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Remedial Investigation Report
for the
Demolition Debris Disposal Area
Site 43

Naval Air Station Pensacola
Pensacola, Florida

Contract Task Order 0355

November 2006

NAVFAC
Naval Facilities Engineering Command
Southeast
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North Charleston, South Carolina 29406

TETRA TECH NUS, Inc.

Rev. 2
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REMEDIAL INVESTIGATION REPORT
FOR THE
DEMOLITION DEBRIS DISPOSAL AREA – SITE 43

NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

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NOVEMBER 2006

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PROFESSIONAL CERTIFICATION

Remedial Investigation Report
Demolition Debris Disposal Area - Site 43 (Operable Unit 18)
Naval Air Station Pensacola, Florida

This Remedial Investigation Report was prepared under the direct supervision of the undersigned geologist using geologic and hydrogeologic principles standard to the profession at the time of the report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of additional information on the assessment described in this report. This report was developed specifically for the referenced site and should not be construed to apply to any other site.

Gerald Walker

November 6, 2006
Gerald Walker, P.G.
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ACRONYMS

ALM	Adult Lead Model
ARAR	Applicable or Relevant and Appropriate Requirements
ATSDR	Agency for Toxic Substances and Disease Registry
BCF	Bioconcentration Factor
bls	Below Land Surface
BRAC	Base Realignment and Closure
°C	Degrees Celsius
CCI	CH2MHILL Constructors, Inc.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CLEAN	Comprehensive Long-term Environmental Action Navy
CLP	Contract Laboratory Program
cm^2	Centimeters Squared
COC	Contaminant of Concern
COPC	Chemical of Potential Concern
C_{SAT}	Soil Saturation Limits
CSM	Conceptual Site Model
CSF	Cancer Slope Factor
CTL	Cleanup Target Level
CTO	Contract Task Order
DPT	Direct-push Technology
Eco-SSL	Ecological Soil Screening Level
Eh	Oxidation Reduction Potential of Groundwater
EPC	Exposure Point Concentration
ESV	Ecological Screening Value
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FS	Feasibility Study
GCTL	Groundwater Cleanup Target Level
HASP	Health and Safety Plan
HCl	Hydrochloric Acid
HEAST	Health Effects Assessment Summary Table
HHRA	Human Health Risk Assessment
HI	Hazard Index
HQ	Hazard Quotient
HSA	Hollow Stem Auger

ACRONYMS (CONTINUED)

IEUBK	Integrated Exposure Uptake Biokenetic
ILCR	Incremental Lifetime Cancer Risk
IR	Installation Restoration
IRA	Interim Removal Action
IRIS	Integrated Risk Information System
K_{OC}	Organic Carbon Parition Coefficient
LOAEL	Lowest Observed Adverse Effect Level
LOEC	Lowest Observable Effect Concentration
MATC	Maximum Acceptable Toxicant Concentration
MCL	Maximum Contamant Level
mg/kg	Milligrams per Kilogram
MI	Mobility Index
MRL	Minimal Risk Level
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NAS	Naval Air Station
NAVFAC EFD SOUTH	Southern Division, Naval Facilities Engineering Command
NCEA	National Center for Environmental Assessment
NEESA	Naval Energy and Environmental Support Activity
NELAP	National Environmental Laboratory Accreditation Program
NOAEL	No Observed Adverse Effect Level
NOEC	No Observable Effect Concentration
NTTC	Navy Technical Training Center
OPPTS	Office of Prevention, Pesticides, and Toxic Substances
ORNL	Oak Ridge National Laboratory
OSWER	Office of Solid Waste and Emergency Response
OU	Operable Unit
oz	Ounce
PAH	Polynuclear Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PEF	Particulate Emissions Factor
ppm	Parts per Million
PPRTV	Provisional Peer Reviewed Toxicity Values
PRG	Preliminary Remediation Goal
RAGS	Risk Assessment Guidance for Superfund
RBCAP	Risk-based Corrective Action Process

ACRONYMS (CONTINUED)

RCRA	Resource Conservation and Recovery Act
RfD	Reference Dose
RG	Remedial Goal
RI	Remedial Investigation
RME	Reasonable Maximum Exposure
RMO	Risk Management Option
S	Water Solubility
SARA	Superfund Amendments and Reauthorization Act
SCR	Site Characterization Report
SCTL	Soil Cleanup Target Level
SLERA	Screening Level Ecological Risk Assessment
SMDP	Scientific/Management Decision Point
SOP	Standard Operating Procedure
SQG	Soil Quality Guidelines
SSL	Soil Screening Level
SVOC	Semivolatile Organic Compound
SWL	Static Water Level
TAL	Target Analyte List
TCL	Target Compound List
TEF	Toxicity Equivalency Factor
TRV	Toxicity Reference Value
TRW	Technical Review Workgroup
TtNUS	Tetra Tech NUS, Inc.
UCL	Upper Confidence Limit
µg/dL	Micrograms per Deciliter
µg/L	Micrograms per Liter
USDA	United States Department of Agriculture
UST	Underground Storage Tank
USEPA	United States Environmental Protection Agency
VE	Volatilization Factor
VOC	Volatile Organic Compound
VP	Vapor Pressure

EXECUTIVE SUMMARY

The primary objective of the Remedial Investigation (RI) at the Demolition Debris Disposal Area – Site 43 was to provide data to guide the selection of a remedy for contamination that is protective of human health and the environment. In order to achieve this primary objective, samples from various media were collected and analyzed to fill data gaps from previous investigations and to evaluate the extent of contamination previously documented at the site and evaluate the effect remedial actions have had on site conditions.

SITE HISTORY

A partially exposed drum was discovered at the site in December 1992. A site reconnaissance found additional buried material and the area was fenced until further investigations were completed. A geophysical survey was conducted to assess the area surrounding the exposed drums and determine the size of the disposal area. A site characterization was performed in October 1999 to investigate the anomalies detected during the geophysical survey and to collect soil and groundwater samples. Surface soil samples were reported to contain benzo(a)pyrene and eight metals at concentrations exceeding the Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Levels (SCTLs) and NAS Pensacola background concentrations. Test pits were excavated at 17 of the geophysical anomaly areas and buried drums were removed at two of these test pits. Five temporary monitoring wells were installed and sampled. The groundwater samples were reported to contain methylene chloride and two metals at concentrations exceeding the FDEP Groundwater Cleanup Target Levels (GCTLs). Only iron was reported to exceed the NAS Pensacola background levels.

INTERIM REMEDIAL ACTION

An Interim Removal Action (IRA) was conducted to remove the metal debris and contaminated surface and subsurface soils at the site. A total of 657 cubic yards of soil and debris were removed and approximately 20 to 25 rusted metal drums and inert ornamental ordnance and munitions were uncovered. Groundwater sampling was conducted prior to excavation activities and after excavation activities were completed. Groundwater samples were analyzed for iron only. Detected iron concentrations for both consecutive sampling events were less than the established NAS Pensacola background concentrations. Following excavation activities, the cleanup criteria were re-evaluated and revised. Because of the revised lower remedial goals (RGs) established for the site after the soil removal activities were completed, a RI and Feasibility Study (FS) was recommended.

REMEDIAL INVESTIGATION

Twenty surface soil samples were collected from the perimeter of the anomaly areas and analyzed for selected parameters. Surface soil samples collected at the site were analyzed for Contract Laboratory Program (CLP) Target Compound List (TCL) semivolatile organic compounds (SVOCs), and inorganic analytes. Twenty soil borings were completed at geophysical anomaly/test pit locations. Two soil samples were submitted for laboratory analysis from each soil boring, the shallow soil samples were collected at the soil excavation limit and the deeper soil samples were collected from between 4 and up to 9 feet. The subsurface soil samples collected at Site 43 were analyzed for CLP TCL SVOCs and selected metals. Eight shallow monitoring wells were installed to an approximate depth of 25 feet below land surface (bls). In addition, two deep permanent monitoring wells were installed to an approximate depth of 50 feet bls. Groundwater samples were collected from the existing micro wells and the newly installed monitoring wells. The groundwater samples collected from on-site wells were analyzed for CLP TCL volatile organic compounds (VOCs) and target analyte list (TAL) metals.

NATURE AND EXTENT OF CONTAMINATION

The release of contaminants at Site 43 appears to have resulted from undocumented burning and disposal of unknown materials. The source and nature of materials, as well as the time of disposal, are unknown.

Ten surface soil samples had exceedances of one or more residential or industrial SCTL for arsenic, barium, copper, lead, vanadium, and carcinogenic PAHs. Six shallow subsurface soil samples had exceedances of one or more residential or industrial SCTL. Contaminant concentrations in the deeper subsurface soil samples from depths greater than 4 feet were less than SCTLs.

Groundwater was determined to flow to the east at the site overall, with localized variation resulting from site topography. Groundwater flow velocity was estimated to be approximately 0.88 feet per day.

Iron was detected in most of the monitoring wells sampled for the RI at concentrations exceeding the GCTL, which is a secondary standard, but less than the Naval Air Station (NAS) Pensacola background iron concentration. Iron concentrations exceeding the background concentration were detectd in three monitoring wells. These wells are located up and side gradient to the known disposal area, which would suggest that the iron concentrations in these wells are naturally occuring rather than due to site activity. Manganese was detected in each of the groundwater samples collected at Site 43. The reported mangnese concentrations in two shallow wells exceeded the GCTL, which is a secondary standard. Lead was detected in only two of the groundwater samples collected at Site 43. Lead only exceeded the

GCTL in the sample collected from PEN-43-13S, which is located at the center of Anomaly Area 11, where surface and subsurface soil samples had lead concentrations exceeding residential and industrial SCTLs.

HUMAN HEALTH RISK ASSESSMENT

An Human Health Risk Assessment (HHRA) was conducted for the chemical concentrations detected in surface soil, subsurface soil, and groundwater samples collected at Site 43. The evaluation was conducted using both United States Environmental Protection Agency (USEPA) and State of Florida regulations and guidelines for HHRA.

Based on the USEPA evaluation, lead is the predominant chemical of potential concern (COPC) detected in soil and groundwater at Site 43. Cancer risk estimates [total incremental lifetime cancer risk (ILCRs)] developed for excavation/construction workers and maintenance workers exposed to COPCs in surface and subsurface soil were less than $1x10^{-6}$. Total ILCRs for full time commercial/industrial workers, lifelong recreational users, and future residents hypothetically exposed to COPCs in soil and groundwater were within the USEPA target risk range of $1x10^{-6}$ to $1x10^{-4}$. Noncancer risk estimates [total Hazard Indicies (HIs)] developed on a target organ/effect basis for all receptors evaluated were less than unity (1.0).

The risk assessment conducted per the State of Florida regulations and guidelines evaluated risks using the published SCTLs for residential and industrial land use scenarios. Carcinogenic PAHs and metals were identified as potential residential contaminants of concern (COCs) for surface soils based on a comparison of maximum concentrations or exposure point concentrations (EPCs) to these SCTLs. Lead was also a potential industrial COC. Carcinogenic PAHs, arsenic, barium, copper, lead, and vanadium were identified as potential residential COCs for subsurface soils based on a comparison of maximum concentrations or EPCs to the SCTLs. Carcinogenic PAHs and lead were also potential industrial COCs. Iron, lead, and manganese were identified as potential COCs for groundwater based on a comparison of maximum concentrations to groundwater cleanup target levels (GCTLs). Hazard Quotients (HQs) for iron and manganese calculated in the USEPA evaluation were less than the USEPA and Florida goal of unity for non-carcinogenic health effects.

SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT

A screening level ecological risk assessment (SLERA) was performed for Site 43 at NAS Pensacola. Several chemicals were retained as COPCs as a result of the initial screening of surface soil. In surface soil, concentrations of barium, copper, and lead pose risks to soil invertebrates and plants, especially

from the cumulative toxicity of multiple metals. The locations where elevated concentrations for the final COPCs exist are primarily limited to three small isolated areas. Potential risks to insectivorous small mammals and birds from copper and lead were evaluated by food chain modeling and the lead concentrations in surface soil may pose potential risks to these receptors.

CONCLUSIONS AND RECOMMENDATIONS

Metals and carcinogenic PAHs were detected in surface soil and subsurface soil samples at concentrations exceeding risk based screening criteria. Metals in groundwater samples exceeded risk-based screening criteria (lead) and secondary standards (iron and manganese). Both the HHRA and SLERA identified risk to human and ecological receptors exceeding USEPA and FDEP benchmarks. The remaining contaminants in Site 43 surface and subsurface soil will require measures to eliminate or minimize exposure by active cleanup, engineering controls, and/or institutional controls. A detailed evaluation of alternatives to achieve this goal should be presented in a Feasibility Study for Site 43. A confirmation sampling and analysis protocol will be incorporated in the Feasibility Study to verify that the selected remedy for Site 43 is effective for the nature and extent of contaminants at the site.

1.0 INTRODUCTION

Tetra Tech NUS, Inc., (TtNUS) under contract to the Department of Navy, Southern Division, Naval Facilities Engineering Command (NAVFAC EFD SOUTH) is submitting this RI Report for the Demolition Debris Disposal Area – Site 43 at NAS Pensacola, located in Pensacola, Florida. This RI Report was prepared under the Comprehensive Long-term Environmental Action Navy (CLEAN) III Contract Number N62467-94-D-0888, Contract Task Order (CTO) 0355.

1.1 PURPOSE OF REMEDIAL INVESTIGATION

The primary objective of the RI is to provide data to evaluate the current environmental conditions and guide the selection of a remedy that is protective of human health and the environment for any contamination present at Site 43. In order to achieve this primary objective, samples from various media were collected and analyzed to fill data gaps from previous investigations. Samples from various media were used to evaluate the extent of contamination previously documented at the site and evaluate the effect remedial actions have had on site conditions.

The field activities for the RI included the collection of samples from surface soil, subsurface soil, and groundwater for submission to a National Environmental Laboratory Accreditation Program (NELAP)-certified laboratory for analysis.

1.2 FACILITY BACKGROUND

NAS Pensacola (Figure 1-1) is located in Escambia County, in Florida's northwest coastal area, approximately 5 miles west of the Pensacola City limits. The federal government established the Navy Yard at Pensacola in 1825. The Navy Yard was placed in caretaker status in 1911. Naval aviation operations began at the facility in 1914. The facility was expanded in 1930's as a NAS.

Current land use at NAS Pensacola consists of various military housing, training, and support facilities as well as large industrial complexes for major repairs and refurbishment of aircraft engines and frames. Additional details on the NAS Pensacola facility may be found in the facility administrative record. Site 43 is located at the southwest corner of the intersection of Murray and Taylor Roads and consists of an area approximately 200 feet by 200 feet in size.

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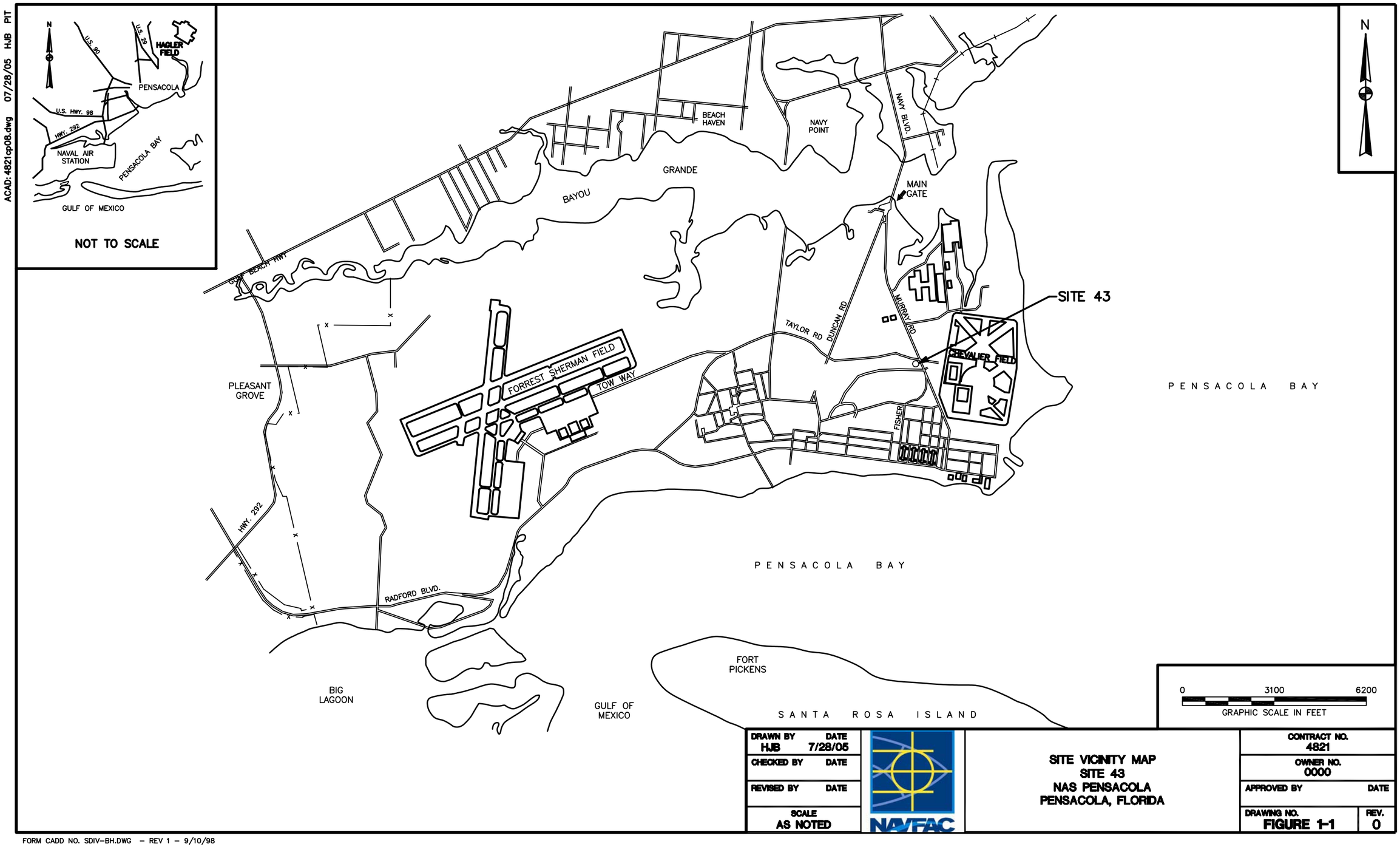

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1.2.1 Site Description and History

Site 43 (Figure 1-2) is located at the southwest corner of Murray and Taylor Roads and north of Road Q, which provides access to the NAS Pensacola Officer's Quarters. The area is grass covered with oak trees scattered throughout the site. Previously the site contained a tennis court and a building foundation/basketball court; however, in 2003 the tennis and basketball courts were removed by the facility. Overhead utilities are not present within the site area; however, an underground water line traverses the site in a general west to east direction.

A housing area is located adjacent to the south side of the site and is referred to as the Warrington Housing and was constructed in 1930's. Previously, the Town of Warrington, which was built by Navy Yard workers on the federal reservation, occupied this general area. Warrington was moved across Bayou Grande as the base expanded in the 1930's and the town cemetery was moved to Barrancas National Cemetery.

In December 1992, a child using a metal detector discovered a partially exposed drum located east of the tennis court. A site reconnaissance found an additional partially buried drum. One drum was in a vertical position; its end punctured revealing standing water in the interior. The second drum also appeared to be in a vertical position, but was not obviously punctured. A third iron object resembling a drum rim was observed east of the tennis court. Smaller, rusted metal debris were observed at the surface. No odors, visible soil stains, or other indications of contaminant release were observed. The area surrounding the buried drums was fenced to prevent general access until further investigations could be conducted. Prior to the current usage as a residential recreational area the site's use is unknown.

1.2.2 Previous Investigations

This section summarizes previous investigations performed at Site 43 at NAS Pensacola. Previous investigations include a geophysical survey, a site and drum characterization, and interim remedial action.

1.2.2.1 Geophysical Survey

In March 1994, Ensafe/Allen & Hoshall conducted a geophysical investigation using gradient and total magnetic surveys to assess the area surrounding the exposed drums. The objective of the investigation was to determine the size of the disposal area and to estimate the magnitude of drum disposal. Although cultural clutter (buried utilities, metal fences, poles, buildings, etc.) precluded a definitive interpretation, magnetic anomalies typical of drums were identified in an area approximately 200 feet by 150 feet (Figure 1-3). Based on the results of the geophysical survey, the suspected disposal area was larger than the area that was fenced following the previous site reconnaissance. The geophysical survey data

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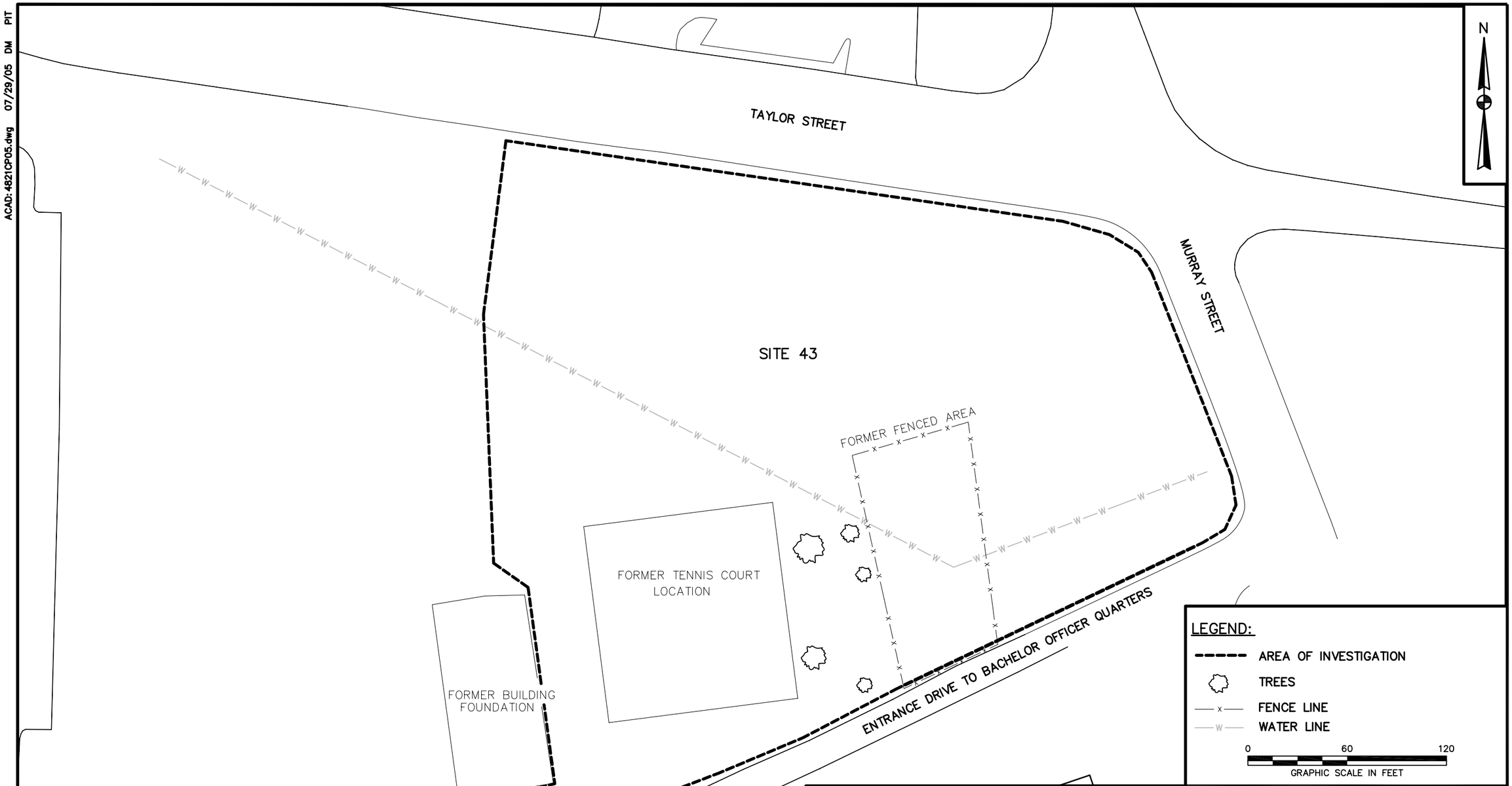

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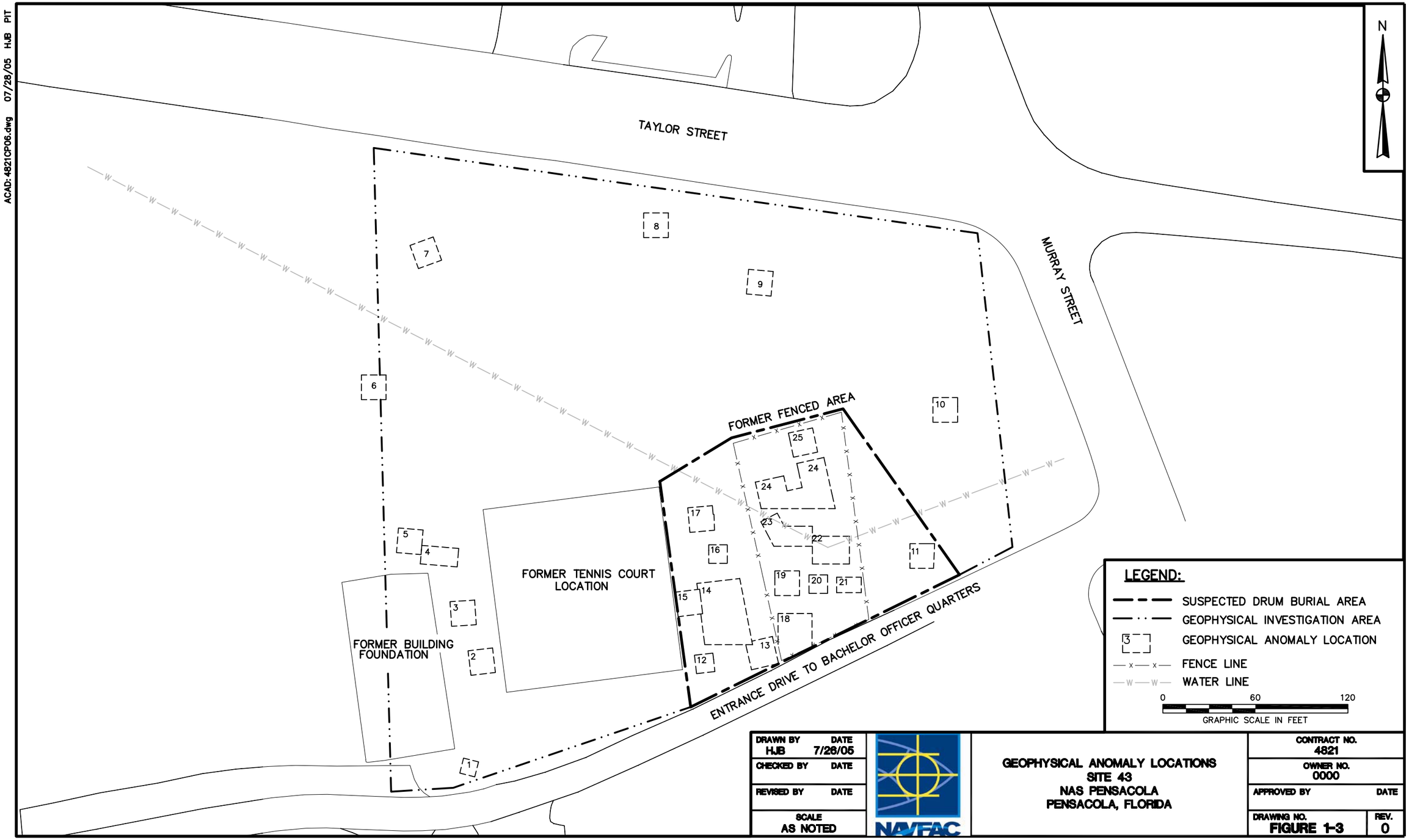

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suggested that the disposal in the area was not systematic and widespread, but limited in size and the number of buried drums. A total of 25 individual geophysical anomalies were identified; however, the actual number of drums disposed of in the area was not determined. The report concluded that the drum disposal area, as well as several anomalies discovered outside the disposal area should be further explored by test pitting or trenching (EnSafe/Allen & Hoshall, 1994a).

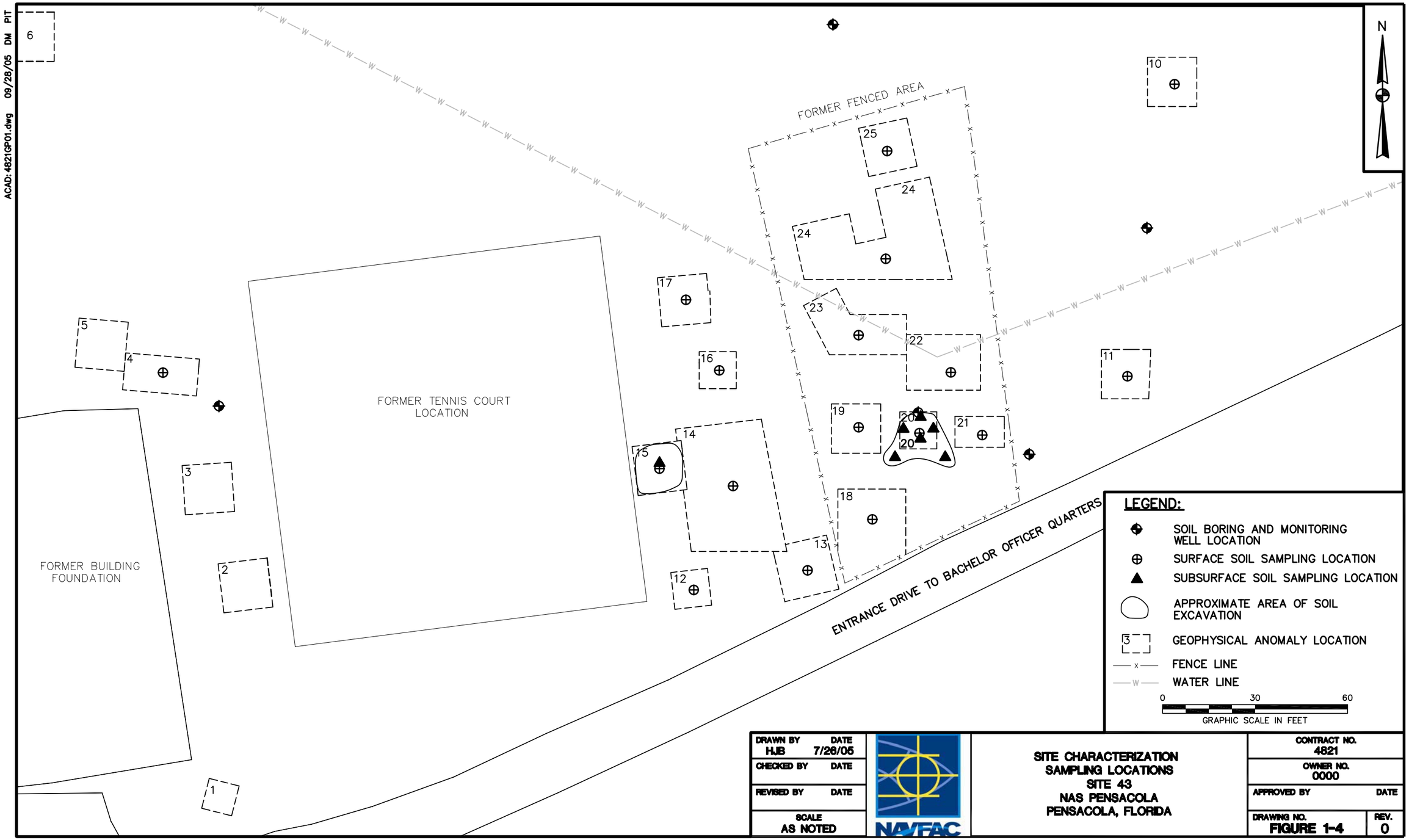
1.2.2.2 Site and Drum Characterization

Following the geophysical survey, TtNUS conducted a site characterization sampling event in October 1999. The purpose of the site characterization was to investigate the anomalies detected during the geophysical survey, collect surface and subsurface soil samples from the anomaly locations, install temporary micro wells, and collect groundwater samples from the micro wells (Figure 1-4). The results of the investigation are summarized in the "Site Characterization Report (Site 43) NAS Pensacola, Pensacola Florida" submitted January 2004.

As part of the site characterization, 17 surface soil samples collected at the site were analyzed for VOCs, SVOCs, pesticides, polychlorinated biphenyls (PCBs), metals, and cyanide (Figure 1-4). The surface soil samples were reported to contain benzo(a)pyrene and eight metals (antimony, arsenic, barium, copper, iron, lead, nickel, and vanadium) at concentrations exceeding the FDEP SCTLs for Direct Exposure - Residential [Chapter 62-777, Florida Administrative Code (FAC)] and NAS Pensacola background concentrations. In addition, concentrations of antimony and nickel were reported to exceed FDEP SCTLs for leachability to groundwater (Chapter 62-777, FAC).

Following the surface soil sampling, test pits were excavated at 17 of the geophysical anomaly areas. Drums were encountered and removed at Anomaly Areas 15 and 20 (Figure 1-4). Following the excavation, seven subsurface soil samples were collected. Due to the shallow burial of the drums, subsurface soil samples were collected immediately beneath the buried drums at depths ranging from 2 to 3.5 feet bls. The samples were analyzed for the same parameters as the surface soil samples. The analytical data indicated benzo(a)pyrene, dibenzo(a,h)anthracene, and nine metals (antimony, arsenic, barium, copper, iron, lead, nickel, zinc, and vanadium) were present at concentrations exceeding the FDEP SCTL for Direct Exposure - Residential and NAS Pensacola background concentrations. Antimony, arsenic, barium, nickel and zinc concentrations were reported to exceed FDEP SCTLs for leachability to groundwater criteria.

In addition to the test pitting subsurface soil sampling, a direct-push technology (DPT) rig was used to collect five additional soil samples from above the water table. The additional soil samples were collected at locations corresponding to the soil boring and monitoring well locations shown on Figure 1-4. The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N
FORMER FENCED AREA
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ENTRANCE DRIVE TO BACHELOR OFFICER QUARTERS
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LEGEND:
SOIL BORING AND MONITORING WELL LOCATION
SURFACE SOIL SAMPLING LOCATION
SUBSURFACE SOIL SAMPLING LOCATION
APPROXIMATE AREA OF SOIL EXCAVATION
GEOPHYSICAL ANOMALY LOCATION
FENCE LINE
WATER LINE
0 30 60
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SITE CHARACTERIZATION
SAMPLING LOCATIONS
SITE 43
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samples were analyzed for the same parameters as the previous subsurface soil samples. However, the analytical results for the subsurface soil samples collected from additional locations did not indicate the presence of contaminants above regulatory standards or NAS Pensacola background concentrations.

During the site characterization investigation, 14 drums were excavated and stored in over pack containers. The contents of the drums were later sampled during the drum characterization sampling event. The analytical data from the drum characterization indicated that 12 of the 14 drums contained insufficient volume/mass to sample. The two remaining drums were sampled and contained metals and polynuclear aromatic hydrocarbons (PAHs) at concentrations exceeding FDEP SCTLs.

Five temporary monitoring wells were installed at Site 43 during the characterization study and sampled for VOCs, SVOCs, pesticides and PCBs, TAL metals and cyanide. The groundwater samples were reported to contain methylene chloride, a common laboratory contaminant, and two metals (aluminum and iron) at concentrations exceeding the FDEP GCTLs specified in Chapter 62-777, FAC. Although concentrations of both metals exceeded the FDEP GCTLs, only detected concentrations of iron were reported to exceed the NAS Pensacola background levels.

1.2.2.3 Interim Remedial Action

Following the completion of the site characterization investigation and addendum, an IRA was completed by CH2MHILL Constructors, Inc. (CCI) to remove the metal debris and contaminated surface and subsurface soils at the site (Figure 1-5). The interim removal action is summarized in the “Interim Removal Action Report, Excavation of Contaminated Soil and Groundwater Monitoring at Site 43, Naval Air Station Pensacola, Pensacola, Florida” dated September 2003.

Prior to initiating the IRA fieldwork, CCI developed RGs for some COCs at the site using 95% Upper Confidence Limit (UCL) procedure for surface soils. Once the 95% UCL-based RGs were calculated and approved by the regulators, samples were collected to delineate the extent of contamination prior to excavation activities. Forty-one (41) surface soil samples and 21 subsurface soil samples were collected in the vicinity of the identified remedial areas for source delineation of the associate metals. Based on the laboratory results, the areas of excavation were defined (CCI, 2003).

Of the initial 15 anomalous areas characterized for contamination, 6 areas exceeded the initial cleanup criteria outlined in the Site 43 Work Plan. These areas included Anomaly Areas 4, 14, 15, 16, 20 and 22. From April through May 3, 2001, a total of 657 cubic yards of soil and debris were removed from these areas at Site 43. The excavated soil was either stockpiled or loaded directly onto transport vehicles. Soil that was analyzed and determined to be hazardous for lead was manifested accordingly. Approximately

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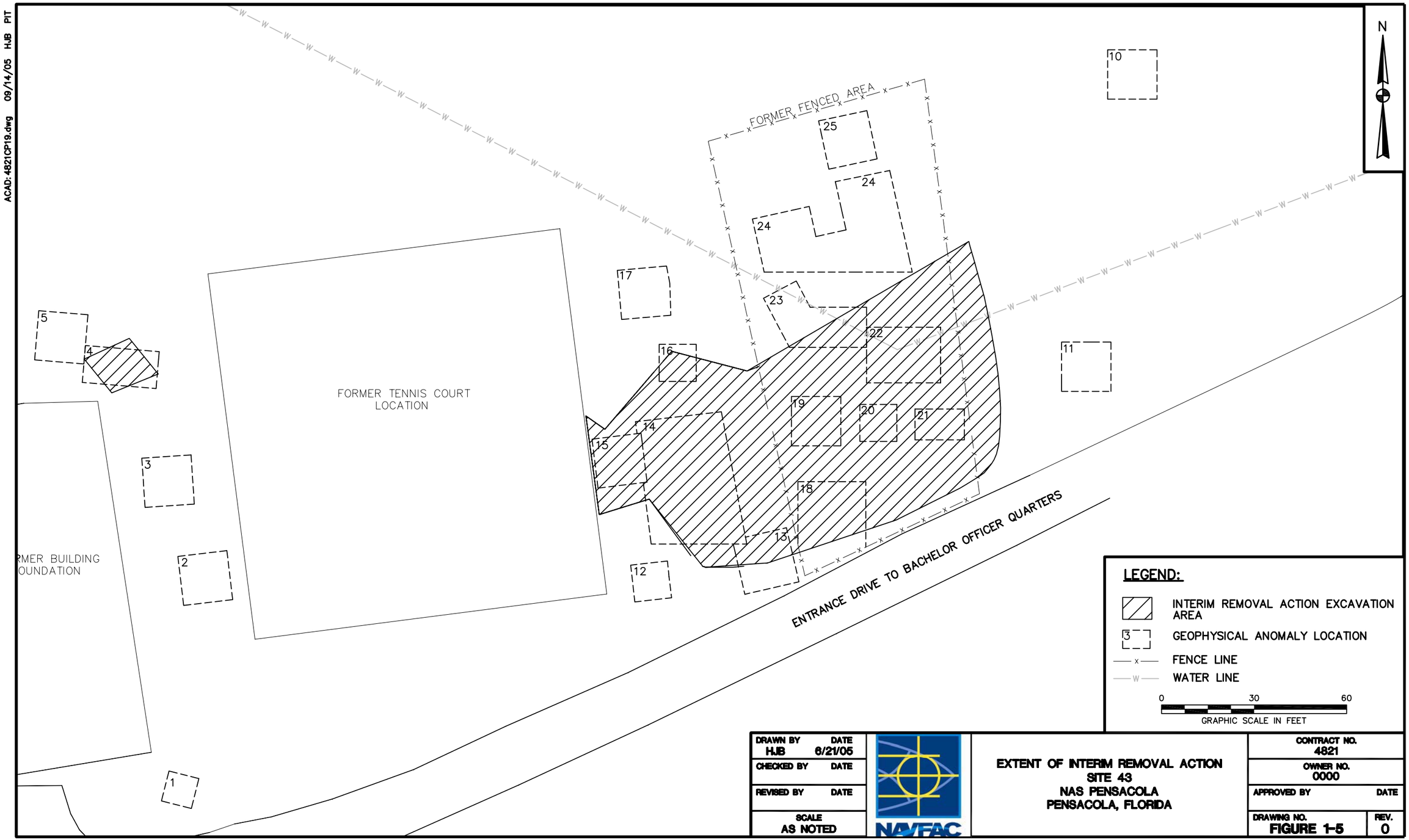

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20 to 25 rusted metal drums and drum parts and inert ornamental ordnance and munitions were uncovered in addition to the original 14 drums identified and previously removed. Following excavation activities, the excavated areas were backfilled with a clayey soil for the liner and topsoil for the upper 1 foot surface completion. Following testing for appropriate density, the excavated areas were hydro-seeded with grass seed and fertilizer (CCI, 2003).

Baseline groundwater sampling was conducted prior to excavation activities and a subsequent round of semi-annual groundwater sampling was conducted after excavation activities were completed. Groundwater samples were analyzed for iron only. Detected iron concentrations for both consecutive sampling events were less than the established NAS Pensacola background concentrations of 1,707 micrograms per liter (µg/L) (CCI, 2003).

Following excavation activities, the cleanup criteria were re-evaluated and revised. Many of the RGs established using the 95% UCL were not appropriate for the site. The University of Florida guidance (2004) indicates that 95% UCL cannot be used for barium, copper, nickel, or vanadium for current or potential residential land use due to acute toxic effects in children as a result of direct exposure. Additionally, the USEPA has indicated that 95% UCL should not be used for lead. Consequently, it was determined that nine other areas (Anomaly Areas 11, 12, 13, 17, 18, 19, 21, 23, and 24) contained contaminants that exceeded the revised cleanup criteria. Areas with exceedances that were not excavated included 11, 12, 13, 17, 23, and 24 (CCI, 2003). In addition, excavation activities were completed to a depth of 2 feet bls; however, subsurface soil samples collected within the excavation area at depths ranging from 2 feet bls to 3.5 feet bls during the characterization study contained exceedances of the revised RGs.

Because of the revised lower RGs established for the site after the soil removal activities were completed, CCI recommended a RI/FS be completed at Site 43 to delineate COC contamination and identify a final remedy for the site (CCI, 2003).

1.2.3 Regulatory Setting

The Navy Installation Restoration (IR) Program was designed to identify and abate or control contaminant migration resulting from past operations at naval installations, with the goal of expediting and improving environmental response actions while protecting human health and the environment. The IR program is conducted in accordance with Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 and Executive Order 12580. CERCLA requires that federal facilities comply with the act, both procedurally and substantively. Site 43 is being investigated as part of

CERCLA requirements. This RI Report has been reviewed by the USEPA and the FDEP. The comments provided by these agencies and responses to these comments are included in Appendix A.

1.3 REPORT ORGANIZATION

The RI Report is organized into seven sections with supporting references and appendices:

- Section 1.0 – Introduction
- Section 2.0 – Study Area Investigation
- Section 3.0 – Physical Characteristics of the Study Area
- Section 4.0 – Nature and Extent of Contamination
- Section 5.0 – Contaminant Fate and Transport
- Section 6.0 - Risk Assessment – human health and ecological risk.
- Section 7.0 – Summary and Conclusions
- References
- Appendices - Supporting data and discussions

2.0 STUDY AREA INVESTIGATION

The primary objective of the RI is to provide data to evaluate the current environmental conditions and guide the selection of a remedy for any contamination present at Site 43 that is protective of human health and the environment. Soil and groundwater samples were collected for off-site laboratory analysis and the analytical results were screened against appropriate federal and state screening values. Field activities, such as sampling and monitoring well installation, were conducted in accordance with the Health and Safety Plan (HASP) and the FDEP Standard Operating Procedures (SOPs) for Field Activities (FDEP, 2004).

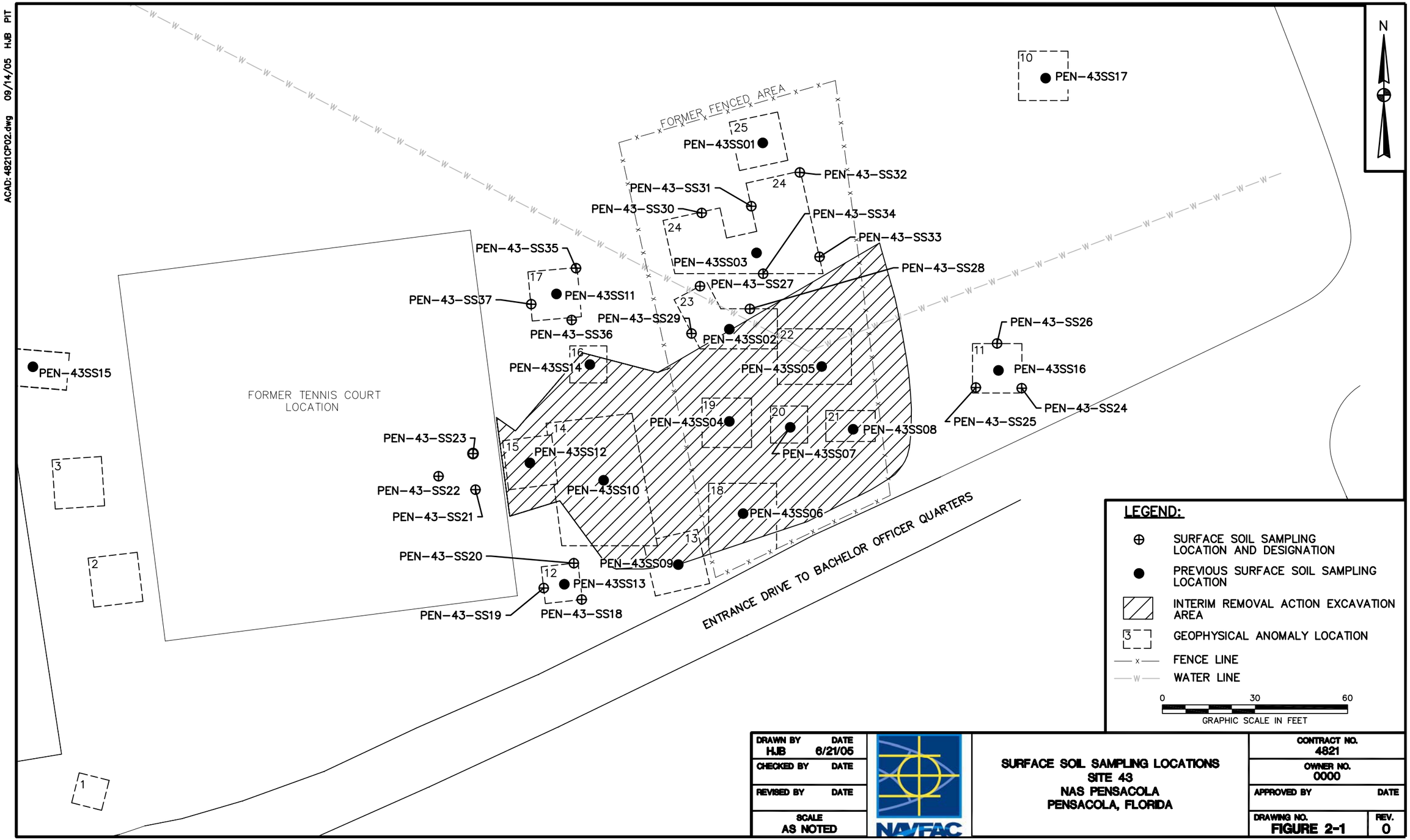
2.1 SURFACE SOIL SAMPLING

Although extensive soil sampling was completed prior to the IRA excavation activities at the site, the areas of revised RG exceedances were not fully delineated or excavated. Analytical results from surface soil samples collected in conjunction with Anomaly Areas 11, 12, 17, 23 and 24 indicated that the extent of RG exceedances was not fully delineated.

Twenty surface soil samples (plus quality assurance and quality control samples) were collected for the RI from on-site locations (Figure 2-1). The surface soil samples were collected from the ground surface to a depth of 1 foot bls using a hand auger in accordance with FS 3100, Surface Soil Sampling (FDEP, 2004). Soil sampling logs are included in Appendix B. To delineate exceedances in the anomaly areas, surface soil samples were collected from the perimeter of the anomaly areas and analyzed the selected parameters based on the exceedances previously reported. In addition, three surface soil samples were collected from the area west of the IRA excavation at the former location of the tennis court. These samples were collected to determine if excavation activities, which were limited previously by the presence of the tennis courts, were extensive enough.

Surface soil samples collected at the site were analyzed for CLP TCL SVOCs (USEPA Method SW-846 8270C), and inorganic analytes (USEPA Method SW-846 6010B). The specific parameters analyzed for each anomaly area are as follows:

- Anomaly Area 11 SVOCs, arsenic, barium, copper, and lead
- Anomaly Area 12 SVOCs, arsenic, barium, copper, lead, and vanadium
- Anomaly Area 17 SVOCs and copper
- Anomaly Area 23 SVOCs, arsenic, barium, lead, and vanadium
- Anomaly Area 24 SVOCs, copper, and lead
- Tennis Court Area SVOCs, arsenic, barium, copper, lead, and vanadium



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2.2 SUBSURFACE SOIL SAMPLING

Because all areas of the revised RG exceedances were not delineated or excavated previously, additional subsurface soil sampling was conducted to further characterize the contaminant levels at the site. Nine soil borings and associated subsurface soil sampling were completed at geophysical anomaly/test pit locations 11, 12, 17, 23 and 24 to further delineate the subsurface soils at locations not previously excavated. Six additional soil borings and associated subsurface soil sampling were completed within the IRA excavation area to further delineate subsurface soil exceedances not removed during the IRA. And finally, five soil borings and assocated subsurface soils samples were completed at the former tennis court location to address potential subsurface soil contamination not previously evaluated due to the presence of the structure. The soil boring locations are shown on Figure 2-2.

The soil borings at Site 43 were advanced using a DPT soil-sampling system) to obtain continuous subsurface soil samples. The DPT sampler was used to collect samples from discrete intervals below 2 feet bls to above the zone of groundwater saturation. Soil boring logs are included in Appendix B. Two soil samples were submitted for laboratory analysis from each soil boring, the shallow soil samples were collected at the soil excavation limit and the deeper soil samples were collected from between 4 and up to 9 feet bls, based on the visual appearance of the soil, e.g. staining or lithology change. In addition, quality assurance and quality control samples were collected. The subsurface soil investigation locations are shown on Figure 2-2.

The subsurface soil samples collected at Site 43 were analyzed for CLP TCL SVOCs (USEPA Method SW-846 8270C), and selected inorganic analytes including arsenic, barium, copper, lead, and vanadium (USEPA Method SW-846 6010B). The soil samples for laboratory analysis were collected in accordance with FS 3200, Subsurface Soil Sampling (FDEP, 2004).

2.3 EXISTING WELL EVALUATION

A temporary micro well network was previously installed at the site during the Site Characterization Report (SCR) investigation (Figure 2-3). A summary of the well construction details are provided in Table 2-1. The existing micro wells were evalauated to determine if the micro wells were viable for current and future groundwater monitoring activities. Existing micro well Pen-43-3S was found to be dry and was properly abandoned. Pen-43-1S was reportedly dry, but was found to be secure and was not abandoned for future use to measure water levels. Micro well Pen-43-4S has not been located since the removal of the tennis court and is believed to have been destroyed. Micro wells Pen-43-2S and Pen-43-5S were secure and were sampled and used in the evaluation of groundwater at the site.

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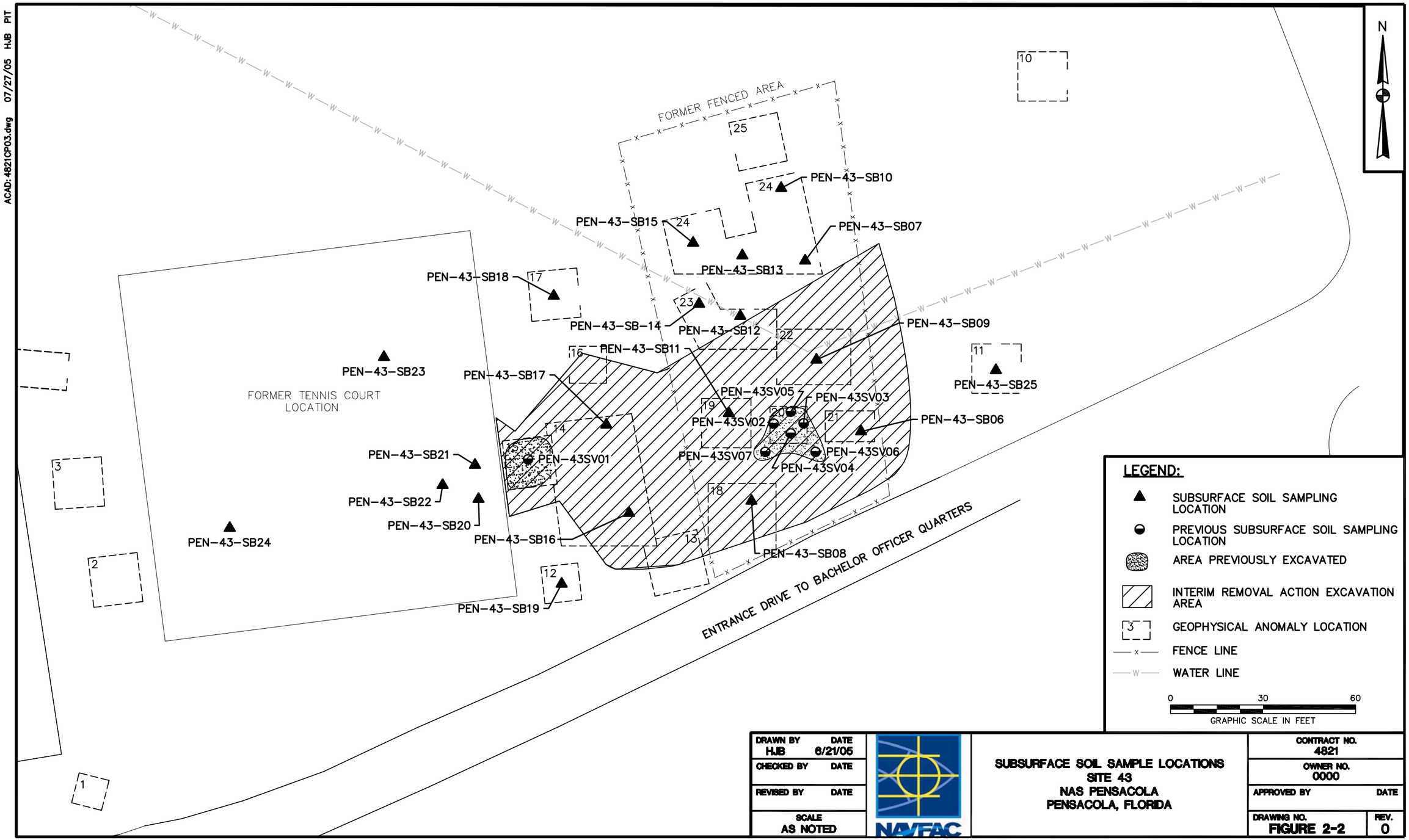

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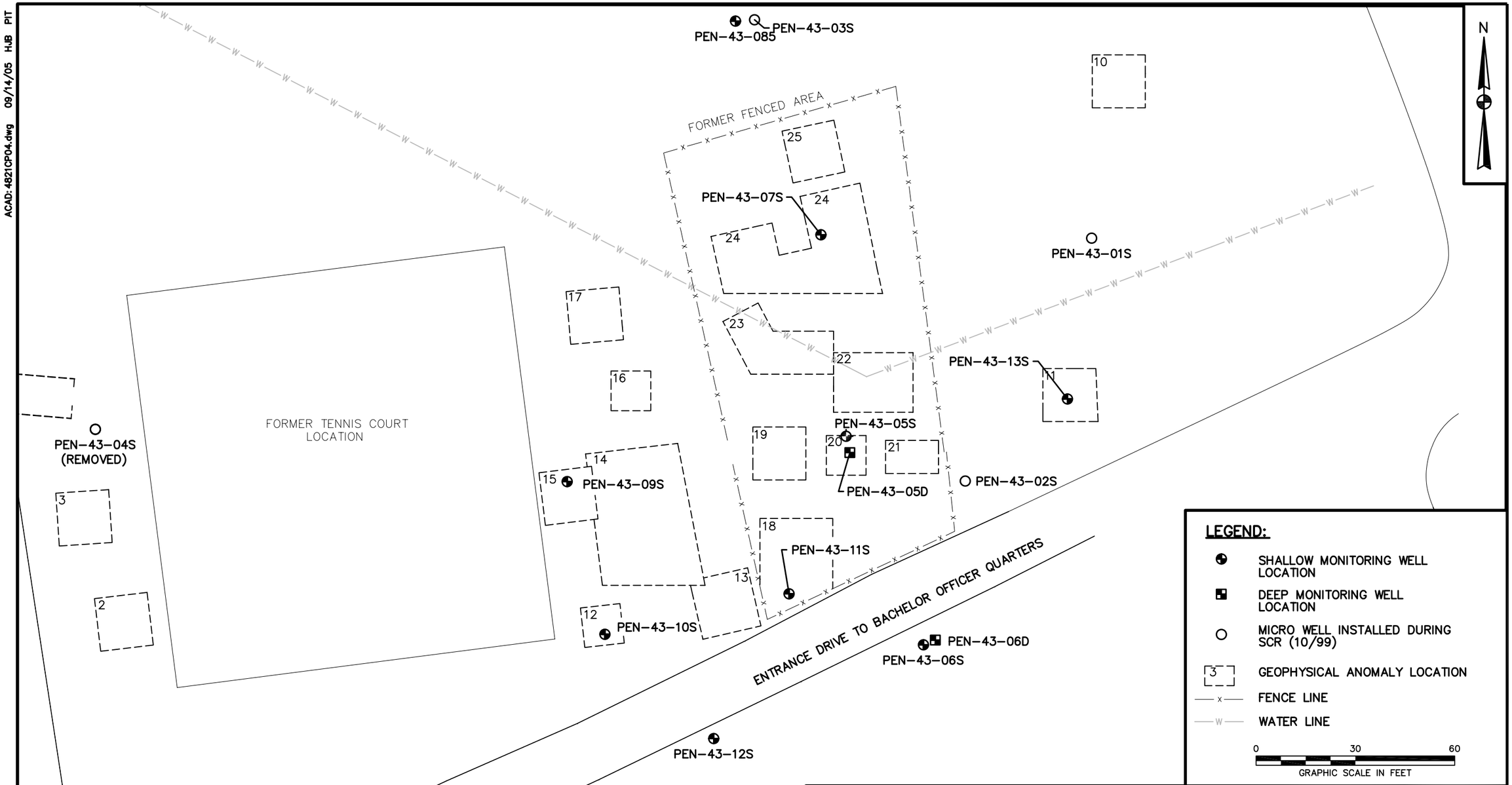

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TABLE 2-1

MONITORING WELL INSTALLATION SUMMARY
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

Well ID	Well Type	Installation Date	Installation Method	Total Depth	Screened Interval Depth	Top-of-Casing Elevation	Well Status
PEN-43-01S	Micro Well	10/17/1999	DPT	19.5	9.5-19.5	24.62	Not Sampled
PEN-43-02S	Micro Well	10/17/1999	DPT	19.4	9.4-19.4	25.98	Sampled/Partially Obstructed
PEN-43-03S	Micro Well	10/17/1999	DPT	19.5	9.5-19.5	---	Abandoned
PEN-43-04S	Micro Well	10/17/1999	DPT	15	5-15	---	Destroyed
PEN-43-05S	Micro Well	10/17/1999	DPT	19	9-19	25.00	Sampled
PEN-43-05D	Deep	2/23/2005	Rotosonic	50	45-50	24.87	Sampled
PEN-43-06S	Shallow	2/24/2005	Rotosonic	25	15-25	26.21	Sampled
PEN-43-06D	Deep	2/23/2005	Rotosonic	50	45-50	26.22	Sampled
PEN-43-07S	Shallow	2/24/2005	Rotosonic	25	15-25	23.03	Sampled
PEN-43-08S	Shallow	2/24/2005	Rotosonic	25	15-25	25.58	Sampled
PEN-43-09S	Shallow	2/24/2005	Rotosonic	25	15-25	23.27	Sampled
PEN-43-10S	Shallow	2/24/2005	Rotosonic	25	15-25	23.18	Sampled
PEN-43-11S	Shallow	2/24/2005	Rotosonic	25	15-25	25.61	Sampled
PEN-43-12S	Shallow	3/3/2005	HSA	25	15-25	25.78	Sampled
PEN-43-13S	Shallow	3/3/2005	HSA	25	15-25	25.27	Sampled

Notes:
--- = Not surveyed
DPT = Direct-push technology
HSA = Hollow stem auger
Depths in feet below grade
Elevations relative to arbitrary benchmark, top of casing for PEN-43-05S of 25 feet
Wells are flush mount surface completions

2.4 MONITORING WELL INSTALLATION

A new permanent monitoring well network, including both shallow and deep monitoring wells, was installed during the RI to supplement or replace the existing micro wells (Figure 2-3). Eight shallow monitoring wells were installed to an approximate depth of 25 feet bls. In addition, two deep permanent monitoring wells were installed to an approximate depth of 50 feet bls. Well construction details are provided in Table 2-1 and Appendix B. The majority of the new monitoring wells were installed using sonic drilling methods. Two of the monitoring wells, PEN-43-12S and PEN-43-13S, were installed using hollow stem auger drilling methods because the sonic drilling rig was unable to access the well locations. The monitoring wells were installed and constructed in accordance with NAVFAC EFD SOUTH and FDEP guidance documents. Following well installation, the top-of-casing elevations for the new and exisiting wells were surveyed using the top-of-casing elevation of PEN-43-05S as a benchmark with an arbitrary elevation of 25 feet.

2.5 GROUNDWATER SAMPLING

Groundwater samples were collected from the existing micro wells where possible and the newly installed monitoring wells to assess the current groundwater conditions. Eight shallow monitoring wells, two shallow micro wells, and two deep monitoring wells were sampled for the RI. The well locations are shown on Figure 2-3.

Static water levels and total well depths were measured on March 5 and March 26, 2005. The wells were purged and sampled using a peristaltic pump and low-flow quiescent purging technique. Groundwater sampling was conducted on March 24, 2005. The monitoring wells were purged in accordance with FS 2212, Well Purging Techniques (FDEP, 2004). Groundwater samples were collected in accordance with FS 2220, Groundwater Sampling Techniques (FDEP, 2004). Water level and groundwater sampling records are in Appendix B.

The groundwater samples collected from on-site wells were analyzed for CLP TCL VOCs (USEPA Method SW-846 8260B) and TAL metals (USEPA Method SW 846 6010B, 9010, and 7471).

2.6 AQUIFER TESTING

Extensive aquifer testing has been completed previously at other NAS Pensacola sites under investigation; therefore, additional aquifer tests were not conducted as part of the Site 43 RI investigation. Because of the similiarity of the site-specific and facility-specific geologic conditions, exisiting aquifer test data and results from pumping tests and slug tests completed at other IR and underground storage tank (UST) sites throughout the facility were used to evalaute hydrogeologic conditions at Site 43.

3.0 PHYSICAL CHARACTERISTICS OF THE STUDY AREA

Data to evaluate site conditions and characteristics were obtained from available literature and the site specific investigations.

3.1 SURFACE FEATURES

NAS Pensacola is located in the extreme southeastern portion of Escambia County, Florida, which lies within the Coastal Plain Province of the United States. As described in the Initial Assessment of NAS Pensacola (Naval Energy and Environmental Support Activity [NEESA], 1983), NAS Pensacola lies within the coastal lowland that is characterized by a series of broad, nearly level marine terraces that extend several miles from the coast and merge with the narrow terraces along the Escambia and Perdido Rivers. NAS Pensacola is located on a peninsula with gently sloping terrain. The land surface elevations on the peninsula range from sea level to approximately 40 feet above mean sea level.

Site 43 is southwest of the intersection of Murray and Taylor Roads (Figure 3-1). The area covers approximately 40,000 square feet and the site elevation is approximately 20 feet above mean sea level. The site lies on the eastern slope of a low area between these two roads and across the street from the entrance to the Officers' Quarters. There is approximately 10 feet of vertical relief across the site. The land is grassy with mature trees and is maintained by the Navy. The site formerly contained a fenced Tennis Court Area and an unfenced old building foundation.

3.2 METEOROLOGY

Escambia County has a warm, humid-temperate climate [United States Department of Agriculture (USDA) 2004]. Along the coast, the Gulf of Mexico moderates high temperatures in the summer and low temperatures in the winter. Total annual precipitation is about 62 inches. The greatest amount of rain falls in July and August. Occasionally, short droughts occur in late spring.

3.3 SURFACE WATER HYDROLOGY

NAS Pensacola is bordered on the south by Big Lagoon, on the south and east by Pensacola Bay, and on the north by Bayou Grande (NEESA, 1983). Sandy surface soil in this area allows for a high proportion of rainfall to infiltrate into the ground and consequently there are few streams. The surface topography has little dissection and the natural drainage system is poorly developed. Much of the surface drainage has been constructed or modified to accommodate structures on base. Swampy areas exist on or near the western portion of NAS Pensacola, and man-made drainage ways and storm drains

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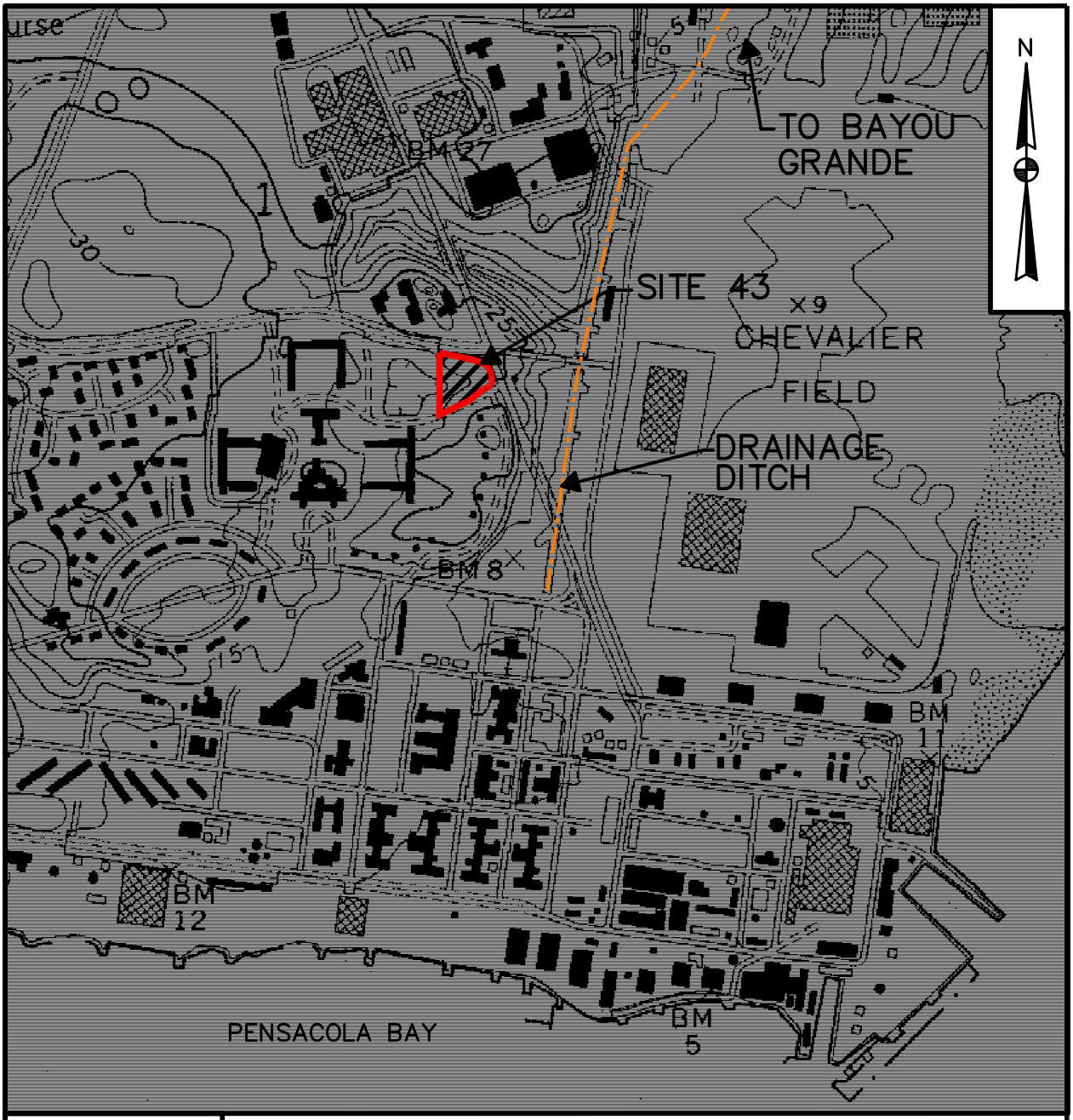

QUADRANGLE LOCATION

SOURCE: 7.5 MINUTE FORT BARRANCAS, FLORIDA QUADRANGLE
1970
PHOTOREVISED 1987
MINOR REVISION 1992

0 1000 2000
GRAPHIC SCALE IN FEET

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feed into the short intermittent streams emptying in to Pensacola Bay and Bayou Grande. No perennial streams enter or exit the NAS Pensacola, but the marshy areas and three small lakes on the golf course retain water throughout the year.

Site 43 is located on the eastern slope of a shallow closed depression bound by paved roads on all four sides (Figure 3-1). Surface water features are not present at the site and overland runoff is to the west into the depression. A designated wetland and a drainage ditch located approximately 500 feet to the east of the site are the nearest surface water bodies (Figure 3-1).

3.4 GEOLOGY

The surficial geology of the area consists of Pleistocene marine deposits made up of light brown to tan, fine quartz sand with associated stringers and lenses of gravel and clay. Underlying these deposits, increasing with age, are the Citronelle Formation, the Miocene Coarse Clastics, the Pensacola Clay, the Tampa Formation, the Chickasawhay Limestone, the Bucatunna Clay member of the Byram Formation, the Ocala Group, the Lisbon equivalent, the Tallahatta Formation, and the Hatchetigbee Formation. The Pleistocene deposits and Citronelle formation are often impossible to differentiate, and together range in thickness from approximately 30 feet to 800 feet across the county (NEESA, 1983).

The lithologies observed during drilling of Site 43 monitoring wells are typical of the undifferentiated Pleistocene marine deposits. The ground surface to 4 feet interval at most of the monitoring well locations showed signs of disturbance either from the waste disposal activities at the site or the IRA excavation. Below 4 feet, typical lithologies included medium to fine silty or clayey sand ranging from light gray or tan to dark brown in color. Significant clay or gravel horizons were not encountered.

3.5 SOILS

Soils at Site 43 are from the Lakeland Series, which consists of very deep, excessiviely drained soils formed in sandy marine sediments (USDA, 2004). These soils are on the summits and side slopes of ridges in uplands and on low ridges and knolls in coastal lowlands. The soil mapping unit at Site 43 is the Lakeland Sand 0-5 percent slopes, which is found on nearly level summits and gently sloping shoulder slopes of broad ridges. Slopes are long and smooth. Typically the surface layer is dark grayish brown sand about 5 inches thick. The substratum to a depth of 80 inches is yellowish brown and brownish yellow sand. The seasonal high water is below a depth of 6 feet throughout the year.

The soils observed while collecting soil samples at Site 43 are comparable in texture and color of the description of the Lakeland Sand. The ground surface to 4 feet interval at most of the soil sampling locations showed signs of disturbance either from the waste disposal activities at the site or the IRA excavation.

3.6 GROUNDWATER HYDROLOGY

3.6.1 Regional Hydrology

Groundwater in Escambia county occurs in three major aquifers: a shallow aquifer which is both artesian and nonartesian (the sand and gravel aquifer), and two deep artesian aquifers (the upper and lower limestones of the Floridan aquifer). In the southern half of the area, the sand and gravel aquifer and the upper limestone of the Floridan aquifer are separated by a thick section of relatively impermeable clay; but, in the northern half the sand and gravel aquifer and the upper limestone of the Floridan aquifer are in contact with one another. The upper limestone of the Floridan aquifer is separated from the lower limestone by a thick clay bed.

The sand and gravel aquifer is composed of sand but has numerous lenses and layers of clay and gravel. The formation also contains lenses of hardpan where the sand has been cemented by iron oxide minerals. This aquifer lies at the surface throughout Escambia County. Logs of borings from various locations at NAS Pensacola show that the surficial sands extend from ground surface to a depth of approximately 35 feet mean sea level below which is a 15-foot thick marine clay, the continuity of which is uncertain. Underlying the clay is more sand with numerous clay lenses (Geraghty and Miller, 1986).

Water levels in the shallow aquifer range from 0 to approximately 30 feet bls across the NAS Pensacola area. The groundwater flow has historically been found toward the Gulf of Mexico and the Escambia and Perdido rivers although groundwater flow can vary locally due to the effect of topography or surface water bodies. The aquifer recharge is predominantly from local precipitation.

The shallow saturated permeable beds in the sand and gravel aquifer contain groundwater under nonartesian conditions, while the deeper permeable beds contain groundwater under artesian pressure, where they are confined by lenses of clay and sandy clay (NEESA, 1983).

Below the sand and gravel aquifer, the limestone layers comprise the regionally extensive Floridan aquifer, which in this area is divided into upper and lower units separated by the Bucatunna clay. The upper Floridan aquifer is an important source of water in areas east of Escambia County; however, in the Pensacola area, it is highly mineralized and not used as a water supply. The lower Floridan aquifer is also highly mineralized and is designated for use as an injection zone for waste disposal in this area (Geraghty and Miller, 1986).

3.6.2 Site Specific Hydrology

Hydrogeologic data were collected to evaluate movement of groundwater in the shallow surficial aquifer at Site 43. Depth to groundwater and groundwater elevation were used to determine the site specific

groundwater flow direction and water table gradient. Groundwater flow velocity at the site was estimated using the hydraulic conductivity values reported from the field investigation at Operable Unit (OU) 10, which is located to the east of Site 43 on the opposite side of Murray Road (Ensafe/Allen and Hoshall, 1996).

3.6.2.1 Static Water Level and Groundwater Elevations

Static water level (SWL) measurement data were recorded from Site 43 monitoring wells on March 5 and March 26, 2005 (Table 3-1). The SWL measurement data and the elevations from the well top-of-casings were used to determine relative groundwater elevations at each well (Appendix B – Groundwater Level Measurement Sheet).

Monitoring wells installed at Site 43 are grouped by the subsurface interval of the well screen:

- Shallow Wells (S identifier) — Screened up to 25 feet below grade
- Deep Wells (D identifier) — Screened from 45 to 50 feet below grade

On March 5, 2005, the relative groundwater elevations in the shallow monitoring wells ranged from 10.14 feet in PEN-43-01S on the east side of the site to 11.00 feet in PEN-43-10S on the west side of the site. The groundwater elevation for deep wells were PEN-43-05D – 11.31 feet and PEN-43-06D – 11.25 feet.

On March 26, 2005, the relative groundwater elevations in the shallow monitoring wells ranged from 10.06 feet in PEN-43-01S on the east side of the site to 10.99 feet in PEN-43-10S on the west side of the site. The groundwater elevation for deep wells were PEN-43-05D – 11.27 feet and PEN-43-06D – 11.22 feet. Groundwater elevations were generally 0.02 to 0.03 feet lower than the elevations measured on March 5, 2005.

3.6.2.2 Groundwater Flow Direction

To evaluate the direction of groundwater flow at the water table, the groundwater elevations from the shallow monitoring wells were plotted on site maps (Figure 3-2 and Figure 3-3). Insufficient data were available to contour the elevations in the deep wells. Groundwater elevation isocontours were drawn from the plotted data. Groundwater flow direction is predicted to be perpendicular to the elevation isocontours.

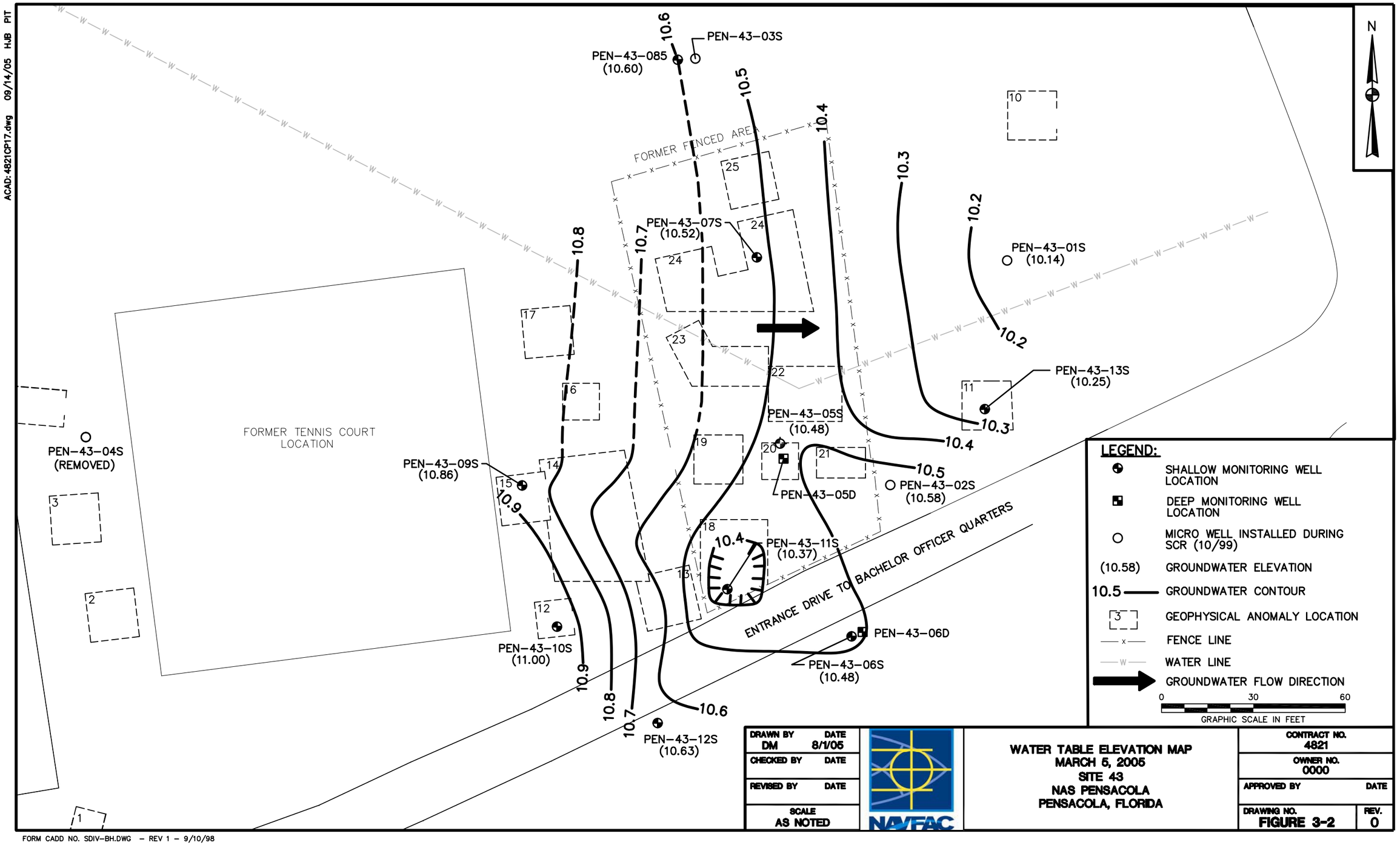
Interpretation of data from Site 43 indicates that overall, groundwater flow at the water table is to the east. Due to the closed topography of the site, localized radial flow is observed in the vicinity of PEN-43-11S.

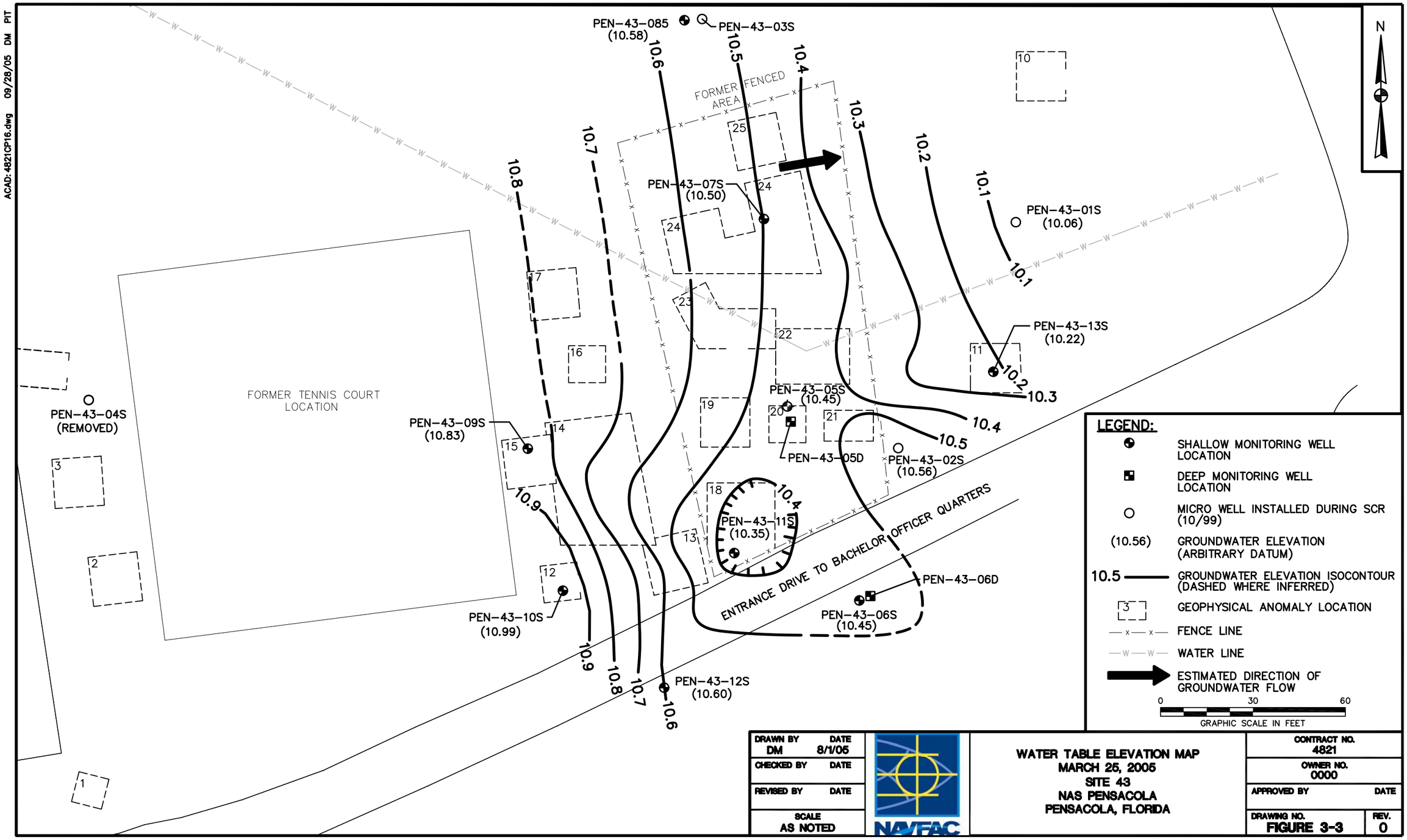
TABLE 3-1

WATER LEVEL MEASUREMENT SUMMARY
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

MONITORING WELL ID	TOP-OF-CASING ELEVATION	5-Mar		26-Mar	
		DEPTH TO WATER	GROUNDWATER ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION
PEN-43-MW-01S	24.62	14.48	10.14	14.56	10.06
PEN-43-MW-02S	25.98	15.40	10.58	15.42	10.56
PEN-43-MW-05S	25.00	14.52	10.48	14.55	10.45
PEN-43-MW0-5D	24.87	13.56	11.31	13.60	11.27
PEN-43-MW-06S	26.21	15.73	10.48	15.76	10.45
PEN-43-MW-06D	26.22	14.97	11.25	15.00	11.22
PEN-43-MW-07S	23.03	12.51	10.52	12.53	10.50
PEN-43-MW-08S	25.58	14.98	10.60	15.00	10.58
PEN-43-MW-09S	23.27	12.41	10.86	12.44	10.83
PEN-43-MW-10S	23.18	12.18	11.00	12.19	10.99
PEN-43-MW-11S	25.61	15.24	10.37	15.26	10.35
PEN-43-MW-12S	25.78	15.15	10.63	15.18	10.60
PEN-43-MW-13S	25.27	15.02	10.25	15.05	10.22

Notes:
Elevations relative to arbitrary benchmark, top-of-casing for PEN-43-05S
Depths in feet below top-of-casing


ACAD: 4821CP17.dwg 09/14/05 HJB PIT
N
PEN-43-03S
PEN-43-085
(10.60)
10.6
10.5
10.4
10.3
10.2
10.8
10.7
10.9
FORMER FENCED AREA
PEN-43-07S
(10.52)
PEN-43-01S
(10.14)
PEN-43-13S
(10.25)
PEN-43-05S
(10.48)
PEN-43-05D
PEN-43-02S
(10.58)
PEN-43-04S
(REMOVED)
FORMER TENNIS COURT
LOCATION
PEN-43-09S
(10.86)
PEN-43-11S
(10.37)
ENTRANCE DRIVE TO BACHELOR OFFICER QUARTERS
PEN-43-06D
PEN-43-06S
(10.48)
PEN-43-10S
(11.00)
PEN-43-12S
(10.63)
1
2
3
6
10
11
12
13
14
15
17
18
19
20
21
22
23
24
25
LEGEND:
SHALLOW MONITORING WELL LOCATION
DEEP MONITORING WELL LOCATION
MICRO WELL INSTALLED DURING SCR (10/99)
(10.58) GROUNDWATER ELEVATION
10.5 GROUNDWATER CONTOUR
GEOPHYSICAL ANOMALY LOCATION
FENCE LINE
WATER LINE
GROUNDWATER FLOW DIRECTION
0 30 60
GRAPHIC SCALE IN FEET
DRAWN BY DM
DATE 8/1/05
CHECKED BY
DATE
REVISED BY
DATE
SCALE AS NOTED
NAVFAC
WATER TABLE ELEVATION MAP
MARCH 5, 2005
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
CONTRACT NO. 4821
OWNER NO. 0000
APPROVED BY
DATE
DRAWING NO. FIGURE 3-2
REV. 0
FORM CADD NO. SDIV-BH.DWG – REV 1 – 9/10/98


ACAD: 4821CP16.dwg 09/28/05 DM PIT
N
PEN-43-085
(10.58)
PEN-43-03S
FORMER FENCED AREA
PEN-43-07S
(10.50)
PEN-43-01S
(10.06)
PEN-43-13S
(10.22)
PEN-43-05S
(10.45)
PEN-43-05D
PEN-43-02S
(10.56)
PEN-43-11S
(10.35)
PEN-43-06D
PEN-43-06S
(10.45)
PEN-43-12S
(10.60)
PEN-43-10S
(10.99)
PEN-43-09S
(10.83)
PEN-43-04S
(REMOVED)
FORMER TENNIS COURT LOCATION
ENTRANCE DRIVE TO BACHELOR OFFICER QUARTERS
10.1
10.2
10.3
10.4
10.5
10.6
10.7
10.8
10.9
LEGEND:
SHALLOW MONITORING WELL LOCATION
DEEP MONITORING WELL LOCATION
MICRO WELL INSTALLED DURING SCR (10/99)
(10.56) GROUNDWATER ELEVATION (ARBITRARY DATUM)
10.5 GROUNDWATER ELEVATION ISOCONTOUR (DASHED WHERE INFERRED)
GEOPHYSICAL ANOMALY LOCATION
FENCE LINE
WATER LINE
ESTIMATED DIRECTION OF GROUNDWATER FLOW
0 30 60
GRAPHIC SCALE IN FEET
DRAWN BY DM
DATE 8/1/05
CHECKED BY
DATE
REVISED BY
DATE
SCALE AS NOTED
NAVFAC
WATER TABLE ELEVATION MAP
MARCH 25, 2005
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
CONTRACT NO. 4821
OWNER NO. 0000
APPROVED BY
DATE
DRAWING NO. FIGURE 3-3
REV. 0
FORM CADD NO. SDIV-BH.DWG – REV 1 – 9/10/98

3.6.2.3 Water Table Gradient

The average horizontal groundwater gradient across the site was calculated from the groundwater elevations measured in shallow monitoring wells and the estimated groundwater flow direction.

The groundwater flow gradient was determined using the following equation:

$$I = \frac{h_1 - h_2}{d}$$

Where:

I = the hydraulic gradient

h_1 = the water elevation at point 1, the highest value

h_2 = the water elevation at point 2, the lowest value

d = the horizontal distance between point 1 and point 2 parallel to the direction of groundwater flow

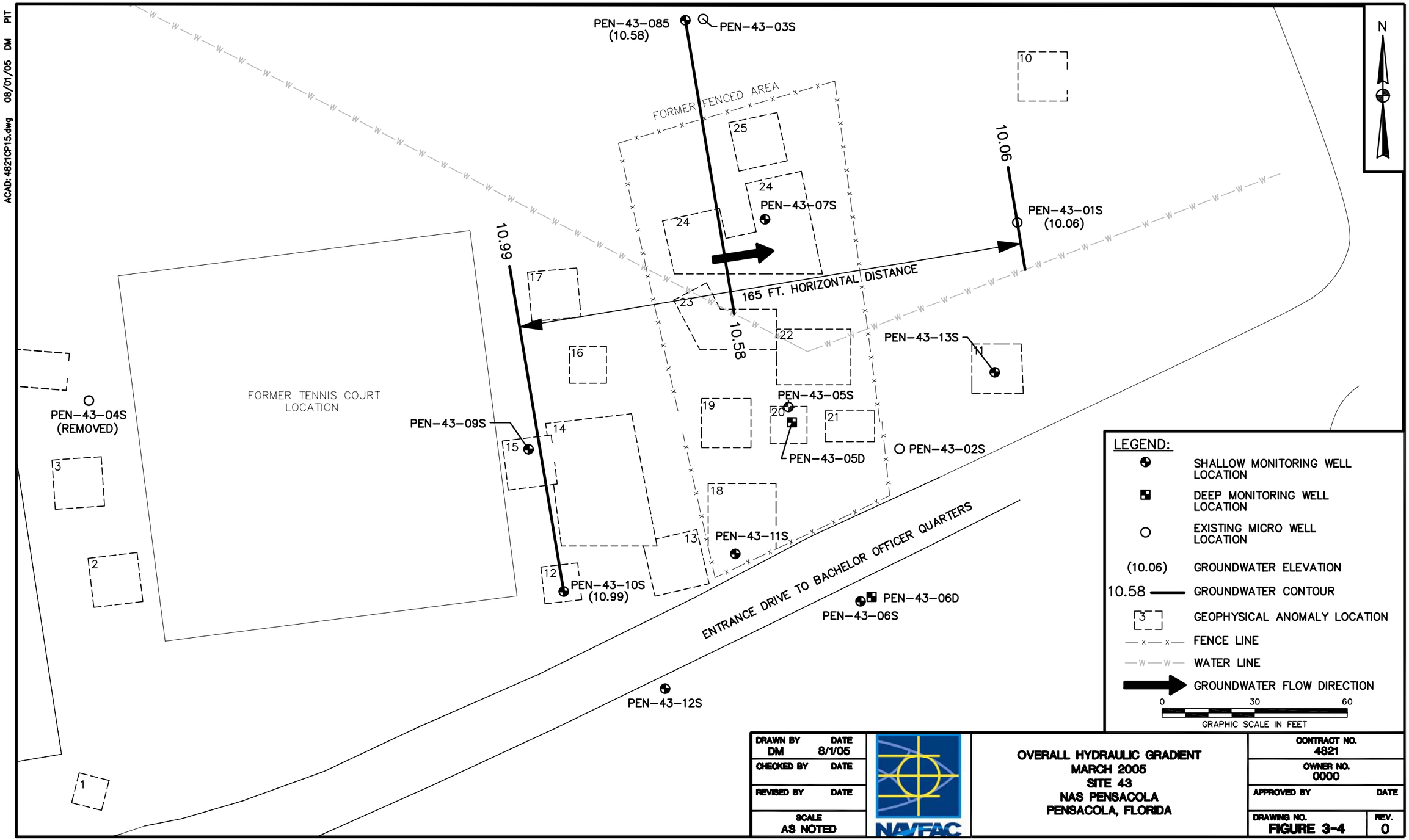
The highest and lowest groundwater elevation values measured in the water table monitoring wells were used to determine the difference in groundwater elevation across the site (Figure 3-4). The horizontal distance between the high and low groundwater elevation points was measured parallel to the estimated groundwater flow direction.

On May 26, 2005, the groundwater elevation in PEN-43-10S, 10.99 feet, was the highest value and the groundwater elevation in PEN-43-01S, 10.06 feet, was the lowest value in the water table monitoring wells. The horizontal distance between these two wells parallel to groundwater flow is approximately 165 feet. These data indicate the average hydraulic gradient of 0.006 feet/foot for the water table wells.

3.6.2.4 Vertical Gradient

The vertical groundwater gradient was estimated from the groundwater elevations measured in the shallow and deep monitoring well pairs installed at the site. The vertical gradient is determined from the difference in groundwater elevation in the adjacent shallow and deep monitoring wells and the vertical separation of the screened intervals of the monitoring wells.

Monitoring wells PEN-43-05S and PEN-43-05D are located adjacent to each other. The bottom of the well screen of PEN-43-05S is 19 feet below grade and the top of the well screen of PEN-43-05D is 45 feet below grade, with a vertical separation of the screened intervals of 26 feet. On March 5, 2005, the groundwater elevation in PEN-43-05D (11.31 feet) was 0.83 feet higher than PEN-43-05S (10.48 feet) resulting in an upward vertical gradient of 0.03 feet. On March 26, 2005, the groundwater elevation in


ACAD: 4821CP15.dwg 08/01/05 DM PIT
N
PEN-43-085
(10.58)
PEN-43-03S
FORMER FENCED AREA
10.06
PEN-43-01S
(10.06)
PEN-43-07S
10.99
165 FT. HORIZONTAL DISTANCE
10.58
PEN-43-13S
PEN-43-05S
PEN-43-05D
PEN-43-02S
FORMER TENNIS COURT
LOCATION
PEN-43-04S
(REMOVED)
PEN-43-09S
PEN-43-11S
PEN-43-10S
(10.99)
PEN-43-06D
PEN-43-06S
ENTRANCE DRIVE TO BACHELOR OFFICER QUARTERS
PEN-43-12S
LEGEND:
SHALLOW MONITORING WELL LOCATION
DEEP MONITORING WELL LOCATION
EXISTING MICRO WELL LOCATION
(10.06) GROUNDWATER ELEVATION
10.58 GROUNDWATER CONTOUR
GEOPHYSICAL ANOMALY LOCATION
FENCE LINE
WATER LINE
GROUNDWATER FLOW DIRECTION
0 30 60
GRAPHIC SCALE IN FEET
DRAWN BY DM DATE 8/1/05
CHECKED BY DATE
REVISED BY DATE
SCALE AS NOTED
NAVFAC
OVERALL HYDRAULIC GRADIENT
MARCH 2005
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
CONTRACT NO. 4821
OWNER NO. 0000
APPROVED BY DATE
DRAWING NO. FIGURE 3-4
REV. 0
FORM CADD NO. SDIV-BH.DWG – REV 1 – 9/10/98

PEN-43-05D (11.27 feet) was 0.82 feet higher than PEN-43-05S (10.45 feet) resulting in an upward vertical gradient of 0.03 feet as well.

Monitoring wells PEN-43-06S and PEN-43-06D are also located adjacent to each other. The bottom of the well screen of PEN-43-05S is 25 feet below grade and the top of the well screen of PEN-43-05D is 45 feet below grade, with a vertical separation of the screened intervals of 20 feet. On March 5, 2005, the groundwater elevation in PEN-43-06D (11.25 feet) was 0.77 feet higher than PEN-43-05S (10.48 feet) resulting in an upward vertical gradient of 0.04 feet. On March 26, 2005, the groundwater elevation in PEN-43-05D (11.22 feet) was 0.77 feet higher than PEN-43-05S (10.45 feet) resulting in an upward vertical gradient of 0.04 feet as well.

3.6.2.5 Hydraulic Conductivity

Hydraulic conductivity values for Site 43 were estimated using data from monitoring wells at OU 10 (Ensafe/Allen and Hoshall, 1996). The geometric mean of the hydraulic conductivity values reported for OU 10 is approximately 44.0 feet/day or 0.03 feet/minute (Appendix C).

3.6.2.6 Groundwater Flow Velocity

Potential movement of groundwater by natural flow in the saturated zone can be estimated by Darcy's Law, which may be expressed as:

$$V = \frac{(K \times I)}{n}$$

Where:

V = average velocity

K = hydraulic conductivity

n = effective porosity

I = average hydraulic gradient

Data from soil borings advanced during the RI indicate that fine grained sand and silty or clayey sand are the typical lithologies at the site. Review of standard literature suggests that a representative effective porosity for this lithology is approximately 30 percent.

Using an average hydraulic conductivity of 44 feet per day, an average hydraulic gradient of 0.006 feet/foot, and an effective porosity value of 30 percent, the estimated average groundwater velocity for the water table zone at Site 43 was calculated at 0.88 feet/day or about 321 feet/year.

3.6.2.7 On Base Potable Water Supply Wells

Three water wells are located on NAS Pensacola to provide an emergency backup potable water supply (NEESA, 1984). The backup water supply wells are completed at depths ranging from 224 to 250 feet bls and extract groundwater from the sand and gravel aquifer. The nearest potable water well to Site 43 is Well 2, located approximately 1,600 feet west-southwest. The main source of potable water for the base is the Navy-owned well field located at Naval Technical Training Center (NTTC) Corry Station, which is located approximately three miles north of NAS Pensacola on the north side of Bayou Grande.

3.7 DEMOGRAPHY AND LAND USE

NAS Pensacola is located west of the City of Pensacola, Florida, in southern Escambia County. NAS Pensacola is an active military facility. The primary mission is aviation training. Additional missions include tenant support and services to other activities in the region.

Land uses on base include training activities, equipment and materials storage, maintenance areas, recreational facilities, and residential housing for military personnel. Land use in the off-base areas adjacent to NAS Pensacola is primarily residential.

Site 43 is located adjacent to several housing areas, therefore, recreational users as well as site and maintenance workers are expected to use the site.

3.8 ECOLOGY

Site 43 is located in a developed area of the base. Ground cover at the site is predominantly maintained lawn. Large trees are present at the site, but native understory is absent. No wetlands are located in the vicinity of Site 43. On-site wildlife may temporarily use Site 43, but due to lack of suitable cover, wildlife use is assumed to be infrequent.

A list of federally listed threatened and endangered species and species of special concern for Escambia County was obtained from the web site for the Ecological Services and Fisheries Resource Office of the U.S. Fish and Wildlife Service in Panama City, Florida and is included in Appendix C. Five fish, 12 amphibians/reptiles, 14 birds, 4 mammals, and 24 plants are listed as threatened, endangered, or a species of special concern for the county (Appendix C). However, the habitats listed for these special status species (i.e., estuarine, palustrine, upland forests, etc.) do not exist at Site 43 or adjacent areas; therefore, none of the special status species recorded in Escambia County would be expected at the site.

4.0 NATURE AND EXTENT OF CONTAMINATION

The analytical results for soil and groundwater samples collected for this investigation were compared to appropriate cleanup target levels (CTLs) established by FDEP. Analytical summary tables and contaminant concentration maps are presented in the investigation results sections. Validation reports for the laboratory analytical results are included in Appendix D.

4.1 CONTAMINANT SOURCES

The release of contaminants at Site 43 appears to have resulted from undocumented burning and disposal of unknown materials. The source and nature of materials, as well as the time of disposal, are unknown. Drums and other buried metallic debris, including inert ornamental ordnance, have been found at site. The area in the vicinity of Site 43 was formerly the Town of Warrington and has been used for military housing since the 1930's.

4.2 SOILS AND VADOSE ZONE

To evaluate the nature and extent of contaminants at Site 43, the surface and subsurface soil analytical results were compared to the risk-based SCTLs established in 62-777, FAC for direct exposure-residential, direct exposure-industrial, and leachability based on groundwater criteria.

4.2.1 Surface Soil

Surface soil samples were collected fro 0 to 1 foot bls at 20 locations at Site 43. Sample locations were based on the surface soil sampling results reported in the SCR and IRA report. Surface soil samples were not collected from areas where surface soil was excavated during the IRA. The samples were analyzed for SVOCs and selected metals; therefore, the surface soil samples were not all analyzed for the same suite of metals. Positive detections of analytes in surface soil samples are summarized in Table 4-1. Data validation reports are included in Appendix D.

4.2.1.1 Arsenic

Twelve of the surface soil samples were analyzed for arsenic, including the samples collected from Anomaly Areas 11, 12, and 23 and the Tennis Court Area (Figure 4-1). Arsenic concentrations greater than the residential SCTL of 2.1 mg/kg were reported from six surface soil samples:

PEN-43-SS19	3.5 milligrams per kilogram (mg/kg)
PEN-43-SS-21	4.2 mg/kg

TABLE 4-1

SURFACE SOIL ANALYTICAL RESULTS SUMMARY
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

LOCATION	FLORIDA CRITERIA			PEN-43-SS18	PEN-43-SS18	PEN-43-SS19	PEN-43-SS20	PEN-43-SS21	PEN-43-SS22	PEN-43-SS23	PEN-43-SS24	PEN-43-SS25	PEN-43-SS26	PEN-43-SS27
SAMPLE NAME				PEN-43-SS1801	PEN-43-SS1801-D	PEN-43-SS1901	PEN-43-SS2001	PEN-43-SS2101	PEN-43-SS2201	PEN-43-SS2301	PEN-43-SS2401	PEN-43-SS2501	PEN-43-SS2601	PEN-43-SS2701
SAMPLE DATE	DIRECT	DIRECT	LEACHING	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05
DEPTH RANGE (Feet below land surface)	EXPOSURE	EXPOSURE	TO	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
SEMIVOLATILE ORGANICS (µg/kg)	RESIDENTIAL	INDUSTRIAL	GROUNDWATER											
1-METHYLNAPHTHALENE	200000	1800000	3100	11 UJ	12 UJ	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ	3 J	2 U	2 U	11 UJ
2-METHYLNAPHTHALENE	210000	2100000	8500	0.6 U	0.7 U	0.6 U	0.6 U	0.6 UJ	0.6 UJ	0.6 UJ	9 J	8 J	8 J	2 J
ACENAPHTHENE	2400000	20000000	2100	0.8 U	0.8 U	0.7 U	0.8 U	0.7 U	0.7 U	0.8 U	3 J	2 J	3 J	0.8 U
ACENAPHTHYLENE	1800000	20000000	27000	4 J	4 J	7 J	8 J	2 J	0.6 UJ	0.6 UJ	9 J	11 J	0.7 U	2 J
ANTHRACENE	21000000	300000000	2500000	4 J	10 J	2 J	2 J	3 J	0.8 U	1 J	16 J	13 J	13 J	5 J
BENZO(G,H,I)PERYLENE	2500000	52000000	32000000	49 J	38 J	24 J	19 J	17 J	2 UJ	6 J	86	68	29	30 J
BIS(2-ETHYLHEXYL)PHTHALATE	72000	390000	3600000	82 U	190 J	79 U	84 U	79 U	79 U	83 U	89 U	91 U	96 U	81 U
DI-N-BUTYL PHTHALATE	8200000	170000000	47000	93 U	100 U	90 U	1200	930	89 U	94 U	100 U	100 U	110 U	91 U
FLUORANTHENE	3200000	59000000	1200000	160	170	59	62	57	5 J	31	280 J	260 J	140	75
FLUORENE	2600000	33000000	160000	0.7 U	3 J	0.6 U	0.7 U	0.6 U	0.6 U	0.7 U	0.7 U	0.7 U	0.8 U	0.7 U
NAPHTHALENE	55000	300000	1200	1 J	1 J	1 J	1 U	1 J	0.9 U	1 U	1 U	1 U	1 U	3 J
PHENANTHRENE	2200000	36000000	250000	43 J	76 J	9 J	10 J	17 J	2 J	8 J	71	62	48	33
PYRENE	2400000	45000000	880000	130	120	46	57	39	4 J	17 J	190	180	86	46
CARCINOGENIC PAHs (µg/kg)														
BENZO(A)ANTHRACENE	NC	NC	800	120 J	110 J	59 J	66 J	39	8 J	19 J	310 J	280 J	120 J	58 J
BENZO(A)PYRENE	100	700	8000	95	78	46	49	36	0.8 U	12 J	160 [R]	150 [R]	62	46
BENZO(B)FLUORANTHENE	NC	NC	2400	210	180	100	110	76	11 J	33	390 J	340 J	140	94
BENZO(K)FLUORANTHENE	NC	NC	24000	61 J	48 J	29 J	34 J	24	3 J	9 J	110	130	46	26 J
CHRYSENE	NC	NC	77000	86	72	35	41	28	3 J	13 J	160	140	60	42
DIBENZO(A,H)ANTHRACENE	NC	NC	700	13 J	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	36	30	13 J	2 UJ
INDENO(1,2,3-CD)PYRENE	NC	NC	6600	49 J	46 J	27 J	24 J	19 J	2 UJ	7 J	98	84	35	30 J
BAP EQUIVALENT	100	700	NC	147 [R]	114	67	71	52	5	20	277 [R]	252 [R]	105 [R]	67
METALS (mg/kg)														
ARSENIC	2.1	12	NC	1.3	1.2	3.5 [R]	1.8	4.2 [R]	0.23 U	1.2	7.6 [R]	4.8 [R]	2	6.0 [R]
BARIUM	120	130000	1600	9.3	10.4	6.6	12.6	710 [R]	2.2	3.4	346 [R]	243 [R]	25.3	310 [R]
COPPER	150	89000	NC	6.7	7.6	29.1	5.4	240 [R]	3.2	5.4	889 [R]	381 [R]	60.5	Not Analyzed
LEAD	400	1400	NC	32.0	37.7	88.0	30.4	2080 [R],[I]	17.1	17.6	1990 [R],[I]	1490 [R],[I]	290	3850 [R],[I]
VANADIUM	67	10000	980	7.0	6.2	6.7	11.6	5.7	1.4	5.9	Not Analyzed	Not Analyzed	Not Analyzed	10.0

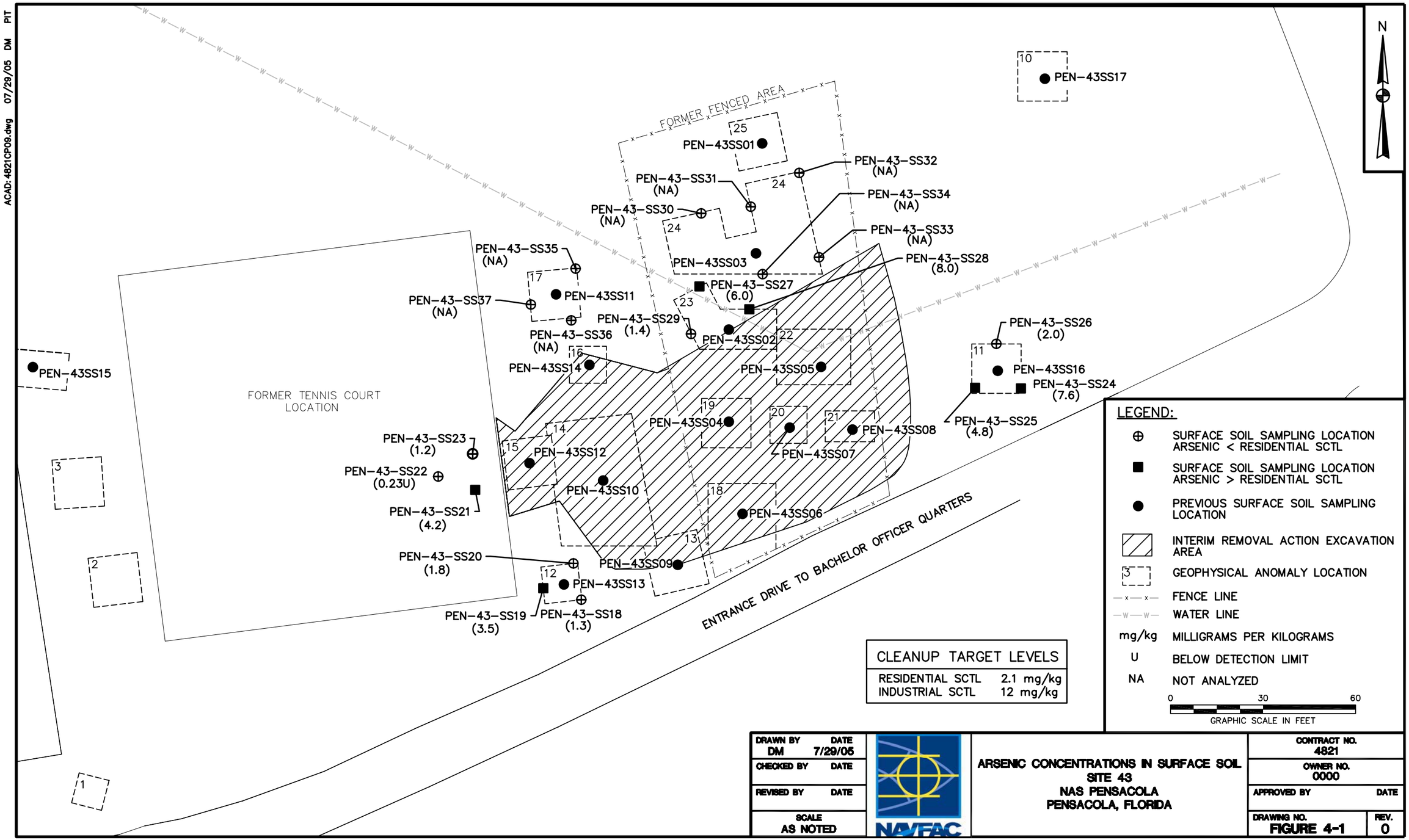
Notes:
J = estimated value.
U = less than laboratory method detection limit.
Shaded values exceed critieria - [R] = Residential, [I] = Industrial, [L] = Leaching
NC = No Criteria Established in 62-777, FAC
µg/kg = micrograms per kilogram
PAHs = Polynuclear Aromatic Hydrocarbons
BAP EQUIVALENT = Benzo(a)pyrene equivalent concentration
mg/kg = milligrams per kilogram

TABLE 4-1

SURFACE SOIL ANALYTICAL RESULTS SUMMARY
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

LOCATION	FLORIDA CRITERIA			PEN-43-SS28	PEN-43-SS29	PEN-43-SS30	PEN-43-SS31	PEN-43-SS32	PEN-43-SS33	PEN-43-SS34	PEN-43-SS35	PEN-43-SS36	PEN-43-SS37
SAMPLE NAME				PEN-43-SS2801	PEN-43-SS2901	PEN-43-SS3001	PEN-43-SS3101	PEN-43-SS3201	PEN-43-SS3301	PEN-43-SS3401	PEN-43-SS3501	PEN-43-SS3601	PEN-43-SS3701
SAMPLE DATE	DIRECT	DIRECT	LEACHING	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05	03/06/05
DEPTH RANGE (Feet below land surface)	EXPOSURE	EXPOSURE	TO	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
SEMIVOLATILE ORGANICS (µg/kg)	RESIDENTIAL	INDUSTRIAL	GROUNDWATER										
1-METHYLNAPHTHALENE	200000	1800000	3100	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ	2 U	2 U	11 UJ	11 UJ	11 UJ
2-METHYLNAPHTHALENE	210000	2100000	8500	3 J	2 J	0.6 U	0.6 UJ	0.6 U	0.6 U	6 J	0.6 U	0.6 U	0.6 U
ACENAPHTHENE	2400000	20000000	2100	1 J	0.8 U	0.7 U	0.8 U	0.7 U	0.8 U	0.8 U	0.8 U	0.7 U	2 J
ACENAPHTHYLENE	1800000	20000000	27000	7 J	1 J	0.6 U	0.6 UJ	0.6 U	1 J	2 J	0.6 U	0.6 U	0.6 U
ANTHRACENE	21000000	300000000	2500000	17 J	3 J	1 J	0.9 U	0.9 J	2 J	2 J	1 J	0.9 U	4 J
BENZO(G,H,I)PERYLENE	2500000	52000000	32000000	110 J	10 J	5 J	4 J	4 J	7 J	21 J	6 J	5 J	6 J
BIS(2-ETHYLHEXYL)PHTHALATE	72000	390000	3600000	83 U	80 U	79 U	80 U	79 U	82 U	84 U	870	79 U	110 J
DI-N-BUTYL PHTHALATE	8200000	170000000	47000	94 U	91 U	90 U	91 U	90 U	93 U	95 U	91 U	90 U	91 U
FLUORANTHENE	3200000	59000000	1200000	270	44	22	16 J	21 J	45	62	21 J	15 J	38
FLUORENE	2600000	33000000	160000	0.7 U	0.6 U	0.6 U	0.6 U	0.6 U	0.7 U	0.7 U	0.6 U	0.6 U	0.7 U
NAPHTHALENE	55000	300000	1200	3 J	2 J	1 J	1 J	0.9 U	1 U	1 U	1 U	1 U	1 J
PHENANTHRENE	2200000	36000000	250000	85	18 J	7 J	5 J	6 J	10 J	15 J	6 J	6 J	24
PYRENE	2400000	45000000	880000	180	24	11 J	9 J	10 J	24	38	12 J	7 J	23
CARCINOGENIC PAHs (µg/kg)													
BENZO(A)ANTHRACENE	NC	NC	800	230 J	31 J	16 J	13 J	13 J	29 J	55 J	16 J	12 J	22 J
BENZO(A)PYRENE	100	700	8000	180 [R]	20 J	10 J	8 J	8 J	18 J	35	10 J	6 J	14 J
BENZO(B)FLUORANTHENE	NC	NC	2400	410	44	24	22	23	48	83	27	16 J	32
BENZO(K)FLUORANTHENE	NC	NC	24000	92 J	12 J	7 J	5 J	6 J	16 J	23	7 J	4 J	9 J
CHRYSENE	NC	NC	77000	150	18 J	8 J	7 J	8 J	17 J	30	9 J	6 J	13 J
DIBENZO(A,H)ANTHRACENE	NC	NC	700	34 J	2 UJ	2 UJ	2 UJ	2 UJ	2 U	12 J	2 UJ	2 UJ	2 UJ
INDENO(1,2,3-CD)PYRENE	NC	NC	6600	90 J	12 J	7 J	5 J	5 J	11 J	22 J	6 J	4 J	6 J
BAP EQUIVALENT	100	700	NC	288 [R]	31	17	14	14	28	63	17	11	22
METALS (mg/kg)													
ARSENIC	2.1	12	NC	8.0 [R]	1.4	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed
BARIUM	120	130000	1600	726 [R]	61.7	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed
COPPER	150	89000	NC	Not Analyzed	Not Analyzed	1.7	8.2	3.9	17	261 [R]	12.2	7.0	4.5
LEAD	400	1400	NC	7360 [R],[I]	417 [R]	10.7	32.5	28.0	68.7	500 [R]	Not Analyzed	Not Analyzed	Not Analyzed
VANADIUM	67	10000	980	73.1 [R]	4.1	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed

Notes:
J = estimated value.
U = less than laboratory method detection limit.
Shaded values exceed critieria - [R] = Residential, [I] = Industrial, [L] = Leaching
NC = No Criteria Established in 62-777, FAC
µg/kg = micrograms per kilogram
PAHs = Polynuclear Aromatic Hydrocarbons
BAP EQUIVALENT = Benzo(a)pyrene equivalent concentration
mg/kg = milligrams per kilogram


ACAD: 4821CP09.dwg 07/29/05 DM PIT
N
FORMER FENCED AREA
FORMER TENNIS COURT LOCATION
ENTRANCE DRIVE TO BACHELOR OFFICER QUARTERS
PEN-43SS01
PEN-43SS02
PEN-43SS03
PEN-43SS04
PEN-43SS05
PEN-43SS06
PEN-43SS07
PEN-43SS08
PEN-43SS09
PEN-43SS10
PEN-43SS11
PEN-43SS12
PEN-43SS13
PEN-43SS14
PEN-43SS15
PEN-43SS16
PEN-43SS17
PEN-43-SS18 (1.3)
PEN-43-SS19 (3.5)
PEN-43-SS20 (1.8)
PEN-43-SS21 (4.2)
PEN-43-SS22 (0.23U)
PEN-43-SS23 (1.2)
PEN-43-SS24 (7.6)
PEN-43-SS25 (4.8)
PEN-43-SS26 (2.0)
PEN-43-SS27 (6.0)
PEN-43-SS28 (8.0)
PEN-43-SS29 (1.4)
PEN-43-SS30 (NA)
PEN-43-SS31 (NA)
PEN-43-SS32 (NA)
PEN-43-SS33 (NA)
PEN-43-SS34 (NA)
PEN-43-SS35 (NA)
PEN-43-SS36 (NA)
PEN-43-SS37 (NA)
LEGEND:
SURFACE SOIL SAMPLING LOCATION ARSENIC < RESIDENTIAL SCTL
SURFACE SOIL SAMPLING LOCATION ARSENIC > RESIDENTIAL SCTL
PREVIOUS SURFACE SOIL SAMPLING LOCATION
INTERIM REMOVAL ACTION EXCAVATION AREA
GEOPHYSICAL ANOMALY LOCATION
FENCE LINE
WATER LINE
mg/kg MILLIGRAMS PER KILOGRAMS
U BELOW DETECTION LIMIT
NA NOT ANALYZED
0 30 60
GRAPHIC SCALE IN FEET
CLEANUP TARGET LEVELS
RESIDENTIAL SCTL 2.1 mg/kg
INDUSTRIAL SCTL 12 mg/kg
DRAWN BY DM DATE 7/29/05
CHECKED BY DATE
REVISED BY DATE
SCALE AS NOTED
NAVFAC
ARSENIC CONCENTRATIONS IN SURFACE SOIL
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
CONTRACT NO. 4821
OWNER NO. 0000
APPROVED BY DATE
DRAWING NO. FIGURE 4-1
REV. 0
FORM CADD NO. SDIV-BH.DWG – REV 1 – 9/10/98

PEN-43-SS24	7.6 mg/kg
PEN-43-SS25	4.8 mg/kg
PEN-43-SS27	6.0 mg/kg
PEN-43-SS28	8.0 mg/kg

The arsenic concentrations in the other six surface soil samples were less than the residential SCTL. No arsenic concentrations exceeding the industrial SCTL of 12 mg/kg were reported, however the results for PEN-43-SS24 and PEN-43-SS28 were greater than three times the residential SCTL. A default leaching to groundwater SCTL has not been established by FDEP for arsenic.

4.2.1.2 Barium

Twelve of the surface soil samples were analyzed for barium, including the samples collected from Anomaly Areas 11, 12, and 23 and the Tennis Court Area (Figure 4-2). Barium concentrations greater than the residential SCTL of 120 mg/kg were reported from five surface soil samples:

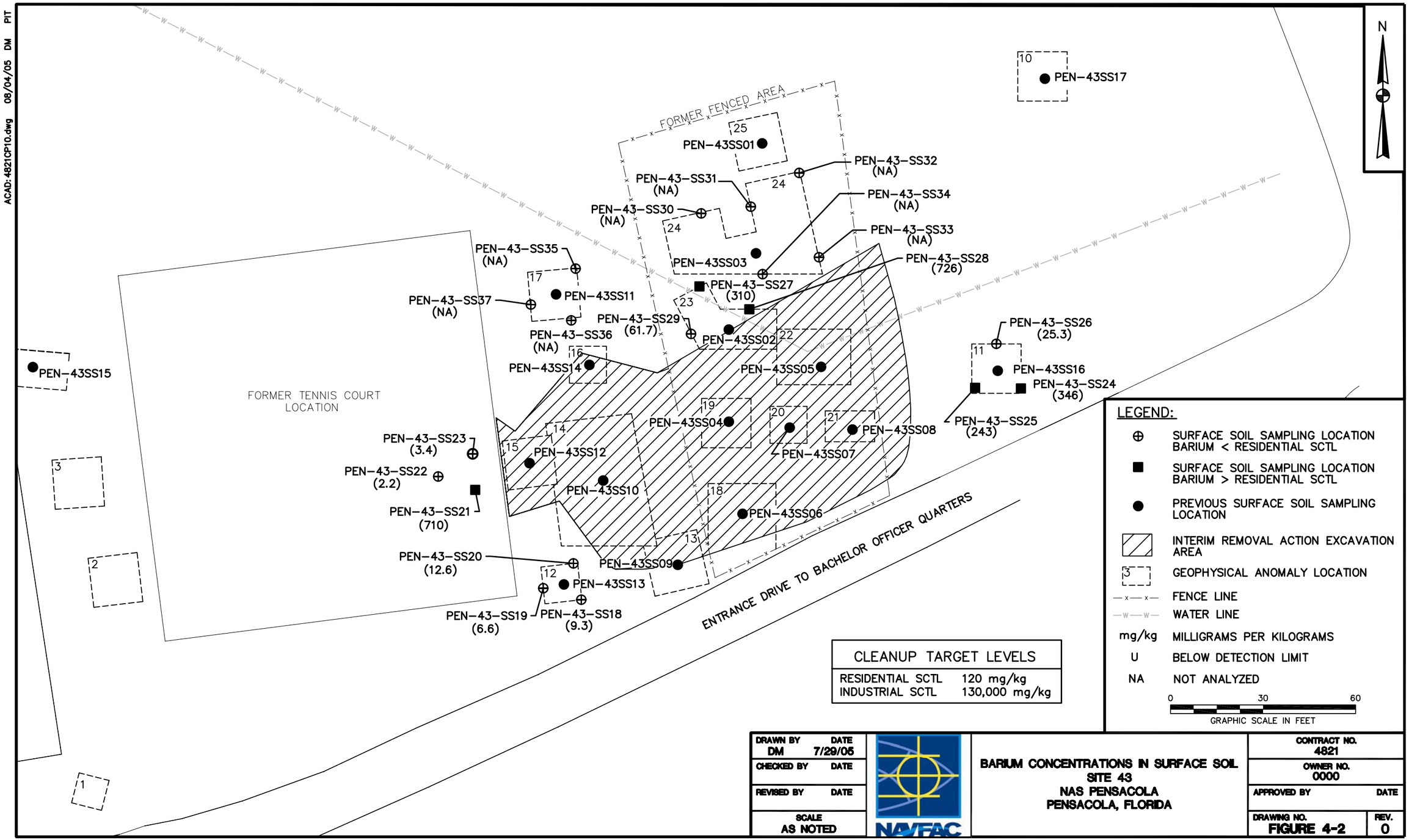
PEN-43-SS21	710 mg/kg
PEN-43-SS24	346 mg/kg
PEN-43-SS25	243 mg/kg
PEN-43-SS27	310 mg/kg
PEN-43-SS28	726 mg/kg

The barium concentrations in the other seven surface soil samples were less than the residential SCTL. No barium concentrations exceeding the industrial SCTL of 130,000 mg/kg were reported. The barium results were not compared to the three times residential SCTL criteria for hot spots because the residential SCTL for barium is based on acute toxicity to children for a one-time exposure. No barium concentrations exceeding the leaching to groundwater SCTL of 1,600 mg/kg were reported.

4.2.1.3 Copper

Seventeen of the surface soil samples were analyzed for copper, including the samples collected from Anomaly Areas 11, 12, 17, and 24 and the Tennis Court Area (Figure 4-3). Copper concentrations greater than the residential SCTL of 150 mg/kg were reported from four surface soil samples:

PEN-43-SS21	240 mg/kg
PEN-43-SS24	889 mg/kg
PEN-43-SS25	381 mg/kg
PEN-43-SS34	261 mg/kg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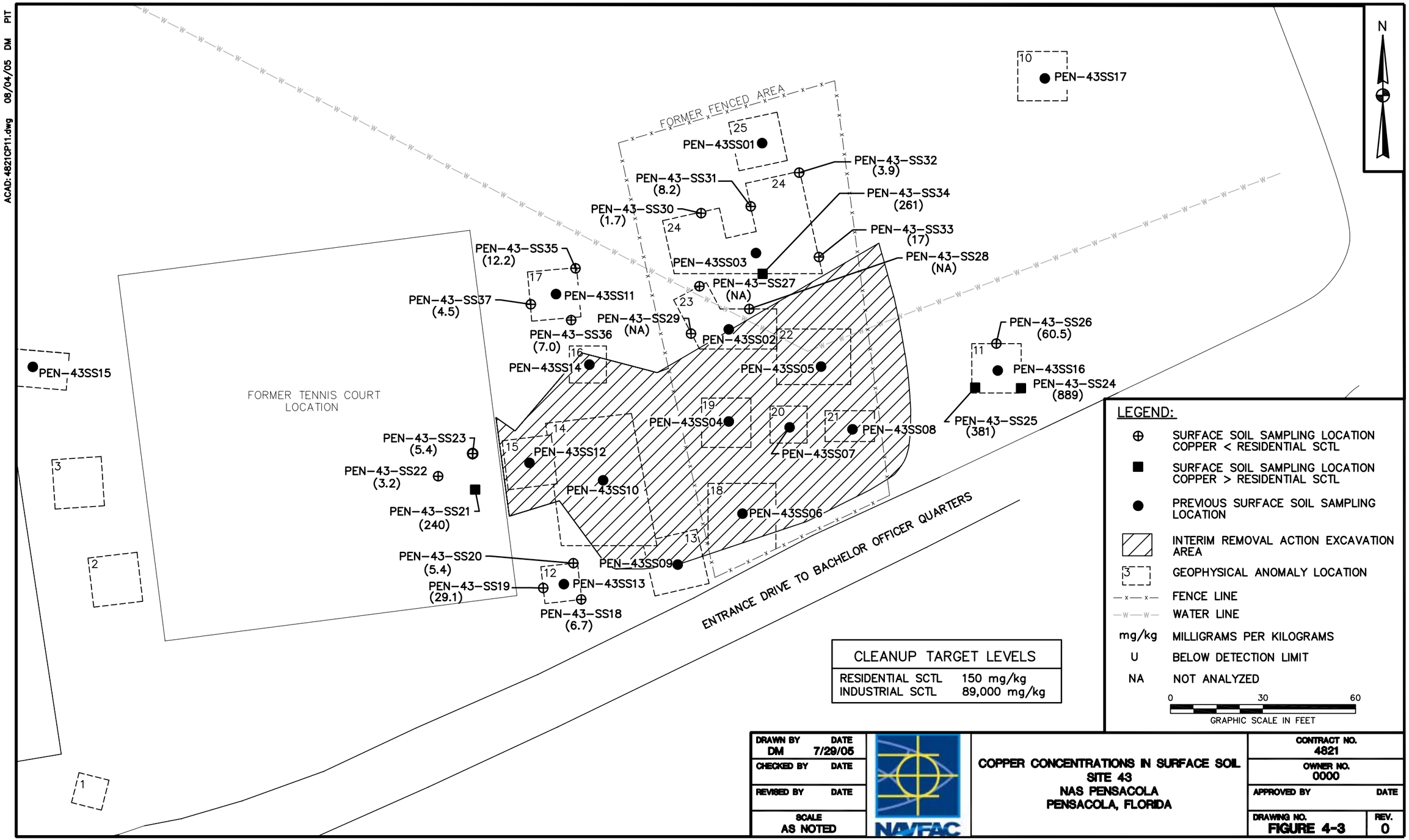
N
FORMER FENCED AREA
FORMER TENNIS COURT LOCATION
ENTRANCE DRIVE TO BACHELOR OFFICER QUARTERS
PEN-43SS17
PEN-43SS01
PEN-43-SS32 (NA)
PEN-43-SS31 (NA)
PEN-43-SS34 (NA)
PEN-43-SS30 (NA)
PEN-43-SS33 (NA)
PEN-43-SS35 (NA)
PEN-43SS03
PEN-43-SS28 (726)
PEN-43-SS27 (310)
PEN-43-SS37 (NA)
PEN-43SS11
PEN-43-SS29 (61.7)
PEN-43-SS36 (NA)
PEN-43SS02
PEN-43-SS26 (25.3)
PEN-43SS14
PEN-43SS05
PEN-43SS15
PEN-43SS16
PEN-43-SS24 (346)
PEN-43SS04
PEN-43-SS25 (243)
PEN-43SS08
PEN-43-SS23 (3.4)
PEN-43SS12
PEN-43SS07
PEN-43-SS22 (2.2)
PEN-43SS10
PEN-43-SS21 (710)
PEN-43SS06
PEN-43-SS20 (12.6)
PEN-43SS09
PEN-43SS13
PEN-43-SS19 (6.6)
PEN-43-SS18 (9.3)
1
2
3
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
24
25
LEGEND:
SURFACE SOIL SAMPLING LOCATION BARIUM < RESIDENTIAL SCTL
SURFACE SOIL SAMPLING LOCATION BARIUM > RESIDENTIAL SCTL
PREVIOUS SURFACE SOIL SAMPLING LOCATION
INTERIM REMOVAL ACTION EXCAVATION AREA
GEOPHYSICAL ANOMALY LOCATION
FENCE LINE
WATER LINE
mg/kg MILLIGRAMS PER KILOGRAMS
U BELOW DETECTION LIMIT
NA NOT ANALYZED
0 30 60
GRAPHIC SCALE IN FEET
CLEANUP TARGET LEVELS
RESIDENTIAL SCTL 120 mg/kg
INDUSTRIAL SCTL 130,000 mg/kg
DRAWN BY DM DATE 7/29/05
CHECKED BY DATE
REVISED BY DATE
SCALE AS NOTED
NAVFAC
BARIUM CONCENTRATIONS IN SURFACE SOIL
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
CONTRACT NO. 4821
OWNER NO. 0000
APPROVED BY DATE
DRAWING NO. FIGURE 4-2
REV. 0
FORM CADD NO. SDIV-BH.DWG – REV 1 – 9/10/98


ACAD: 4821CP11.dwg 08/04/05 DM PIT
N
FORMER FENCED AREA
FORMER TENNIS COURT LOCATION
ENTRANCE DRIVE TO BACHELOR OFFICER QUARTERS
PEN-43SS01
PEN-43SS02
PEN-43SS03
PEN-43SS04
PEN-43SS05
PEN-43SS06
PEN-43SS07
PEN-43SS08
PEN-43SS09
PEN-43SS10
PEN-43SS11
PEN-43SS12
PEN-43SS13
PEN-43SS14
PEN-43SS15
PEN-43SS16
PEN-43SS17
PEN-43-SS18 (6.7)
PEN-43-SS19 (29.1)
PEN-43-SS20 (5.4)
PEN-43-SS21 (240)
PEN-43-SS22 (3.2)
PEN-43-SS23 (5.4)
PEN-43-SS24 (889)
PEN-43-SS25 (381)
PEN-43-SS26 (60.5)
PEN-43-SS27 (NA)
PEN-43-SS28 (NA)
PEN-43-SS29 (NA)
PEN-43-SS30 (1.7)
PEN-43-SS31 (8.2)
PEN-43-SS32 (3.9)
PEN-43-SS33 (17)
PEN-43-SS34 (261)
PEN-43-SS35 (12.2)
PEN-43-SS36 (7.0)
PEN-43-SS37 (4.5)
LEGEND:
SURFACE SOIL SAMPLING LOCATION COPPER < RESIDENTIAL SCTL
SURFACE SOIL SAMPLING LOCATION COPPER > RESIDENTIAL SCTL
PREVIOUS SURFACE SOIL SAMPLING LOCATION
INTERIM REMOVAL ACTION EXCAVATION AREA
GEOPHYSICAL ANOMALY LOCATION
FENCE LINE
WATER LINE
mg/kg MILLIGRAMS PER KILOGRAMS
U BELOW DETECTION LIMIT
NA NOT ANALYZED
0 30 60
GRAPHIC SCALE IN FEET
CLEANUP TARGET LEVELS
RESIDENTIAL SCTL 150 mg/kg
INDUSTRIAL SCTL 89,000 mg/kg
DRAWN BY DM DATE 7/29/05
CHECKED BY DATE
REVISED BY DATE
SCALE AS NOTED
NAVFAC
COPPER CONCENTRATIONS IN SURFACE SOIL
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
CONTRACT NO. 4821
OWNER NO. 0000
APPROVED BY DATE
DRAWING NO. FIGURE 4-3
REV. 0
FORM CADD NO. SDIV-BH.DWG – REV 1 – 9/10/98

The copper concentrations in the other 13 surface soil samples were less than the residential SCTL. No copper concentrations exceeding the industrial SCTL of 89,000 mg/kg were reported. The copper results were not compared to the three times residential SCTL criteria for hot spots because the residential SCTL for copper is based on acute toxicity to children for a one-time exposure. A default leaching to groundwater SCTL has not been established by FDEP for copper.

4.2.1.4 Lead

Seventeen of the surface soil samples were analyzed for lead, including the samples collected from Anomaly Areas 11, 12, 23, and 24 and the Tennis Court Area (Figure 4-4). Lead concentrations greater than the industrial SCTL of 1,400 mg/kg were reported from five surface soil samples:

PEN-43-SS-21	2,080 mg/kg
PEN-43-SS24	1,990 mg/kg
PEN-43-SS25	1,490 mg/kg
PEN-43-SS27	3,850 mg/kg
PEN-43-SS28	7,360 mg/kg

The lead concentration in PEN-43-SS28 was more than three times the industrial SCTL. Lead concentrations greater than the residential SCTL of 400 mg/kg were reported from two additional surface soil samples:

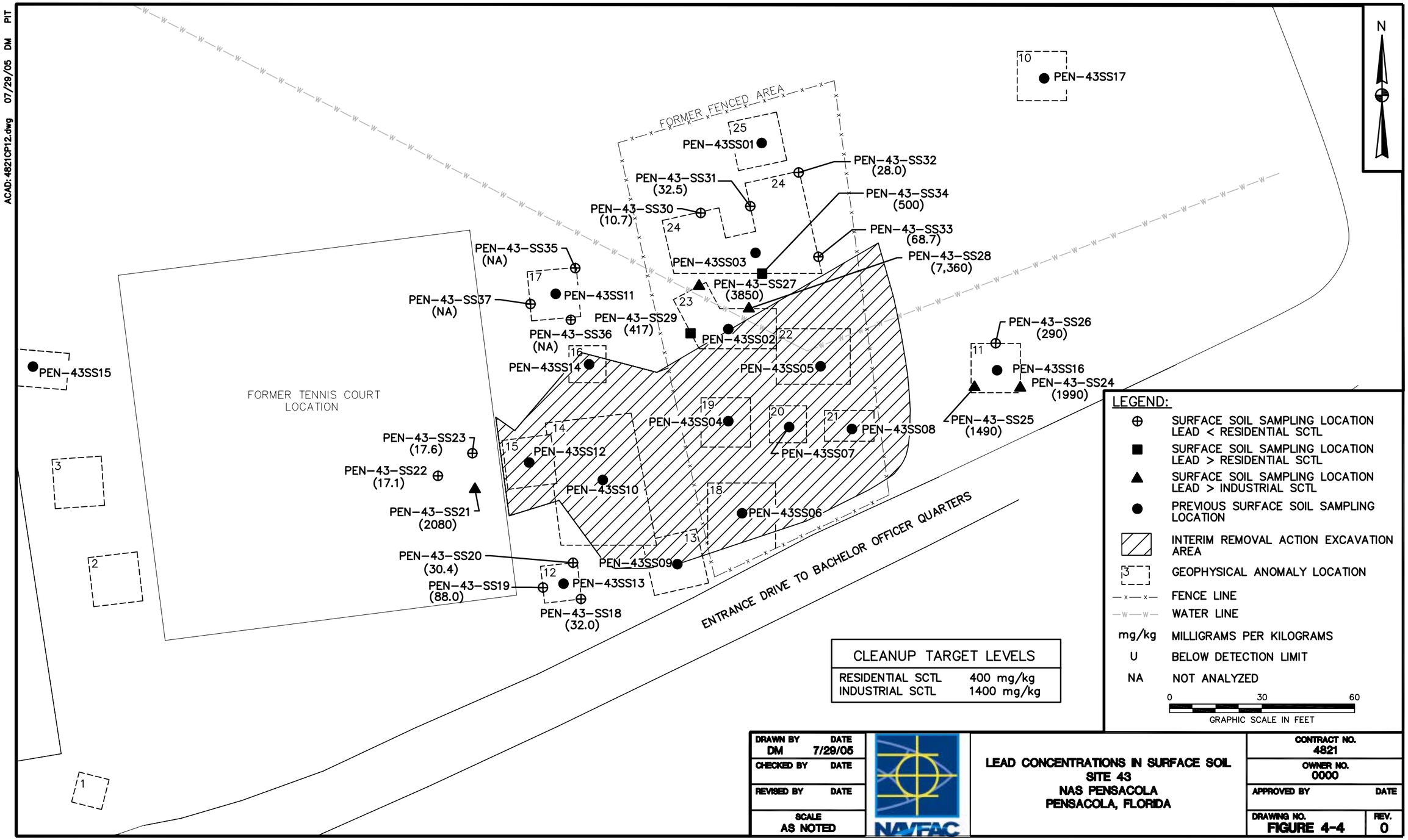
PEN-43-SS29	417 mg/kg
PEN-43-SS34	500 mg/kg

The lead concentrations in the other 10 surface soil samples were less than the residential SCTL. A default leaching to groundwater SCTL has not been established by FDEP for lead.

4.2.1.5 Vanadium

Nine of the surface soil samples were analyzed for vanadium, including the samples collected from Anomaly Areas 12 and 23 and the Tennis Court Area (Figure 4-5). A vanadium concentration greater than the residential SCTL of 67 mg/kg was reported from one sample, PEN-43-SS28 at 73.1 mg/kg. The vandium concentrations in the other eight surface soil samples were less than the residential SCTL. No vanadium concentrations exceeding the industrial SCTL of 10,000 mg/kg were reported. The vanadium results were not compared to the three times residential SCTL criteria for hot spots because the residential SCTL for vanadium is based on acute toxicity to children for a one-time exposure. No vanadium concentrations exceeding the leaching to groundwater SCTL of 980 mg/kg were reported.

ACAD: 4821CP12.dwg 07/29/05 DM PIT



CLEANUP TARGET LEVELS	
RESIDENTIAL SCTL	400 mg/kg
INDUSTRIAL SCTL	1400 mg/kg

LEGEND:

- ⊕ SURFACE SOIL SAMPLING LOCATION LEAD < RESIDENTIAL SCTL
- ■ SURFACE SOIL SAMPLING LOCATION LEAD > RESIDENTIAL SCTL
- ▲ SURFACE SOIL SAMPLING LOCATION LEAD > INDUSTRIAL SCTL
- ● PREVIOUS SURFACE SOIL SAMPLING LOCATION
- INTERIM REMOVAL ACTION EXCAVATION AREA
- 3 GEOPHYSICAL ANOMALY LOCATION
- —x—x— FENCE LINE
- —w—w— WATER LINE
- mg/kg MILLIGRAMS PER KILOGRAMS
- U BELOW DETECTION LIMIT
- NA NOT ANALYZED

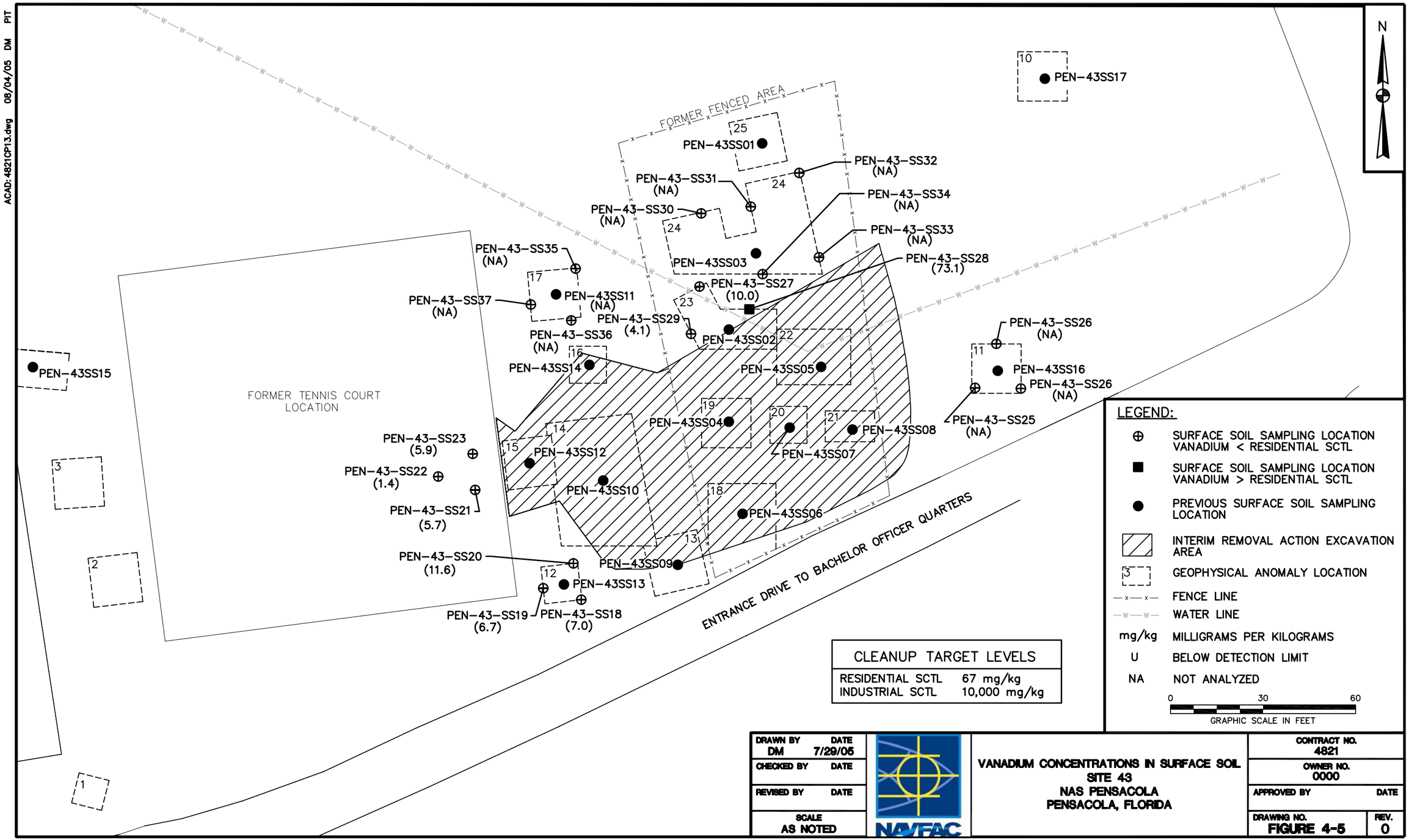
0 30 60
GRAPHIC SCALE IN FEET

DRAWN BY	DATE	LEAD CONCENTRATIONS IN SURFACE SOIL SITE 43 NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NO. 4821	
DM	7/29/05		OWNER NO. 0000	
CHECKED BY	DATE		APPROVED BY	DATE
REVISED BY	DATE		DRAWING NO. FIGURE 4-4	REV. 0
SCALE AS NOTED				

NAVFAC

FORM CADD NO. SDIV-BH.DWG – REV 1 – 9/10/98

ACAD: 4821CP13.dwg 08/04/05 DM PIT



CLEANUP TARGET LEVELS	
RESIDENTIAL SCTL	67 mg/kg
INDUSTRIAL SCTL	10,000 mg/kg

LEGEND:

- ⊕ SURFACE SOIL SAMPLING LOCATION VANADIUM < RESIDENTIAL SCTL
- ■ SURFACE SOIL SAMPLING LOCATION VANADIUM > RESIDENTIAL SCTL
- ● PREVIOUS SURFACE SOIL SAMPLING LOCATION
- INTERIM REMOVAL ACTION EXCAVATION AREA
- 3 GEOPHYSICAL ANOMALY LOCATION
- —x—x— FENCE LINE
- —W—W— WATER LINE
- mg/kg MILLIGRAMS PER KILOGRAMS
- U BELOW DETECTION LIMIT
- NA NOT ANALYZED

0 30 60
GRAPHIC SCALE IN FEET

DRAWN BY	DATE
DM	7/29/05
CHECKED BY	DATE
REVISED BY	DATE
SCALE AS NOTED	

NAVFAC

VANADIUM CONCENTRATIONS IN SURFACE SOIL
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NO. 4821	
OWNER NO. 0000	
APPROVED BY	DATE
DRAWING NO. FIGURE 4-5	REV. 0

FORM CADD NO. SDIV-BH.DWG – REV 1 – 9/10/98

4.2.1.6 Carcinogenic PAHs

Each of the 20 surface soil samples collected for the RI were analyzed for TCL SVOCs. Table 4-1 provides a summary of analytes detected in surface soil. The following SVOCs were detected at concentrations less than screening criteria in soil samples collected at Site 43: acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, bis(2-ethylhexyl)phthalate, di-n-butylphthalate, fluoranthene, fluorene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene. No SVOCs were detected at concentrations exceeding leaching to groundwater criteria. SVOCs reported at concentrations greater than direct exposure screening criteria were limited to carcinogenic PAHs (Figure 4-6) and are discussed below.

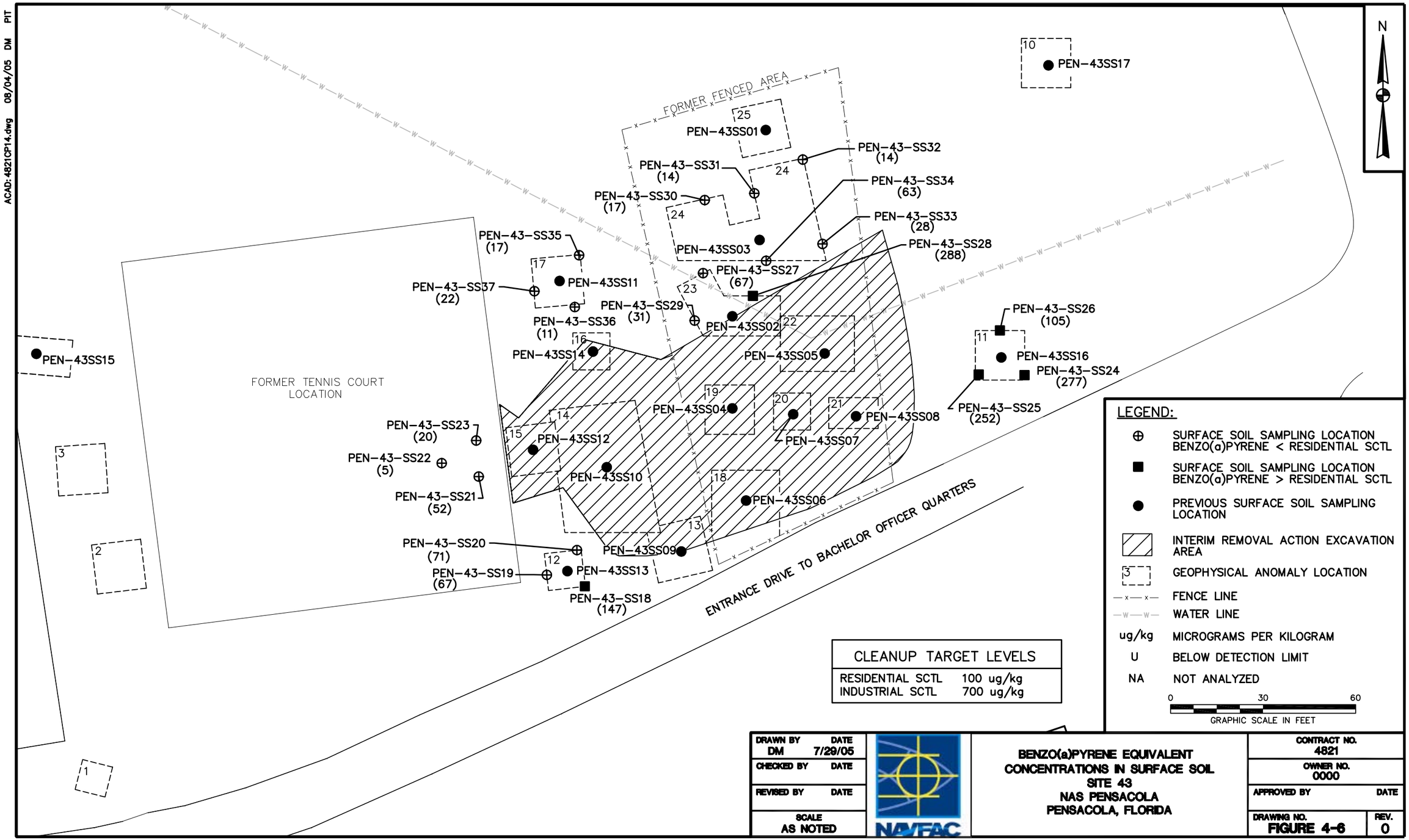
The seven carcinogenic PAHs listed in 62-777, FAC are benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, and indeno(1,2,3-CD)pyrene. The concentration of each carcinogenic PAH is converted to a benzo(a)pyrene equivalent concentration using a toxic equivalency factor (TEF). The TEFs for the carcinogenic PAHS are:

- Benzo(a)pyrene 1.0
- Benzo(a)anthracene 0.1
- Benzo(b)fluoranthene 0.1
- Benzo(k)fluoranthene 0.01
- Dibenzo(a,h)anthracene 1.0
- Chrysene 0.001
- Indeno(1,2,3-CD)pyrene 0.1

The benzo(a)pyrene equivalent concentrations of the detected carcinogenic PAHs are summed for each sample and the sum is compared to the direct exposure SCTLs established for benzo(a)pyrene in 62-777, FAC. Table 4-1 summarizes the positive detections of carcinogenic PAHs and the calculated benzo(a)pyrene equivalent concentrations.

Carcinogenic PAHs were detected in each of the 20 surface soil samples collected at Site 43 (Figure 4-6). Five samples had benzo(a)pyrene equivalent concentrations greater than the residential SCTL of 100 μg/kg (the reported concentrations of benzo(a)pyrene for each sample are provided in parentheses for comparison):

PEN-43-SS18 147 μg/kg (95 μg/kg)
PEN-43-SS24 277 μg/kg (160 μg/kg)
PEN-43-SS25 252 μg/kg (150 μg/kg)


ACAD: 4821CP14.dwg 08/04/05 DM PIT
N
FORMER FENCED AREA
FORMER TENNIS COURT LOCATION
ENTRANCE DRIVE TO BACHELOR OFFICER QUARTERS
PEN-43SS01
PEN-43SS02
PEN-43SS03
PEN-43SS04
PEN-43SS05
PEN-43SS06
PEN-43SS07
PEN-43SS08
PEN-43SS09
PEN-43SS10
PEN-43SS11
PEN-43SS12
PEN-43SS13
PEN-43SS14
PEN-43SS15
PEN-43SS16
PEN-43SS17
PEN-43-SS18 (147)
PEN-43-SS19 (67)
PEN-43-SS20 (71)
PEN-43-SS21 (52)
PEN-43-SS22 (5)
PEN-43-SS23 (20)
PEN-43-SS24 (277)
PEN-43-SS25 (252)
PEN-43-SS26 (105)
PEN-43-SS27 (67)
PEN-43-SS28 (288)
PEN-43-SS29 (31)
PEN-43-SS30 (17)
PEN-43-SS31 (14)
PEN-43-SS32 (14)
PEN-43-SS33 (28)
PEN-43-SS34 (63)
PEN-43-SS35 (17)
PEN-43-SS36 (11)
PEN-43-SS37 (22)
LEGEND:
SURFACE SOIL SAMPLING LOCATION BENZO(a)PYRENE < RESIDENTIAL SCTL
SURFACE SOIL SAMPLING LOCATION BENZO(a)PYRENE > RESIDENTIAL SCTL
PREVIOUS SURFACE SOIL SAMPLING LOCATION
INTERIM REMOVAL ACTION EXCAVATION AREA
GEOPHYSICAL ANOMALY LOCATION
FENCE LINE
WATER LINE
ug/kg MICROGRAMS PER KILOGRAM
U BELOW DETECTION LIMIT
NA NOT ANALYZED
0 30 60
GRAPHIC SCALE IN FEET
CLEANUP TARGET LEVELS
RESIDENTIAL SCTL 100 ug/kg
INDUSTRIAL SCTL 700 ug/kg
DRAWN BY DM DATE 7/29/05
CHECKED BY DATE
REVISED BY DATE
SCALE AS NOTED
NAVFAC
BENZO(a)PYRENE EQUIVALENT CONCENTRATIONS IN SURFACE SOIL
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
CONTRACT NO. 4821
OWNER NO. 0000
APPROVED BY DATE
DRAWING NO. FIGURE 4-6
REV. 0
FORM CADD NO. SDIV-BH.DWG – REV 1 – 9/10/98

PEN-43-SS26 105 μg/kg (62 μg/kg)

PEN-43-SS28 288 μg/kg (180 μg/kg)

No benzo(a)pyrene equivalent concentrations greater than three times the residential SCTL were reported in the surface soil samples.

4.2.2 Subsurface soil

Subsurface soil samples were collected at 20 locations at Site 43. Sample locations were based on the subsurface soil sampling results reported in the SCR and IRA report. Two subsurface soil samples were collected from each boring location; one from the shallow interval that corresponded to approximate depth of waste burial at the site (2 to 3 feet at most sample locations), and from a deeper sample interval ranging from 4 to 9 feet, based on visual appearance of the soil. The samples were analyzed for SVOCs and the suite of five selected metals. Positive detections of analytes in subsurface soil samples are summarized in Table 4-2. Data validation reports are included in Appendix D.

4.2.2.1 Arsenic

An arsenic concentration greater than the industrial SCTL of 12 mg/kg was reported from subsurface soil sample PEN-43-SB2501 at an estimated concentration of 14.6 mg/kg (Figure 4-7). However, the arsenic concentration in the field duplicate of this sample, PEN-43-SB2501D, was estimated at 5.3 mg/kg, which is less than the industrial SCTL. Arsenic concentrations greater than the residential SCTL of 2.1 mg/kg were reported from four subsurface soil samples:

PEN-43-SB0601 2.6 mg/kg (estimated)

PEN-43-SB1101 4.2 mg/kg

PEN-43-SB1401 11.4 mg/kg

PEN-43-SB1701 7.3 mg/kg

The arsenic results for PEN-43-SB1401 and PEN-43-SB1701 were greater than three times the residential SCTL. The arsenic concentrations in the other 15 shallow subsurface soil samples and all 20 of the deeper subsurface soil samples were less than the residential SCTL. A default leaching to groundwater SCTL has not been established by FDEP for arsenic.

4.2.2.2 Barium

Barium concentrations greater than the residential SCTL of 120 mg/kg were reported from six shallow subsurface soil samples:

TABLE 4-2

SUBSURFACE SOIL ANALYTICAL SUMMARY
SITE 43 REMEDIAL INVESTIGATION
NAS PENSACOLA
PENSACOLA, FLORIDA

LOCATION	FLORIDA CRITERIA			PEN-43-SB06	PEN-43-SB06	PEN-43-SB07	PEN-43-SB07	PEN-43-SB08	PEN-43-SB08	PEN-43-SB09	PEN-43-SB09	PEN-43-SB10	PEN-43-SB10	PEN-43-SB11	PEN-43-SB11	PEN-43-SB11	PEN-43-SB12
SAMPLE NAME				PEN-43-SB0601	PEN-43-SB0602	PEN-43-SB0701	PEN-43-SB0702	PEN-43-SB0801	PEN-43-SB0802	PEN-43-SB0901	PEN-43-SB0902	PEN-43-SB1001	PEN-43-SB1002	PEN-43-SB1101	PEN-43-SB1102	PEN-43-SB1102-D	PEN-43-SB1201
SAMPLE DATE	DIRECT	DIRECT	LEACHING	03/03/05	03/03/05	03/03/05	03/03/05	03/03/05	03/03/05	03/03/05	03/03/05	03/03/05	03/03/05	03/04/05	03/04/05	03/04/05	03/04/05
DEPTH RANGE (FT)	EXPOSURE	EXPOSURE	TO	3 - 4	7 - 9	3 - 4	7 - 9	2 - 3	6 - 8	2 - 3	6 - 8	2 - 3	6 - 8	2 - 3	5 - 7	5 - 7	2 - 3
SEMIVOLATILE ORGANICS (UG/KG)	RESIDENTIAL	INDUSTRIAL	GROUNDWATER														
1,1-BIPHENYL	3000000	34000000	200	180 U	180 U	180 U	170 U	170 U	170 UJ	180 U	170 U	170 U	170 U	190 U	170 U	170 U	180 U
1-METHYLNAPHTHALENE	200000	1800000	3100	11 U	11 U	11 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	11 U	10 UJ	10 U	11 UJ
2-METHYLNAPHTHALENE	210000	2100000	8500	1 J	0.6 U	0.6 U	0.6 U	1 J	0.6 U	2 J	0.6 U	0.6 U	0.6 U	3 J	0.6 U	0.6 U	0.6 U
ACENAPHTHENE	2400000	20000000	2100	0.8 U	0.7 U	0.8 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	3 J	0.7 U	0.7 U	0.8 U
ACENAPHTHYLENE	1800000	20000000	27000	0.6 U	0.6 U	0.6 U	0.6 U	2 J	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	8 J	0.6 U	0.6 U	0.6 U
ANTHRACENE	21000000	300000000	2500000	8 J	0.9 U	0.9 U	0.8 U	2 J	0.8 U	0.9 U	0.8 U	0.8 U	0.8 U	15 J	0.8 U	0.8 U	2 J
BENZO(G,H,I)PERYLENE	2500000	52000000	32000000	40	2 UJ	2 U	2 UJ	7 J	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	110 J	2 UJ	2 U	7 J
CARBAZOLE	49000	240000	200	65 U	64 U	64 U	63 U	63 U	63 UJ	64 U	63 U	63 U	63 U	68 U	63 U	63 U	64 U
DI-N-BUTYL PHTHALATE	8200000	170000000	47000	92 U	90 U	91 U	89 U	89 U	650 J	1200	88 U	89 U	89 U	95 U	88 U	89 U	91 U
DIBENZOFURAN	320000	63000000	15000	67 U	66 U	67 U	65 U	66 U	66 UJ	66 U	65 U	65 U	65 U	70 U	65 U	66 U	67 U
FLUORANTHENE	3200000	59000000	1200000	86	2 U	2 U	2 U	30	4 J	8 J	2 U	2 J	2 U	280	2 U	2 U	18 J
FLUORENE	2600000	33000000	160000	0.7 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	2 J	0.6 U	0.6 U	0.6 U
ISOPHORONE	540000	1200000	200	56 U	55 U	56 U	55 U	55 U	55 UJ	56 U	54 U	55 U	55 U	59 U	55 U	55 U	56 U
NAPHTHALENE	55000	300000	1200	2 J	0.9 U	1 U	0.9 U	1 J	0.9 U	1 J	2 J	0.9 U	0.9 U	4 J	0.9 U	0.9 U	1 U
PHENANTHRENE	2200000	36000000	250000	38	2 U	2 U	2 U	12 J	3 J	4 J	2 U	2 U	2 U	58	2 U	2 U	8 J
PYRENE	2400000	45000000	880000	74	2 UJ	2 U	2 UJ	20 J	3 J	5 J	2 UJ	2 UJ	2 UJ	230	2 U	2 U	13 J
CARCINOGENIC PAHs (UG/KG)																	
BENZO(A)ANTHRACENE	NC	NC	800	56	1 U	1 U	1 U	24	7 J	10 J	1 U	1 U	1 U	250	1 U	1 U	18 J
BENZO(A)PYRENE	100	700	8000	47	0.8 U	0.8 U	0.8 U	19 J	0.8 U	4 J	0.8 U	0.8 U	0.8 U	280 [R]	0.8 U	0.8 U	12 J
BENZO(B)FLUORANTHENE	NC	NC	2400	57 J	2 U	2 UJ	2 U	42	7 J	13 J	2 U	2 U	2 U	460 J	2 UJ	2 U	25 J
BENZO(K)FLUORANTHENE	NC	NC	24000	24	1 U	1 U	1 U	13 J	1 J	3 J	1 U	1 U	1 U	96 J	1 U	1 U	7 J
CHRYSENE	NC	NC	77000	50	1 U	1 U	1 U	16 J	2 J	4 J	1 U	1 U	1 U	190	1 U	1 U	10 J
DIBENZO(A,H)ANTHRACENE	NC	NC	700	15 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
INDENO(1,2,3-CD)PYRENE	NC	NC	6600	30	2 U	2 U	2 U	8 J	2 U	2 U	2 U	2 U	2 U	91 J	2 UJ	2 U	5 J
BAP EQUIVALENT	100	700	NC	77	0.8 U	0.8 U	0.8 U	28	3	7	0.8 U	0.8 U	0.8 U	362	0.8 U	0.8 U	18
METALS (MG/KG)																	
ARSENIC	2.1	12	NC	2.6 J [R]	0.35 J	0.36 J	0.17 UJ	1.8 J	0.29 J	1.3 J	0.29 J	0.31 J	0.20 UJ	4.2 [R]	0.21 U	0.31	0.20 U
BARIUM	120	130000	1600	188 J [R]	17.4 J	2.1 J	1.9 J	138 J [R]	15.7 J	13.6 J	1.4 J	1.4 J	2.2 J	306 J [R]	1.5 J	15.1 J	58.6 J
COPPER	150	89000	NC	529 J [R]	3.2 J	1.5 J	1.1 J	300 J [R]	74.7 J	26.6 J	0.70 J	0.70 J	0.86 J	3380 [R]	0.74	2.2	22.5
LEAD	400	1400	NC	519 [R]	6.7	1.8	1.0	427 [R]	20.9	109	0.90	1.3	0.82	1370 J [R]	1.4 J	4.0 J	87.7 J
VANADIUM	67	10000	980	18.5	2.5	2.3	1.7	6.5	2.9	2.3	2.1	2.2	2.2	8.0	2.4	2.3	2.3

Notes:
J = estimated value.
U = less than laboratory method detection limit.
Shaded values exceed critieria - [R] = Residential, [I] = Industrial, [L] = Leaching
NC = No Criteria Established in 62-777, FAC
µg/kg = micrograms per kilogram
PAHs = Polynuclear Aromatic Hydrocarbons
BAP EQUIVALENT = Benzo(a)pyrene equivalent concentration
mg/kg = milligrams per kilogram

TABLE 4-2

SUBSURFACE SOIL ANALYTICAL SUMMARY
SITE 43 REMEDIAL INVESTIGATION
NAS PENSACOLA
PENSACOLA, FLORIDA

LOCATION	FLORIDA CRITERIA			PEN-43-SB12	PEN-43-SB13	PEN-43-SB13	PEN-43-SB14	PEN-43-SB14	PEN-43-SB15	PEN-43-SB15	PEN-43-SB16	PEN-43-SB16	PEN-43-SB17	PEN-43-SB17	PEN-43-SB18	PEN-43-SB18	PEN-43-SB19
SAMPLE NAME				PEN-43-SB1202	PEN-43-SB1301	PEN-43-SB1302	PEN-43-SB1401	PEN-43-SB1402	PEN-43-SB1501	PEN-43-SB1502	PEN-43-SB1601	PEN-43-SB1602	PEN-43-SB1701	PEN-43-SB1702	PEN-43-SB1801	PEN-43-SB1802	PEN-43-SB1901
SAMPLE DATE	DIRECT	DIRECT	LEACHING	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05
DEPTH RANGE (FT)	EXPOSURE	EXPOSURE	TO	7 - 9	2 - 3	5 - 7	2 - 3	4 - 5	2 - 3	7 - 9	2 - 3	7 - 9	2 - 3	5 - 7	2 - 3	7 - 9	2 - 3
SEMIVOLATILE ORGANICS (UG/KG)	RESIDENTIAL	INDUSTRIAL	GROUNDWATER														
1,1-BIPHENYL	3000000	34000000	200	180 U	170 U	180 U	280 J [L]	180 U	170 U	170 U	170 U	180 U	180 U	170 U	180 U	170 U	170 U
1-METHYLNAPHTHALENE	200000	1800000	3100	11 UJ	10 UJ	11 UJ	540 J	11 U	10 UJ	10 U	10 U	11 U	2 J	10 U	11 U	10 U	10 U
2-METHYLNAPHTHALENE	210000	2100000	8500	0.6 U	0.6 U	0.6 U	670	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	2 J	0.6 U	0.6 U	0.6 U	0.6 U
ACENAPHTHENE	2400000	20000000	2100	0.8 U	0.7 U	0.7 U	1800	0.8 U	0.7 U	0.7 U	0.7 U	0.8 U	0.8 U	0.7 U	0.8 U	0.7 U	0.7 U
ACENAPHTHYLENE	1800000	20000000	27000	0.6 U	0.6 U	0.6 U	6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	7 J	0.6 U	0.6 U	0.6 U	0.6 U
ANTHRACENE	21000000	300000000	2500000	0.9 U	0.8 U	0.9 U	8000	0.9 U	0.8 U	0.8 U	0.8 U	0.9 U	7 J	0.8 U	0.9 U	0.8 U	0.9 J
BENZO(G,H,I)PERYLENE	2500000	52000000	32000000	2 UJ	2 UJ	2 UJ	4600 J	2 U	2 UJ	2 U	2 U	2 U	150 J	2 U	2 U	2 U	2 U
CARBAZOLE	49000	240000	200	64 U	63 U	64 U	2800 [L]	65 U	63 U	63 U	63 U	66 U	66 U	63 U	64 U	64 U	63 U
DI-N-BUTYL PHTHALATE	8200000	170000000	47000	90 U	89 U	90 U	98 U	91 U	89 U	88 U	88 U	93 U	93 U	88 U	90 U	89 U	89 U
DIBENZOFURAN	320000	63000000	15000	66 U	66 U	66 U	1700	67 U	66 U	65 U	65 U	68 U	68 U	65 U	66 U	66 U	65 U
FLUORANTHENE	3200000	59000000	1200000	4 J	2 U	2 U	30000	2 U	2 U	2 U	2 U	2 U	160	2 U	2 J	2 U	5 J
FLUORENE	2600000	33000000	160000	0.6 U	0.6 U	0.6 U	1700	0.6 U	0.6 U	0.6 U	0.6 U	0.7 U	0.7 U	0.6 U	0.6 U	0.6 U	0.6 U
ISOPHORONE	540000	1200000	200	56 U	55 U	56 U	60 U	56 U	55 U	54 U	54 U	58 U	57 U	55 U	56 U	55 U	55 U
NAPHTHALENE	55000	300000	1200	1 U	0.9 U	1 U	2400 J [L]	1 U	0.9 U	0.9 U	0.9 U	1 U	2 J	0.9 U	1 U	0.9 U	0.9 U
PHENANTHRENE	2200000	36000000	250000	2 J	2 U	2 U	28000	2 U	2 U	2 U	2 U	2 U	34	2 U	2 U	2 U	4 J
PYRENE	2400000	45000000	880000	3 J	2 U	2 U	17000 J	2 UJ	2 U	2 UJ	2 UJ	2 UJ	110 J	2 UJ	2 UJ	2 UJ	3 J
CARCINOGENIC PAHs (UG/KG)																	
BENZO(A)ANTHRACENE	NC	NC	800	8 J	1 U	1 U	15000 J [L]	1 U	1 U	1 U	1 U	1 U	320 J	1 U	7 J	6 J	7 J
BENZO(A)PYRENE	100	700	8000	2 J	0.8 U	0.8 U	10000 [R],[L]	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	340 [R]	0.8 U	0.8 U	0.8 U	0.8 U
BENZO(B)FLUORANTHENE	NC	NC	2400	8 J	2 UJ	2 UJ	16000 J [L]	2 U	2 UJ	2 U	2 U	2 U	670 J	2 U	2 U	2 U	2 U
BENZO(K)FLUORANTHENE	NC	NC	24000	2 J	1 U	1 U	5700	1 UJ	1 U	1 UJ	1 UJ	1 UJ	130	1 UJ	1 UJ	1 UJ	1 UJ
CHRYSENE	NC	NC	77000	3 J	1 U	1 U	8700 J	1 U	1 U	1 U	1 U	1 U	170	1 U	1 J	1 U	1 U
DIBENZO(A,H)ANTHRACENE	NC	NC	700	2 U	2 U	2 U	1100 [L]	2 UJ	2 U	2 UJ	2 UJ	2 UJ	36	2 UJ	2 UJ	2 UJ	2 UJ
INDENO(1,2,3-CD)PYRENE	NC	NC	6600	1 J	2 UJ	2 UJ	5000	2 U	2 UJ	2 U	2 U	2 U	150	2 U	2 U	2 U	2 U
BAP EQUIVALENT	100	700	NC	5	0.8 U	0.8 U	14766	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	491	0.8 U	3	3	3
METALS (MG/KG)																	
ARSENIC	2.1	12	NC	0.56	0.24 U	0.38	11.4 [R]	0.25	0.35	0.25 U	0.32	0.24 U	7.3 [R]	0.32	0.41	0.50	0.33
BARIUM	120	130000	1600	10.0 J	1.3 J	1.4 J	939 J [R]	7.6 J	7.7 J	3.7 J	14.1 J	4.8 J	366 J [R]	1.1 J	2.8 J	1.8 J	1.6 J
COPPER	150	89000	NC	10.6 J	0.95	0.63	1220 [R]	5.1	1.4	0.94	1.5	1.1	500 [R]	0.54	1.7	1.2	0.45
LEAD	400	1400	NC	37.5 J	1.1 J	0.58 U	5500 J [R],[I]	9.6 J	3.2 J	1.3 J	1.2 J	2.4 J	1460 J [R],[I]	0.96 J	6.5 J	2.8 J	0.81 J
VANADIUM	67	10000	980	3.0	1.9	1.6	156 [R]	6.2	2.2	1.6	38.2	26.4	40.1	1.8	1.8	2.2	2.4

Notes:
J = estimated value.
U = less than laboratory method detection limit.
Shaded values exceed critieria - [R] = Residential, [I] = Industrial, [L] = Leaching
NC = No Criteria Established in 62-777, FAC
µg/kg = micrograms per kilogram
PAHs = Polynuclear Aromatic Hydrocarbons
BAP EQUIVALENT = Benzo(a)pyrene equivalent concentration
mg/kg = milligrams per kilogram

TABLE 4-2

SUBSURFACE SOIL ANALYTICAL SUMMARY
SITE 43 REMEDIAL INVESTIGATION
NAS PENSACOLA
PENSACOLA, FLORIDA

LOCATION	FLORIDA CRITERIA			PEN-43-SB19	PEN-43-SB20	PEN-43-SB20	PEN-43-SB21	PEN-43-SB21	PEN-43-SB22	PEN-43-SB22	PEN-43-SB23	PEN-43-SB23	PEN-43-SB24	PEN-43-SB24	PEN-43-SB25	PEN-43-SB25	PEN-43-SB25
SAMPLE NAME				PEN-43-SB1902	PEN-43-SB2001	PEN-43-SB2002	PEN-43-SB2101	PEN-43-SB2102	PEN-43-SB2201	PEN-43-SB2202	PEN-43-SB2301	PEN-43-SB2302	PEN-43-SB2401	PEN-43-SB2402	PEN-43-SB2501	PEN-43-SB2501-D	PEN-43-SB2502
SAMPLE DATE	DIRECT	DIRECT	LEACHING	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/04/05	03/06/05	03/06/05	03/04/05	03/04/05	03/04/05
DEPTH RANGE (FT)	EXPOSURE	EXPOSURE	TO	6 - 8	2 - 3	5 - 7	2 - 3	5 - 7	2 - 3	7 - 9	2 - 3	6 - 8	2 - 3	5 - 7	2 - 3	2 - 3	4 - 5
SEMIVOLATILE ORGANICS (UG/KG)	RESIDENTIAL	INDUSTRIAL	GROUNDWATER														
1,1-BIPHENYL	3000000	34000000	200	170 U	170 U	170 U	180 U	180 U	170 U	180 U	180 U	170 U	170 U	170 U	180 U	180 U	170 U
1-METHYLNAPHTHALENE	200000	1800000	3100	10 U	2 U	10 U	11 U	11 U	2 U	11 UJ	11 UJ	10 UJ	10 UJ	10 UJ	2 U	2 U	2 U
2-METHYLNAPHTHALENE	210000	2100000	8500	0.6 U	0.6 U	0.6 U	0.6 U	5 J	0.6 U	0.6 UJ	0.6 UJ	0.6 U	0.6 UJ	0.6 UJ	8 J	10 J	5 J
ACENAPHTHENE	2400000	20000000	2100	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.8 U	0.7 U	0.7 U	0.7 U	1 J	2 J	0.7 U
ACENAPHTHYLENE	1800000	20000000	27000	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 UJ	0.6 UJ	0.6 U	0.6 UJ	0.6 UJ	2 J	3 J	0.6 U
ANTHRACENE	21000000	300000000	2500000	0.8 U	0.8 U	0.8 U	0.9 U	0.9 U	0.8 U	0.9 U	0.9 U	0.8 U	0.8 U	0.8 U	7 J	8 J	0.8 U
BENZO(G,H,I)PERYLENE	2500000	52000000	32000000	2 U	2 UJ	2 U	2 U	2 U	2 U	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	30	30	2 U
CARBAZOLE	49000	240000	200	63 U	63 U	63 U	64 U	64 U	63 U	64 U	65 U	64 U	63 U	64 U	66 U	67 U	63 U
DI-N-BUTYL PHTHALATE	8200000	170000000	47000	1000 J	89 U	89 U	90 U	90 U	89 U	90 U	91 U	1200	89 U	89 U	93 U	94 U	88 U
DIBENZOFURAN	320000	63000000	15000	65 U	66 U	65 U	66 U	66 U	66 U	66 U	67 U	66 U	65 U	66 U	69 U	69 U	65 U
FLUORANTHENE	3200000	59000000	1200000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 J	2 U	8 J	2 U	100	110	2 U
FLUORENE	2600000	33000000	160000	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.7 U	0.7 U	0.6 U
ISOPHORONE	540000	1200000	200	55 U	55 U	55 U	56 U	55 U	55 U	55 U	56 U	55 U	55 U	55 U	58 U	58 U	54 U
NAPHTHALENE	55000	300000	1200	0.9 U	0.9 U	0.9 U	1 U	0.9 U	0.9 U	1 J	1 U	0.9 U	0.9 U	0.9 U	1 U	1 U	0.9 U
PHENANTHRENE	2200000	36000000	250000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 J	2 U	34	36	2 U
PYRENE	2400000	45000000	880000	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	4 J	2 U	61	74	2 U
CARCINOGENIC PAHs (UG/KG)																	
BENZO(A)ANTHRACENE	NC	NC	800	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	6 J	1 UJ	7 J	1 U	89 J	100 J	1 UJ
BENZO(A)PYRENE	100	700	8000	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	2 J	0.8 U	52	60	0.8 U
BENZO(B)FLUORANTHENE	NC	NC	2400	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	8 J	2 U	100 J	180 J	2 U
BENZO(K)FLUORANTHENE	NC	NC	24000	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	2 J	1 U	32 J	9 J	1 U
CHRYSENE	NC	NC	77000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 J	1 U	47	54	1 U
DIBENZO(A,H)ANTHRACENE	NC	NC	700	2 UJ	2 U	2 U	2 U	2 U	2 U	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 U	22	2 U
INDENO(1,2,3-CD)PYRENE	NC	NC	6600	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	38	40	2 U
BAP EQUIVALENT	100	700	NC	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	3	0.8 U	6	0.8 U	76	114	0.8 U
METALS (MG/KG)																	
ARSENIC	2.1	12	NC	0.23 U	0.27 UJ	0.24 UJ	0.27 UJ	0.24 UJ	0.34 J	0.23 UJ	0.21 UJ	0.27	0.22 U	0.24 U	14.6 J [R],[I]	5.3 J [R]	0.25 UJ
BARIUM	120	130000	1600	0.56 J	2.4 J	0.32 U	1.8 J	0.92 J	2.0 J	1.5 J	4.0 J	1.0	1.5	1.7	884 J [R]	270 J [R]	10.8 J
COPPER	150	89000	NC	0.78	1.0 J	0.22 UJ	0.84 J	0.45 J	0.60 J	0.73 J	1.7 J	0.26	0.74	0.55	448 J [R]	930 J [R]	8.2 J
LEAD	400	1400	NC	0.56 U	1.8	0.24	0.96	0.71	1.0	0.62	2.1	0.50	1.3	2.0	1340 [R]	1390 [R]	1.1
VANADIUM	67	10000	980	0.83	2.9	0.44 U	2.8	1.4	2.7	1.5	1.8	1.4	1.6	2.6	13.6	11.2	2.4

Notes:
J = estimated value.
U = less than laboratory method detection limit.
Shaded values exceed critieria - [R] = Residential, [I] = Industrial, [L] = Leaching
NC = No Criteria Established in 62-777, FAC
µg/kg = micrograms per kilogram
PAHs = Polynuclear Aromatic Hydrocarbons
BAP EQUIVALENT = Benzo(a)pyrene equivalent concentration
mg/kg = milligrams per kilogram

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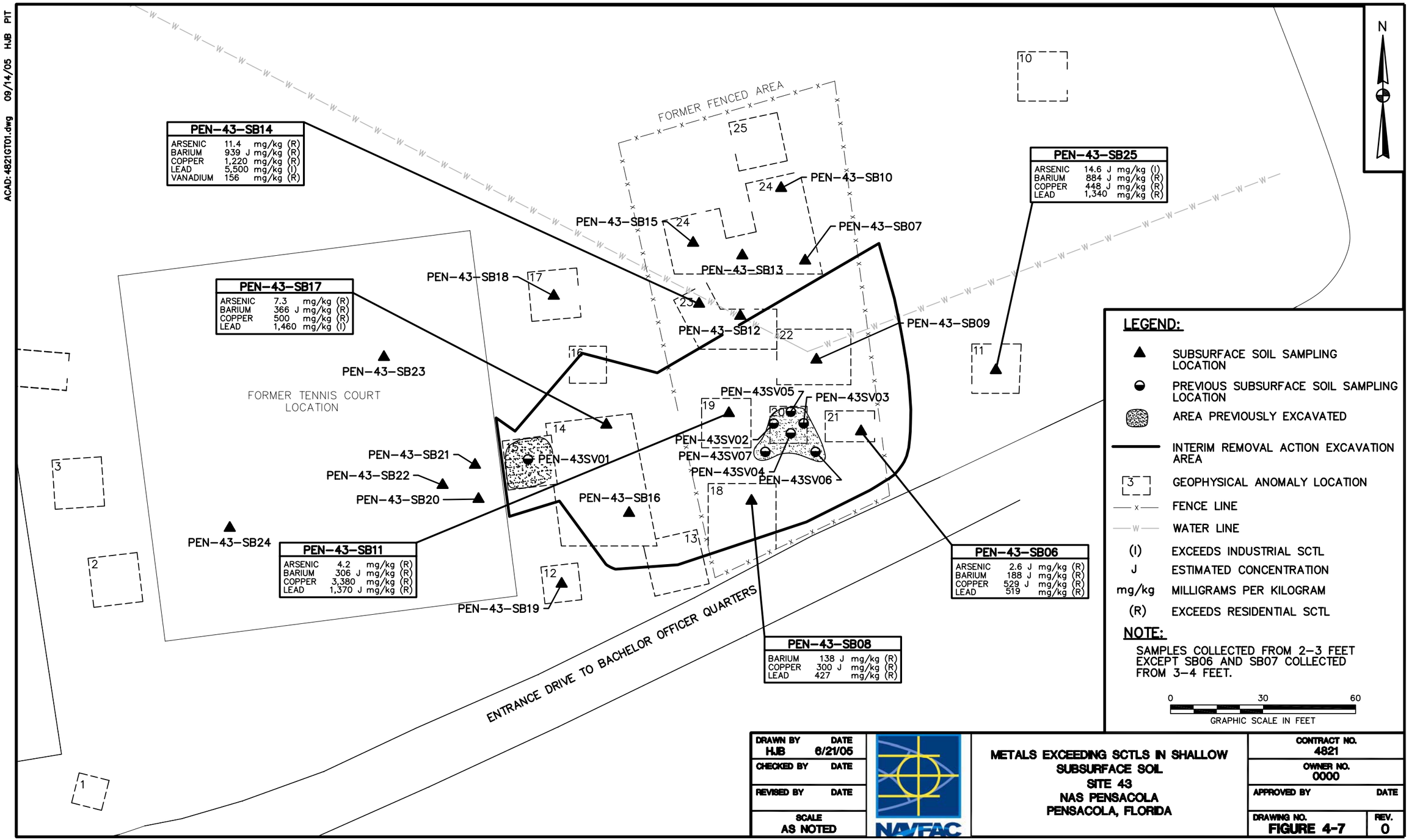

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METALS EXCEEDING SCTLS IN SHALLOW SUBSURFACE SOIL
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA

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PEN-43-SB0601	188 J mg/kg
PEN-43-SB0801	138 J mg/kg
PEN-43-SB1101	306 J mg/kg
PEN-43-SB1401	939 J mg/kg
PEN-43-SB1701	366 J mg/kg
PEN-43-SB2501	884 J mg/kg

The barium concentrations in the other 14 shallow subsurface soil samples and all 20 of the deeper subsurface soil samples were less than the residential SCTL (Figure 4-7). No barium concentrations exceeding the industrial SCTL of 130,000 mg/kg were reported. The barium results were not compared to the three times residential SCTL criteria for hot spots because the residential SCTL for barium is based on acute toxicity to children for a one-time exposure. No barium concentrations exceeding the leaching to groundwater SCTL of 1,600 mg/kg were reported.

4.2.2.3 Copper

Copper concentrations greater than the residential SCTL of 150 mg/kg were reported from six shallow subsurface soil samples:

PEN-43-SB0601	529 J mg/kg
PEN-43-SB0801	300 J mg/kg
PEN-43-SB1101	3,380 mg/kg
PEN-43-SB1401	1,220 mg/kg
PEN-43-SB1701	500 mg/kg
PEN-43-SB2501	448 J mg/kg

The copper concentrations in the other 14 shallow subsurface soil samples and all 20 of the deeper subsurface soil samples were less than the residential SCTL. No copper concentrations exceeding the industrial SCTL of 89,000 mg/kg were reported. The copper results were not compared to the three times residential SCTL criteria for hot spots because the residential SCTL for copper is based on acute toxicity to children for a one-time exposure. A default leaching to groundwater SCTL has not been established by FDEP for copper.

4.2.2.4 Lead

Lead concentrations greater than the industrial SCTL of 1,400 mg/kg were reported from two shallow subsurface soil samples:

PEN-43-SB1401	5,500 J mg/kg
PEN-43-SB1701	1,460 mg/kg

The lead concentration in PEN-43-SB1401 was more than three times the industrial SCTL. Lead concentrations greater than the residential SCTL of 400 mg/kg were reported from three additional shallow subsurface soil samples:

PEN-43-SB0601	519 mg/kg
PEN-43-SB0801	427 mg/kg
PEN-43-SB1101	1,370 J mg/kg
PEN-43-SB2501	1,340 mg/kg

The lead concentrations in the other 15 shallow subsurface soil samples and all 20 of the deeper subsurface soil samples were less than the residential SCTL. A default leaching to groundwater SCTL has not been established by FDEP for lead.

4.2.2.5 Vanadium

A vanadium concentration greater than the residential SCTL of 67 mg/kg was reported from one shallow subsurface soil sample, PEN-43-SB1401 at 156 mg/kg. The vandium concentrations in the other shallow and deeper subsurface soil samples were less than the residential SCTL. No vanadium concentrations exceeding the industrial SCTL of 10,000 mg/kg were reported. The vanadium results were not compared to the three times residential SCTL criteria for hot spots because the residential SCTL for vanadium is based on acute toxicity to children for a one-time exposure. No vanadium concentrations exceeding the leaching to groundwater SCTL of 980 mg/kg were reported.

4.2.2.6 Carcinogenic PAHs

Each of the subsurface soil samples collected for the RI were analyzed for TCL SVOCs. Table 4-2 provides a summary of analytes detected in subsurface soil. The following SVOCs were detected at concentrations less than screening criteria in soil samples collected at Site 43: acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, di-n-butylphthalate, dibenzofuran, fluoranthene, fluorene, isophorone, 1-methylnaphthalene, 2-methylnaphthalene, phenanthrene, and pyrene. SVOCs reported at concentrations greater than direct exposure screening criteria were limited to carcinogenic PAHs (Figure 4-8) and are discussed below.

A benzo(a)pyrene equivalent concentration greater than three times the industrial SCTL of 700 μg /kg was reported from subsurface soil sample PEN-43-SB1401 at 14,767 μg/kg (Figure 4-8). Three shallow

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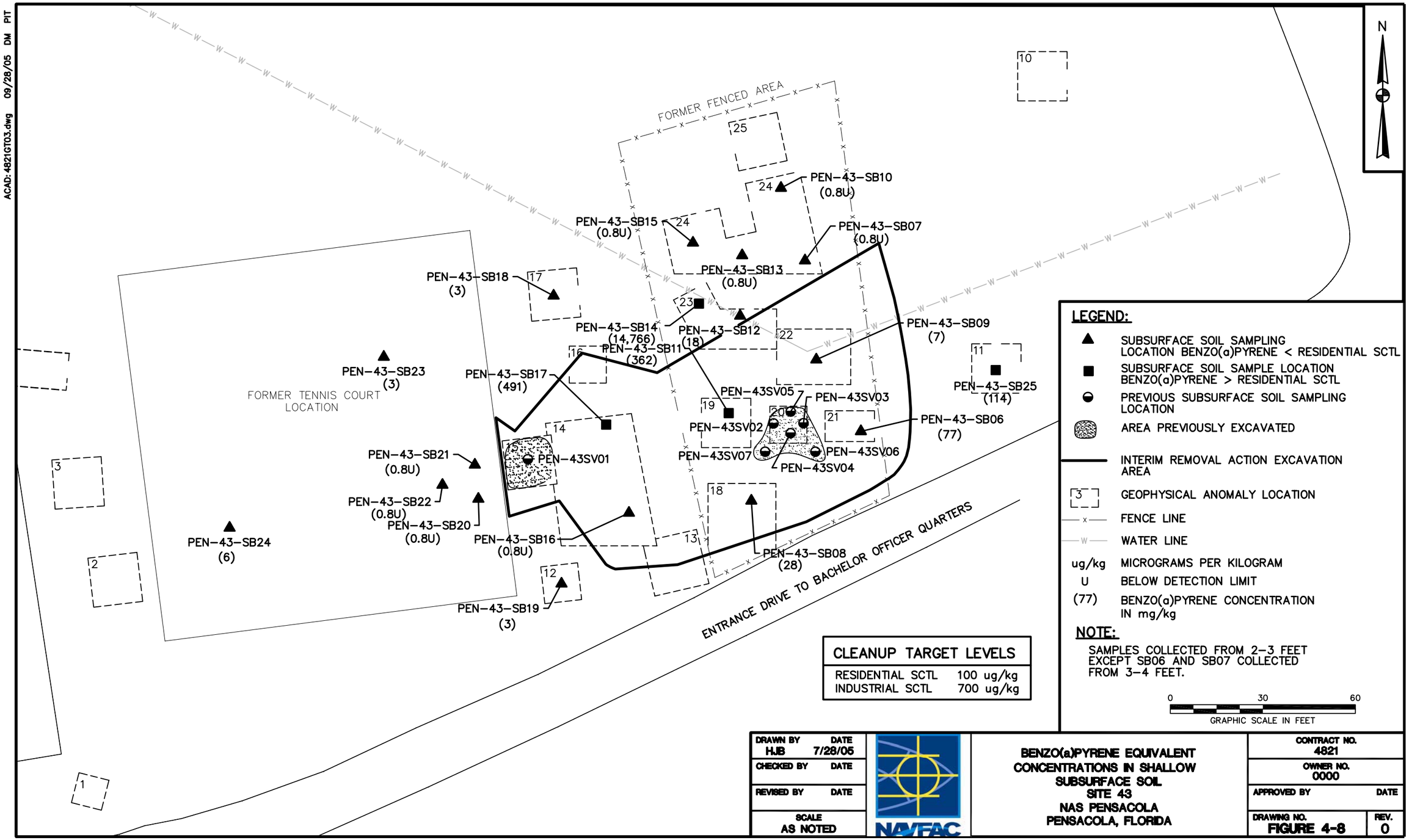

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subsurface soil samples had benzo(a)pyrene equivalent concentrations greater than the residential SCTL of 100 μg/kg (the reported concentrations of benzo(a)pyrene for each sample are provided in parentheses for comparison):

PEN-43-SB1101	362 μg/kg (280 μg/kg)
PEN-43-SB1701	491 μg/kg (340 μg/kg)
PEN-43-SB2501-D	114 μg/kg (60 μg/kg)

However, the benzo(a)pyrene equivalent concentration in sample PEN-43-SB2501, from which PEN-43-SB2501-D was split, was 76 μg/kg, which is less than the residential SCTL. The benzo(a)pyrene equivalent concentrations in the other 16 shallow subsurface soil samples and all 20 of the deeper subsurface soil samples were less than the residential SCTL.

4.2.2.7 Leachability SCTL Exceedances

Analytical results from shallow subsurface soil sample PEN-43-SB1401 reported three SVOCs (1,1-biphenyl, carbazole, and naphthalene) and four carcinogenic PAHs (benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene) at concentrations greater than the leachability to groundwater SCTLs. While the concentrations of the three SVOCs were less than direct exposure SCTLs, the four carcinogenic PAHs also exceeded direct exposure SCTLs. Reported concentrations of TCL SVOCs in the other subsurface soil samples collected for the RI were less than the leachability to groundwater SCTLs.

4.2.3 Soil Investigation Summary

Ten surface soil samples with exceedances of one or more residential SCTL (including some industrial exceedances) were collected during the RI, including surface soil samples collected from Anomaly Areas 11, 12, 23, and 24 and the Tennis Court Area. Six shallow subsurface soil samples had exceedances of one or more residential SCTL (including some industrial exceedances). Four of these samples were collected in the footprint of the IRA excavation, and one each from Anomaly Areas 11 and 23. Contaminant concentrations in the deeper subsurface soil samples, collected from depths greater than 4 feet, were less than SCTLs.

Anomaly Area 17

Contaminant concentrations in the surface and subsurface soil samples collected from Anomaly Area 17 were less than SCTLs; therefore, no further delineation is needed in this area.

Anomaly Area 11

All three of the surface soil samples and the shallow subsurface soil sample collected at Anomaly Area 11, located to the east of the IRA excavation, had exceedances of residential screening critieria. Surface soil samples PEN-43-SS24 and PEN-43-SS25 and subsurface soil sample PEN-43-SB2501, collected from 2 to 3 feet, had exceedances of the arsenic, barium, copper, lead, and carcinogenic PAH SCTLs. The lead concentrations in these samples exceeded the industrial SCTL. Surface soil sample PEN-43-SS26 exceeded only the residential carcinogenic PAH SCTL and none of the metals SCTLs. These analytical results indicate that horizontal and vertical delineation of the surface and subsurface soil contaminants has not been completed at Anomaly Area 11.

Anomaly Area 12

Two of the surface soil samples collected at Anomaly Area 12 had exceedances of residential SCTLs, PEN-43-SS18 exceeded the carcinogenic PAH SCTL and PEN-43-SS19 exceeded the arsenic SCTL. The third surface soil sample PEN-43-SS20 had no SCTL exceedances. No SCTL exceedances were reported for the subsurface soil samples collected from PEN-43-SB19.

Anomaly Area 23

All three of the surface soil samples and one of the shallow subsurface soil sample collected at Anomaly Area 23, located adjacent to the northern edge of the IRA excavation, had exceedances of residential screening critieria. Surface soil samples PEN-43-SS27 and PEN-43-SS28 had exceedances of the arsenic, barium, and lead SCTLS. The lead concentration in PEN-43-SS28 also exceeded the industrial SCTL. The carcinogenic PAH concentration for PEN-43-SS28 exceeded the residential SCTL. Surface soil sample PEN-43-SS29 exceeded only the residential carcinogenic PAH SCTL and none of the metals SCTLs. The shallow subsurface soil sample collected at PEN-43-SB14 had exceedances of the arsenic, barium, copper, and vanadium residential SCTLs and the lead and carcinogenic PAH industrial SCTLs. Sample PEN-43-SB1401 contained some of the highest contaminant concentrations observed in samples collected for the RI. The remaining subsurface soil samples collected at Anomaly Area 23 had no SCTL exceedances.

Anomaly Area 24

One of the surface soil samples collected at Anomaly Area 24, located to the north of the IRA excavation, had exceedances of residential SCTLs. PEN-43-SS34 had exceedances of the copper and lead residential SCTLs. PEN-43-SS34 was collected from the southern perimeter of Anomaly Area 24, which is closest to Anomaly Area 23 and the IRA excavation. Contaminant concentrations in the other surface and subsurface soil samples collected from Anomaly Area 24 were less than SCTLs.

Tennis Court Area

One of the surface soil samples collected at the Tennis Court Area had exceedances of residential and industrial SCTLs. PEN-43-SS21 had exceedances of the arsenic, barium, and copper residential SCTL and the lead industrial SCTL. Contaminant concentrations in the other surface and subsurface soil samples collected from the Tennis Court Area were less than SCTLs.

IRA Excavation Area

Four of the soil boring locations advanced in the excavation area from the IRA had SCTL exceedances. The shallow subsurface soil samples collected at PEN-43-SB06, PEN-43-SB08, PEN-43-SB11, and PEN-43-SB17 had exceedances of the arsenic, barium, copper, and lead residential SCTLs. The lead concentration in PEN-43-SB1701 also exceeded the industrial SCTL. The carcinogenic PAH concentration for PEN-43-SB1101 and PEN-43-SB1701 exceeded the residential SCTL. The distribution of contaminants in the shallow subsurface zone suggests that subsurface soil contaminantion remaining at the site does not extend laterally much further than the IRA excavation. SCTL exceedances were not reported for the subsurface soil samples collected at Anomaly Areas 12, 17, and 24 or the Tennis Court Area.

4.3 GROUNDWATER

Previous groundwater sampling events at site detected only VOCs and metals, therefore the groundwater samples collected during the RI were analyzed for TCL VOCs and TAL metals. Groundwater samples were collected from twelve monitoring wells. Ten of the wells were shallow wells screened at the water table. Two of the wells were deep wells, screened 45 to 50 feet. Groundwater analytical results were compared to the risk-based GCTLs established in 62-777 FAC and the NAS Pensacola background concentrations for metals (Appendix C). Table 4-3 provides a summary of analytes detected in groundwater.

4.3.1 Volatile Organics

Three VOCs, including acetone, chloroform, and trichloroethene (TCE) were detected in the groundwater samples at concentrations less than the GCTLs. Acetone and chloroform are frequent laboratory contaminants.

4.3.2 Metals

Thirteen metals were detected in the groundwater samples collected at Site 43. Three of the metals (iron, lead, and manganese) were detected at concentrations exceeding Florida GCTLs. The remaining metals, barium, calcium, chromium, copper, magnesium, mercury, nickel, potassium, sodium, and zinc,

TABLE 4-3

GROUNDWATER ANALYTICAL SUMMARY
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA
Page 1 of 3

SAMPLE NAME	GCTL	NAS PENSACOLA BACKGROUND CONC.	PEN-43-GW02S02	PEN-43-GW05D01	PEN-43-GW05S02	PEN-43-GW05S02-D	PEN-43-GW06D01
SAMPLE DATE			03/24/05	03/24/05	03/24/05	03/24/05	03/24/05
DEPTH RANGE (FT)			15 - 25	45 - 50	10 - 20	10 - 20	45 - 50
VOLATILE ORGANICS (µg/L)							
ACETONE	6300	NA	2 UR	2 UR	2 UR	2 J	2 UR
CHLOROFORM	70	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	3	NA	0.3 U	0.8 J	0.4 J	0.3 U	0.3 U
METALS (µg/L)							
BARIUM	2000	13.22	29	17.1	55.4	55.6	31.9
CALCIUM	NE	17,560	9910	6020	25800	25500	4350
CHROMIUM	100	34.98	1.6	1.6	2.8	3.6	3.3
COPPER	1000	16.2	2.52 U	2.52 U	2.52 U	2.52 U	2.52 U
IRON	300	1,707.80	192	1650	8 U	11.3 U	1540
LEAD	15	1.6	2.07 U	2.07 U	2.07 U	2.07 U	2.07 U
MAGNESIUM	NE	2,872.50	651	2380	1540	1530	2720
MANGANESE	50	21.92	1.5	28.7	4.6	4.6	24.8
MERCURY	2	0.2	0.02	0.02 U	0.02 U	0.02 U	0.02 U
NICKEL	100	39.9	11.6 U	11.6 U	11.6 U	18.2	11.6 U
POTASSIUM	NE	12,167.60	1330	1200	1100	1080	1120
SODIUM	160000	18,345	20100	11600	32000	32600	11200
ZINC	5000	153.2	12.7 U	9.1 U	36.8	33.5	14.1 U

Notes:
Shaded value exceeds Groundwater Cleanup Target Level
NE = not established
NA = not applicabe
U = less than laboratory method detection limit
J = estimated value
FT = feet
µg/L = micrograms per liter

TABLE 4-3

GROUNDWATER ANALYTICAL SUMMARY
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA
Page 2 of 3

SAMPLE NAME	GCTL	NAS PENSACOLA BACKGROUND CONC.	PEN-43-GW06S01	PEN-43-GW09S01	PEN-43-GW10S01	PEN-43-GW11S01	PEN-43-GW12S01
SAMPLE DATE			03/24/05	03/24/05	03/24/05	03/24/05	03/24/05
DEPTH RANGE (FT)			15 - 25	15 - 25	15 - 25	15 - 25	15 - 25
VOLATILE ORGANICS (µg/L)							
ACETONE	6300	NA	2 UR	3 J	5 J	2 UR	3 J
CHLOROFORM	70	NA	0.4 U	0.4 U	0.4 U	1 J	6
TRICHLOROETHENE	3	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
METALS (µg/L)							
BARIUM	2000	13.22	17	29.7	18.9	40.7	75.2
CALCIUM	NE	17,560	15200	18100	20800	24800	56800
CHROMIUM	100	34.98	2.5	4.5	2.7	2.2	1.5
COPPER	1000	16.2	2.52 U	6	2.52 U	8.1	2.52 U
IRON	300	1,707.80	4000	2470	2280	866	31.3 U
LEAD	15	1.6	2.07 U	2.07 U	2.07 U	4	2.07 U
MAGNESIUM	NE	2,872.50	1900	1840	3730	2620	6580
MANGANESE	50	21.92	204	15.3	12.6	23.7	1.5
MERCURY	2	0.2	0.02 U	0.02 U	0.02	0.02 U	0.02
NICKEL	100	39.9	11.6 U	14.8	11.6	11.6 U	11.6 U
POTASSIUM	NE	12,167.60	1900	1450	3300	1430	3620
SODIUM	160000	18,345	9260	6610	12400	9150	31800
ZINC	5000	153.2	7.6 U	52.8	7.3 U	30 U	74

Notes:
Shaded value exceeds Groundwater Cleanup Target Level
NE = not established
NA = not applicabe
U = less than laboratory method detection limit
J = estimated value
FT = feet
µg/L = micrograms per liter

TABLE 4-3

GROUNDWATER ANALYTICAL SUMMARY
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA
Page 3 of 3

SAMPLE NAME	GCTL	NAS PENSACOLA BACKGROUND CONC.	PEN-43-GW13S01	PEN-43-MW07S01	PEN-43-MW08S01
SAMPLE DATE			03/24/05	03/24/05	03/24/05
DEPTH RANGE (FT)			15 - 25	15 - 25	15 - 25
VOLATILE ORGANICS (µg/L)					
ACETONE	6300	NA	2 UR	2 UR	3 J
CHLOROFORM	70	NA	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	3	NA	0.3 U	0.3 U	0.3 U
METALS (µg/L)					
BARIUM	2000	13.22	32.7	32.6	30.9
CALCIUM	NE	17,560	24200	16400	23900
CHROMIUM	100	34.98	1.4	1.8	2.4
COPPER	1000	16.2	10.1	2.52 U	2.52 U
IRON	300	1,707.80	125 U	1490	238
LEAD	15	1.6	29.9	2.07 U	2.07 U
MAGNESIUM	NE	2,872.50	2290	3600	3820
MANGANESE	50	21.92	7.5	54.8	29.2
MERCURY	2	0.2	0.05	0.02	0.02
NICKEL	100	39.9	11.6 U	11.6 U	14.3
POTASSIUM	NE	12,167.60	1350	2350	3170
SODIUM	160000	18,345	20500	28000	21400
ZINC	5000	153.2	117	18 U	8.7 U

Notes:
Shaded value exceeds Groundwater Cleanup Target Level
NE = not established
NA = not applicable
U = less than laboratory method detection limit
J = estimated value
FT = feet
µg/L = micrograms per liter

were all detected at concentrations less than the Florida GCTLs. Metals reported at concentrations greater than screening criteria are discussed below.

4.3.2.1 Iron

Iron was detected in nine of the groundwater samples collected at Site 43 (Figure 4-9). The iron concentrations in seven of the monitoring wells were greater than the GCTL of 300 μg/L, including:

PEN-43-05D 1,650 μg/L
PEN-43-06D 1,540 μg/L
PEN-43-06S 4,000 μg/L
PEN-43-09S 2,470 μg/L
PEN-43-10S 2,280 μg/L
PEN-43-11S 866 μg/L
PEN-43-07S 1,490 μg/L

The iron concentrations reported for PEN-43-06S, PEN-43-09S, and PEN-43-10S were greater than NAS Penscaola background iron concentration of 1,707 μg/L. The iron concentration in PEN-43-06S also exceeded the GCTL for low yield/poor quality aquifers of 3,000 μg/L. The GCTL for iron is a secondary groundwater standard, not a health based standard.

4.3.2.2 Manganese

Manganese was detected in all 12 of the groundwater samples collected at Site 43 (Table 4-3). Manganese was detected in two monitoring wells at concentrations greater than the GCTL of 50 μg/L:

PEN-43-06S 204 μg/L
PEN-43-07S 54.8 μg/L

The NAS Pensacola background concentration for manganese is 21.92 μg/L, which is less than the manganese GCTL. The manganese concentration reported for both wells was less than the GCTL for low yield/ poor quality aquifers of 500 μg/L. The GCTL for manganese is a secondary groundwater standard, not a health based standard.

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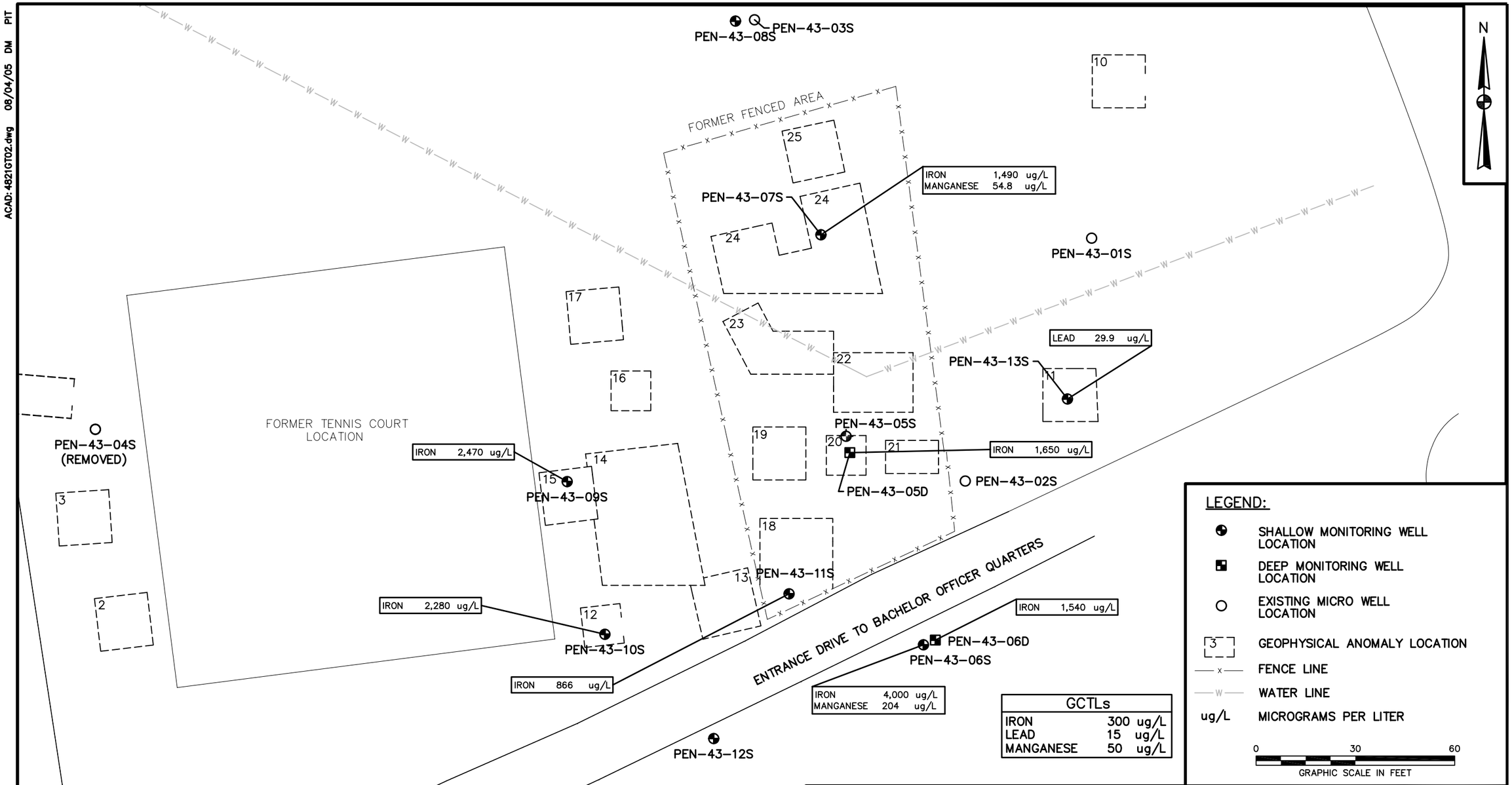

GCTLs	
IRON	300 ug/L
LEAD	15 ug/L
MANGANESE	50 ug/L

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4.3.2.3 Lead

Lead was detected in two of the groundwater samples collected at Site 43 (Table 4-3). Lead was detected in the groundwater sample collected from PEN-43-13S at a concentration of 29.9 μg/L, exceeding the GCTL of 15 μg/L (Figure 4-9). The NAS Pensacola background concentration for lead is 1.6 μg/L, which is less than the lead GCTL. The lead concentration reported for both wells was less than the GCTL for low yield/ poor quality aquifers of 150 μg/L.

4.3.3 Groundwater Investigation Summary

Groundwater samples collected at Site 43 were analyzed for TAL metals and TCL VOCs based on analytical results from previous sampling events. Detected VOC concentrations in the groundwater samples collected for the RI were less than the GCTLs.

Iron was detected in most of the monitoring wells sampled for the RI at concentrations exceeding the GCTL, which is a secondary standard, but less than the NAS Pensacola background iron concentration. Iron concentrations exceeded the background concentration in three monitoring wells, PEN-43-06S, PEN-43-09S, and PEN-43-10S. The highest iron concentration was observed in PEN-43-06S. These wells are located up and side gradient to the known disposal area, which would suggest that the iron concentrations in these wells are naturally occuring rather than due to site activity.

Manganese was detected in each of the groundwater samples collected at Site 43. The reported manganese concentrations in two shallow wells, PEN-43-06S and PEN-43-07S, exceeded the GCTL, which is a secondary standard. PEN-43-06S is located to the south of the IRA excavation area and PEN-43-07S is located to the north of the IRA excavation area. The highest manganese concentration was observed in PEN-43-06S, which is located side gradient to the known disposal area. Manganese was less than the GCTL in PEN-43-06D, the deep well paired with PEN-43-06S.

Lead was detected in only two of the groundwater samples collected at Site 43. Lead only exceeded the GCTL in the sample collected from PEN-43-13S, which is located at the center of Anomaly Area 11, where surface and subsurface soil samples had lead concentrations exceeding residential and industrial SCTLs.

4.4 SURFACE WATER AND SEDIMENTS

Surface water and sediment samples were not collected for the RI at Site 43 because no surface water bodies are present at the site. The topography forms a closed depression at the site and precipitation rapidly infiltrates the sandy soil. A drainage ditch approximately 500 feet to the east of site is the nearest

surface water feature. This ditch is downgradient of site hydrogeologically and also at a lower elevation downslope from the site. Water in this drainage ditch flows to north and empties into Bayou Grande.

4.5 AIR

Air samples were not collected for the RI because the contaminants previously detected in surface soil, metals and SVOCs, are not especially volatile and are not expected to vaporize. Air monitoring was conducted during the soil investigation due to the potential for dust/particulate exposure. Because of the sandy soil at the site, little dust was generated under normal conditions. However, there is a potential for particulate exposure in areas without grass if the soil is heavily disturbed, e.g during an excavation.

5.0 CONTAMINANT FATE AND TRANSPORT

The behavior of contaminants released into the environment, particularly the potential for a contaminant to migrate from the release area and persist in an environmental medium, can influence whether the release will result in an adverse human health or ecological effect. The fate and transport discussion for this RI report is limited to the groups of chemicals that were detected during the RI sampling event at concentrations greater than the CTLs established by the State of Florida.

5.1 POTENTIAL ROUTES OF MIGRATION

The movement of contaminants in the environment will be controlled by certain properties of the contaminant and the availability of suitable pathways for contaminant movement.

5.1.1 Physical and Chemical Factors Affecting Contaminant Mobility

The following properties can be used to evaluate the potential environmental mobility and fate of site contaminants:

- Specific gravity
- Vapor pressure
- Water solubility
- Octanol/water partition coefficient
- Organic carbon partition coefficient
- Henry's Law constant
- Bioconcentration factor
- Mobility index

Table 5-1 presents the physical and chemical properties of the organic compounds detected at Site 43. The relative mobilities of metals as a function of environmental conditions are provided in Table 5-2.

5.1.1.1 Specific Gravity

Specific gravity is the ratio of the weight of a given volume of pure chemical at a specified temperature to the weight of the same volume of water at a given temperature. Specific gravity is used to determine whether a chemical will have a tendency to float or sink in water when present as a pure chemical or at very high concentrations. Non-aqueous phase chemicals with a specific gravity greater than 1 will tend to sink, and chemicals with a specific gravity less than 1 will tend to float. Of the groups of chemicals detected at Site 43, PAHs generally have a specific gravity greater than 1.

TABLE 5-1

ENVIRONMENTAL FATE AND TRANSPORT PARAMETERS FOR ORGANIC CHEMICALS
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

Chemical	Specific Gravity (@ 20/4°C)(2)	Vapor Pressure (mm Hg @ 20°C)(1)	Solubility (mg/L @ 20°C)(1)	Octanol/Water Partition Coefficient(1)	Organic Carbon Partition Coefficient(2)	Henry's Law Constant (atm-m3/mole)(1)	Bioconcentration Factor (mg/L/mg/kg)(2)	Mobility Index log((solubility*VP)/Koc)
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)								
Acenaphthene	1.07	5.00E-03	4.24E+02	8.32E+03	7.08E+03	1.55E-04	1.10E+03	-3.52E+00
Acenaphthylene	1.02	2.30E-02	1.61E+01	1.17E+04	2.00E+03	1.14E-04	3.80E+02	-3.73E+00
Anthracene	1.283(25/4°C)	1.95E-4 (25°C)	1.29E+0 (25°C)	2.32E+04	2.95E+04 (3)	8.6E-5 (25°C)	4.70E+03	-8.07E+00
Benzo(a)anthracene	1.274	5.00E-09	1E-2 (24°C)	4.07E+05	3.98E+05 (3)	6.60E-07	5.30E+04	-1.59E+01
Benzo(b)fluoranthene	NA	5.00E-07	1.2E-3 (25°C)	3.72E+06	1.23E+06 (3)	1.20E-05	1.40E+05	-1.53E+01
Benzo(k)fluoranthene	NA	9.59E-11	5.5E-4 (25°C)	6.92E+06	1.23E+06 (3)	1.04E-03	1.40E+05	-1.94E+01
Benzo(g,h,i)perylene	NA	1.00E-10	2.6E-4 (25°C)	1.70E+07	1.60E+06	1.4E-7 (25°C)	3.50E+05	-1.98E+01
Benzo(a)pyrene	1.351	5.00E-09	3.8E-3 (25°C)	9.55E+05	1.02E+06 (3)	4.9E-7 (25°C)	1.40E+05	-1.67E+01
Carbazole	1.1	1.37E-06	7.48E+00	3.89E+03	3.39E+03	1.53E-08	5.01E+02	-8.52E+00
Chrysene	1.274 (20°C)	6.3E-9 (25°C)	6E-3 (25°C)	4.07E+05	3.98E+05 (3)	1.05E-6 (25°C)	5.30E+04	-1.60E+01
Dibenzo(a,h)anthracene	1.282	1.00E-10	5E-4 (25°C)	9.33E+05	3.80E+06 (3)	7.3E-8 (25°C)	6.90E+05	-1.99E+01
Fluoranthene	1.252	5.0E-6 (25°C)	2.65E-1 (25°C)	2.14E+05	1.07E+05 (3)	6.5E-6 (25°C)	1.20E+04	-1.09E+01
Fluorene	1.202	1.00E+01	1.98E+00	1.62E+04	1.38E+04	6.36E-05	3.80E+03	-2.84E+00
Indeno(1,2,3-cd)pyrene	NA	1E-10 (25°C)	6.20E-02	4.57E+07	3.47E+06 (3)	3.95E-8 (25°C)	3.50E+05	-1.77E+01
1-Methylnaphthalene	1.0202	5.39E-02	2.58E+01	7.41E+03	7.30E+02	2.60E-04	1.3E+02-6.8E+02	-2.72E+00
2-Methylnaphthalene	1.0058	1E+1 (105°C)	2.6E+1 (25°C)	7.24E+03	7.27E+2 (4)	4.99E-4 (25°C)	5.10E+02	-4.47E-01
Naphthalene	1.162	8.2E-2 (25°C)	3E+1 (25°C)	2.34E+03	2.00E+03 (3)	4.83E-4 (25°C)	4.20E+02	-2.91E+00
Phenanthrene	0.980 (4°C)	1E+0 (118.2°C)	8.16E-1 (21°C)	2.88E+04	1.40E-04	3.93E-5 (25°C)	4.70E+03	-4.23E+00
Pyrene	1.271 (23/4°C)	2.5E+0 (200°C)	1.6E-1 (26°C)	1.51E+05	1.05E+05 (3)	5.1E-6 (25°C)	1.20E+04	-5.42E+00

1 USEPA, September 1992, Handbook of RCRA Groundwater Monitoring Constituents: Chemical and Physical Properties.

2 USEPA, December 1982, Aquatic Fate Process Data for Organic Priority Pollutants.

3 USEPA, July 1996, Soil Screening Guidance.

4 Lyman et al., 1990; Equation 4-5

TABLE 5-2

RELATIVE MOBILITIES OF METALS AS A FUNCTION OF ENVIRONMENTAL CONDITIONS (Eh,pH)
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

Relative Mobility	Environmental Conditions			
	Oxidizing	**Acidic**	**Neutral/Alkaline**	**Reducing**
Very High			Selenium	
High	Selenium and Zinc	Selenium, Zinc, Copper, Nickel, Mercury, and Silver		
Medium	Copper, Nickel, Mercury, Silver, Arsenic, and Cadmium	Arsenic and Cadmium	Arsenic and Cadmium	
Low	Lead, Barium, and Beryllium	Lead, Barium, and Beryllium	Lead, Barium, and Beryllium	
Very Low	Iron and Chromium	Chromium	Chromium, Zinc, Copper, Nickel, Mercury, and Silver	Chromium, Selenium, Zinc, Copper, Nickel, Mercury, Lead, Barium, Beryllium, and Silver

Source: Swartzbaugh, et al. Remediating Sites Contaminated with Heavy Metals. Hazardous Materials Control, November/December 1992.

5.1.1.2 Vapor Pressure

Vapor pressure provides an indication of the rate at which a chemical volatilizes from both soil and water. Chemicals with higher vapor pressures are expected to enter the atmosphere much more readily than chemicals with lower vapor pressures. Volatilization is a significant loss process for VOCs in surface water or surface soil and is of primary importance at environmental interfaces such as surface soil/air and surface water/air. Volatilization is not as important when evaluating contaminated groundwater and subsurface soils that are not exposed to the atmosphere. Vapor pressures of PAHs are low and volatilization is not significant for metals.

5.1.1.3 Water Solubility

The rate at which a chemical may be leached from a solid matrix (soil, waste deposit) by infiltrating precipitation is proportional to its water solubility. More soluble chemicals are more readily leached than less soluble chemicals. The water solubilities presented in Table 5-1 indicate that PAHs are not especially water soluble.

The solubility of inorganics is strongly influenced by their valence state(s) and forms (hydroxides, oxides, carbonates, etc.). The solubility is also dependent on pH, Eh (redox potential), temperature, and other ionic species in solution (the Debye-Huckel theory). The solubility products reported in the literature vary with the type of complex formed, but generally it can be noted that, for example, cadmium and copper complexes are more soluble than lead and nickel complexes.

5.1.1.4 Octanol/Water Partition Coefficient

The octanol/water partition coefficient (K_{ow}) is a measure of the equilibrium partitioning of chemicals between octanol and water. A linear relationship between the K_{ow} and the uptake of chemicals by fatty tissues of animal and human receptors (the bioconcentration factor) has been established. It is also useful in characterizing the sorption of compounds by organic soils where experimental values are not available. PAHs are more likely to partition to fatty tissues than the more soluble VOCs. The K_{ow} is also used to estimate bioconcentration factors in aquatic organisms.

5.1.1.5 Organic Carbon Partition Coefficient

The organic carbon partition coefficient (K_{oc}) indicates the tendency of a chemical to adhere to soil particles containing organic carbon. Chemicals with high K_{oc}s generally have low water solubilities and vice versa. This parameter may be used to infer the relative rates at which the more mobile chemicals (ketones, monocyclic aromatics, and halogenated aliphatics) partition to groundwater. Most PAHs are

relatively immobile in the soil and are preferentially bound to the soil. These compounds are not as likely to be transported in the dissolved phase by groundwater to the same extent as compounds with higher water solubilities. However, these preferentially bound chemicals are easily transported by erosional processes when they are present in surface soils and the soil particles to which they have adsorbed are mobilized.

5.1.1.6 Henry's Law Constant

Both the vapor pressure and the water solubility are of use in determining volatilization rates from surface water bodies and from groundwater. The ratio of these two parameters, the Henry's Law constant, is used to calculate the equilibrium chemical concentrations in the vapor (air) phase versus the liquid (water) phase for the dilute solutions commonly encountered in environmental settings. In general, chemicals having a Henry's Law constant of less than 1×10^{-5} atm-m^3/mole should volatilize very little and be present only in minute amounts in the atmosphere or soil gas. For chemicals with a Henry's Law constant greater than 5×10^{-3} atm-m^3/mole volatilization and diffusion in soil gas could be significant.

5.1.1.7 Bioconcentration Factor

The bioconcentration factor (BCF) represents the ratio of aquatic-animal-tissue concentration to water concentration. The ratio is both contaminant and species specific. When site-specific values are not measured, literature values are used or the BCF is derived from the octanol/water coefficient. Many of the PAHs will bioconcentrate at levels three to five orders of magnitude greater than those concentrations found in the water.

5.1.1.8 Distribution Coefficient

The distribution coefficient (K_d) is a measure of the equilibrium distribution of a chemical or ion in soil/water systems. The distribution of organic chemicals is a function of both the K_{oc} and the amount of organic carbon in the soil. For ions (e.g., metals), K_d is the ratio of the concentration adsorbed on soil surfaces to the concentration in water. Distribution coefficients for metals vary over several orders of magnitude because the K_d is dependent on the size and charge of the ion and the soil properties governing exchange sites on soil surfaces. Coulomb's Law predicts that the ion with the smallest hydrated radius and the largest charge will be preferentially accumulated over ions with larger radii and smaller charges.

5.1.1.9 Mobility Index

The mobility index (MI) is a quantitative assessment of chemical mobility in the environment based on the water solubility (S), vapor pressure (VP), and the (K_{oc}) of a given material (McCall, et. al., 1983):

$$MI = \log ((S*VP)/K_{oc})$$

The MI for a given chemical is evaluated using the following scale (Ford and Gurba, 1984):

Relative MI	Mobility Description
> 5	extremely mobile
0 to 5	very mobile
-5 to 0	slightly mobile
-10 to –5	immobile
< -10	very immobile

Lighter molecular weight PAHs, such as naphthalene, have MIs ranging from -5 to 0 and are considered slightly mobile, and the heavier molecular weight PAHs [e.g., benzo(a)pyrene] are classified as very immobile having MIs less than -10 (Table 5-1).

5.1.2 Potential Pathways for Contaminant Migration

Based on the evaluation of existing conditions at Site 43, the following potential contaminant transport pathways may exist at the site:

- Leaching of soil contaminants to groundwater
- Migration of groundwater contaminants
- Volatilization from soil or groundwater

5.1.2.1 Leaching of Soil Contaminants to Groundwater

Contaminants that adhere to soil particles or have accumulated in soil pore spaces can be remobilized and transported to the groundwater as a result of infiltration or precipitation. The rate and extent of this leaching are influenced by:

- The depth of the water table
- Amount of precipitation
- Rate of infiltration

- The physical and chemical properties of the soil
- The physical and chemical properties of the contaminant

The mobility of chemicals at Site 43 will influenced by the relatively shallow water table, potentially high rates of precipitation, and the sandy soil in the area which may allow a higher rate of infiltration. The contaminants identified at Site 43 (metals and PAHs) generally have physical and chemical properties that result in low mobility and higher persistence in the environment.

5.1.2.2 Migration of Groundwater Contaminants

Contaminants can migrate in either a dissolved phase or as an immiscible liquid. A contaminant that is present in water above its solubility concentration will form an immiscible liquid. Based on the specific gravity of the contaminant, it will either float or sink in the water. In the case of chlorinated solvents (e.g., chloroform), the contaminant will sink in the water because it has a higher specific gravity than water. Subsurface transport of the immiscible contaminants is governed by a set of factors different from those of dissolved contaminants.

The groundwater data at Site 43 do not provide evidence of immiscible contaminants at concentrations exceeding water solubility levels. Solvents were detected at concentrations less than their water solubilities. Therefore, the migration of groundwater contaminants, for the most part, is likely governed by factors that govern the movement of dissolved contaminants. Three general processes govern the migration of dissolved constituents in groundwater: advection, dispersion, and retardation. Advection is a process by which solutes are carried by groundwater movement. Dispersion is a mixing of contaminated and uncontaminated water during advection. Retardation is a slowing of contaminant migration caused by the reaction of the solute with the aquifer soil.

Contaminant concentrations may be affected by one or more mechanisms during transport. Volatilization or precipitation may physically transform contaminants. Contaminants may be chemically transformed through photolysis, hydrolysis, or oxidation/reduction. Contaminants may also be biologically transformed by biodegradation.

Hydrogeologic data were collected to evaluate movement of groundwater in the shallow surficial aquifer at Site 43. These data were used to estimate the site specific groundwater flow direction and groundwater flow velocity.

5.1.2.3 Volatilization from Soil or Groundwater

Chemicals in soil can migrate into ambient air either as vapors or by adhering to particulate matter (dusts). Chemicals that have a significant volatility are likely to enter ambient air as vapors. These chemicals are generally considered to be compounds with Henry's Law Constants greater than 1.0×10^{-5} and molecular weights less than 200. Chemicals with lower Henry's Law Constants and higher molecular weights are more likely to enter ambient air on particulate matter carried by winds.

Once in groundwater, volatile chemicals may migrate or they may volatilize through the capillary zone and overlying soil layers into ambient air or inside buildings. Chemicals in the vapor phase may migrate horizontally or vertically and can enter buildings through cracks in the foundation or through foundation walls. Once inside buildings, the air concentrations in buildings are subject to various factors, such as building dimensions and ventilation rates. Upon entering ambient air, the vapors are not expected to persist for long periods of time having half-lives in the atmosphere typically measured in hours or a few days. The air concentrations of vapors in ambient air are likely to be quickly diluted by the action of winds. Vapors may also be released directly to ambient air from soil or groundwater during excavation activities.

The contaminants previously detected in soil and groundwater samples at Site 43 (metals and SVOCs) are not especially volatile and are not expected to vaporize into the air. Air monitoring was conducted during the soil investigation due to the potential for dust/particulate exposure. Because of the sandy soil at the site, little dust was generated under normal conditions. However, there is a potential for particulate exposure in areas without grass if the soil is heavily disturbed (e.g during an excavation).

5.2 CONTAMINANT PERSISTENCE

The life span of the contaminants once released to the environment is controlled by the susceptibility of the contaminant to certain chemical and biological processes that may degrade the contaminants and reduce their remaining mass.

5.2.1 <u>SVOCs</u>

SVOCs as a class of compounds, and PAHs in particular, are considered to be persistent in the environment. SVOCs in soil are much more likely to bind to soil and be transported via mass transport mechanisms than to go into solution. PAHs are subject to degradation via aerobic bacteria but may be relatively persistent in the absence of microbial population or macronutrients such as phosphorus and nitrogen. Landspreading applications have indicated that PAHs are highly amenable to microbial degradation in soil. The rate of degradation is influenced by temperature, pH, oxygen concentrations,

initial chemical concentrations, and moisture. Photolysis, hydrolysis, and oxidation are not important fate processes for the degradation of PAHs in soil.

5.2.2 Metals

Metals are highly persistent environmental contaminants. They do not biodegrade, photolyze, or hydrolyze. Metals released to the environment generally adsorb to the soil matrix (as compared to being part of the soil structure) and bioaccumulate. Because metals are frequently incorporated into the soil matrix and remain bound to particulate matter, they also migrate from the source areas via bulk movement processes (erosion).

5.3 CONTAMINANT MIGRATION

The mobility of the contaminants, once released to the environment, is controlled by the physical properties of the contaminant, which determine whether the contaminant partitions to more mobile media (air or groundwater) or less mobile media (soil or sediment particles).

5.3.1 SVOCs

SVOCs are generally considered to be fairly immobile chemicals in the environment because they are large molecules with high organic carbon partition coefficients and low solubilities when compared to the volatile organics. However, some of the lighter molecular weight PAHs (a subgroup of SVOCs), such as naphthalene, are more water soluble and environmentally mobile. SVOC compounds in the soil generally do not migrate vertically to a great extent and are more likely to adhere to soil particles and be removed from the site via surface runoff and erosional processes.

PAHs generally have very low solubilities, vapor pressures, and Henry's Law constants and high K_{oc}s and K_{ow}s. The low-molecular-weight PAHs (e.g., acenaphthene, anthracene, fluorene, phenanthrene) may volatilize from surface waters, and the high-molecular-weight PAHs [e.g., benzo(a)pyrene, benz(a)anthracene, chrysene, etc.] are less likely to volatilize. PAHs in soil are much more likely to bind to soil and be transported via mass transport mechanisms than to go into solution.

5.3.2 Metals

The mobility of metals is influenced primarily by their physical and chemical properties, in combination with the physical and chemical characteristics of the soil matrix. Factors that assist in predicting the mobility of inorganic species are the soil/pore water pH, soil/pore water oxidation reduction potential of

groundwater (Eh), and cation exchange capacity. The mobility of metals generally increases with decreasing soil pH and cation exchange capacity (Table 5-2).

Because inorganics are frequently incorporated into the soil matrix and remain bound to particulate matter, they also migrate from the source areas via bulk movement processes (erosion). The larger, non-colloidal soil particles (greater than 0.45 micron) are not generally considered to be mobile in groundwater. Metals are also more mobile under acidic conditions. In these cases, it is possible for metals to migrate vertically through the soil column and reach the groundwater.

6.0 RISK ASSESSMENT

6.1 HUMAN HEALTH RISK ASSESSMENT

This section presents the HHRA for soil and groundwater at Site 43. The objective of the risk assessment is to determine whether detected concentrations of chemicals in soil and groundwater pose significant threats to potential human receptors under current and/or future land use. The potential risks to receptors are estimated based on the assumption no further actions are taken to control contaminant releases or prevent receptor exposure.

6.1.1 Human Health Risk Assessment Protocol

The following USEPA, FDEP, and Navy guidance documents and regulations were used to develop the HHRA methodology and to evaluate potential risks for each site:

- Conducting Human Health Risk Assessments under the Environmental Restoration Program, Department of the Navy, February 2001.
- Navy Policy on the Use of Chemical Background Levels, Department of the Navy, January 2004.
- Technical Report: Development of Soil Cleanup Target Levels for Chapter 62-777, FAC, Florida Department of Environmental Protection (FDEP), February 2005.
- State of Florida Chapter 62-780 FAC, Contaminated Site Cleanup Criteria, April 2005.
- Risk Assessment Guidance for Superfund: Volume I, Human Health Evaluation Manual (Part A), USEPA, December 1989.
- Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors, USEPA, March 1991.
- Guidance for Data Usability in Risk Assessment (Part A), USEPA, April 1992.
- Supplemental Guidance to RAGS: Calculating the Concentration Term, USEPA, May 1992.
- Preliminary Review Draft: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure, USEPA, May 1993.
- Soil Screening Guidance: Technical Background Document, USEPA, July 1996.
- Exposure Factors Handbook, USEPA, August 1997.
- Supplemental Guidance to RAGS: Region IV Bulletins, Human Health Risk Assessment, USEPA Region 4, May 2000.

- Role of Background in the CERCLA Cleanup Program, USEPA, April 2002.
- Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites, USEPA, December 2002a.
- Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, USEPA, December 2002b.
- Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance, Dermal Risk Assessment), USEPA, July 2004.

The components of an HHRA are addressed in the following sections:

- Data Evaluation Protocol (including data usability assessment and COPC selection)
- Exposure Assessment
- Toxicity Assessment
- Risk Characterization
- Uncertainty Analysis

The risk assessment presented in this report considers both USEPA and FDEP policies and guidelines available for conducting HHRAs. Quantitative risk estimates are developed for receptor exposure to surface soil, subsurface soil, and groundwater using the "risk-ratio" approach defined in Section 6.1.3.3. USEPA Region IV supports the use of this technique. Additionally, comparisons of site soil and groundwater concentrations to FDEP CTLs recommended in FDEP Rule 62-780 are provided (Section 6.1.6). This rule presents a phased risk-based corrective action process (RBCAP) that is iterative and tailors site rehabilitation tasks to site-specific conditions and risks.

6.1.1.1 Data Evaluation Protocol

Data evaluation, the first component of a baseline HHRA, is a two-step, medium-specific task involving the compilation and evaluation of analytical data. The first step involves the compilation of the analytical database and an evaluation of data usability for purposes of HHRA. The second step of the data evaluation is the selection of a medium-specific list of COPCs, which are used to quantitatively or qualitatively determine potential human health risks for site media. COPCs are selected primarily based on a toxicity screen (i.e., a comparison of site contaminant concentrations to conservative toxicity screening values) and a background screen (i.e., a comparison of site concentrations to background concentrations). In addition, as discussed below, factors such as frequency of detection are considered in some cases. The results of the COPC selection process are presented in Section 6.1.2.

6.1.1.1.1 Data Usability

Data collected from the field investigation conducted in March 2005 were used to assess risks to potential human and ecological receptors. The samples were collected after the IRA, which occurred in 2003 and represent current site conditions. The data were validated according to USEPA National Validation Functional Guidelines for Organic Data Review (October 1999), the Laboratory and Data Validation Functional Guidelines for Evaluation of Inorganic Analysis (February 1994), and TtNUS Standard Operating Procedures.

Fixed-based analytical results only from the field investigations were used in the quantitative risk evaluation. All detected concentrations with "J" qualifiers are considered positive detections and were used in the risk evaluation. Data with "U" and "UJ" qualifiers and data qualified because of blank contamination were retained and evaluated as nondetects. Field measurements and data regarded as unreliable (i.e., qualified as "R" during the data validation process) were not used in the quantitative risk assessment.

6.1.1.1.2 Selection of Chemicals of Potential Concern for Quantitative Risk Assessment

The selection of COPCs is a qualitative screening process used to limit the number of chemicals and exposure routes quantitatively evaluated in the baseline HHRA to those site-related constituents that dominate overall potential risks. Screening, primarily by risk-based concentrations and basewide background levels, is used to focus the risk assessment on meaningful chemicals and exposure routes.

In most cases, a chemical is selected as a COPC and retained for further quantitative risk evaluation if the maximum detection in a sampled medium exceeds the selected risk-based concentration(s) (i.e., the COPC screening level) and the chemical is determined to be present at concentrations exceeding background. This second condition applies only to those chemicals for which background comparison is possible and appropriate (e.g., metals). Background data are not available for organic chemicals. Chemicals eliminated from further evaluation at this time are assumed to present minimal risks to potential human receptors.

COPC Screening Levels

Several types of screening levels were used to identify COPCs for soil and groundwater at Site 43.

Soil

Screening levels based on the following criteria were used to select COPCs for surface and subsurface soil:

- USEPA Region 9 Preliminary Remediation Goals (PRGs) for Residential Soil (USEPA Region 9, October 2004). The Region 9 Soil PRGs are based on ingestion, dermal contact, and inhalation of vapors and/or particulates.
- USEPA generic Soil Screening Levels (SSLs) for the inhalation of volatiles and fugitive dusts calculated online at http://risk.lsd.ornl.gov/calc_start.shtml based on methodology from the USEPA's Soil Screening Guidance (USEPA, July 1996).

Groundwater

Screening levels based on the following USEPA criteria were used to select COPCs for groundwater:

- USEPA Region 9 Preliminary Remediation Goals (PRGs) for Tap Water (USEPA Region 9, October 2004). The Region 9 Tap Water PRGs are based on the cumulative effects of the ingestion and inhalation (for volatiles) routes of exposure.
- USEPA Maximum Contaminant Levels (MCLs) (USEPA, Winter 2004)

The screening levels based on the Region 9 PRGs are based on a HQ of 1.0 (i.e., a no adverse non-carcinogenic effect level) or a cancer risk level of $1X10^{-6}$ (i.e., a one-in-one million probability of developing cancer) but are adjusted (lowered) to reflect cumulative risk issues (e.g., Region 9 PRGs are typically adjusted to reflect a HQ of 0.1).

In the risk assessment conducted according to USEPA methodology, the screening levels for both carcinogens and non-carcinogens were developed using the guidance provided in the USEPA Region 4 Human Health Risk Assessment Bulletins -- Supplement to RAGS (USEPA Region 4, May 2000). In this approach, the risk-based screening levels based on the USEPA Region 9 PRGs correspond to a HQ of 0.1 (for noncarcinogens) or an ILCR of 1×10^{-6} (for carcinogens). The Region 9 PRG values for noncarcinogens were multiplied by 0.1 to account for potential cumulative effects of several chemicals affecting the same target area or producing the same adverse non-carcinogenic health effect.

The screening levels used in the risk assessment conducted according to FDEP methodology were developed using the guidance provided in Appendices D and E of the Technical Report for Chapter 62-777 (FDEP, February 2005) and are presented in Section 6.1.6.
Because of the different exposure scenarios for potential human receptors, COPCs are identified separately for surface and subsurface soil. Surface soil is defined as soil collected from 0 to 1 feet bls and subsurface soil is defined as soil collected from depths of 1 to 9 feet bls.

Exposure to COPCs in subsurface soil is typically evaluated only for potential exposure during construction or excavation activities. Therefore, a construction/excavation worker is considered to be the receptor most likely exposed to COPCs in subsurface soil. However, subsurface soil could potentially be brought to the surface during future excavation projects resulting in exposure of other receptors such as future residents or workers. For this reason, potential exposure of residents and typical industrial workers to subsurface soils are also evaluated in the risk assessment.

Screening Levels for Lead

Limited criteria are available to evaluate the potential risks associated with lead. There are no strictly risk-based concentrations for this chemical because the USEPA has not derived toxicity values [i.e., cancer slope factors (CSFs), reference doses (RfDs)] for lead. However, recommended screening levels are available for lead in soil and are frequently used to indicate the need for response activities.

Guidance from both the Office of Prevention, Pesticides, and Toxic Substances (OPPTS) and the Office of Solid Waste and Emergency Response (OSWER) recommend 400 mg/kg as the lowest screening level for lead-contaminated soil in a residential setting where children are frequently present (USEPA, July 1994). OPPTS identifies 2,000 to 5,000 mg/kg as an appropriate range for areas where contact with soil by children in a residential setting is less frequent. A value of 400 mg/kg is used as the screening level for COPC selection for both surface and subsurface soil.

Guidance for the USEPA Technical Review Workgroup (TRW) for Lead indicates that “a reasonable screening level for soil lead at commercial/industrial (i.e., non-residential) sites is 800 mg/kg” for a typical non-contact intensive worker (USEPA, online at http://www.epa.gov/superfund/programs/lead/almfaq.htm, July 2005). This value is not used for COPC selection but may be used in the qualitative evaluation of lead. The current State of Florida commercial/industrial SCTL for lead in soil is 1,400 mg/kg (FDEP, April 2005).

The Florida CTL and Safe Drinking Water Act Action Level of 15 µg/L was used as the screening level for lead in groundwater.

Essential Nutrients and Chemicals without Toxicity Criteria

The essential nutrients calcium, magnesium, potassium, and sodium are not included in the COPC screening process. These inorganic chemicals are naturally abundant in environmental matrices and are only toxic at high doses and, because of the lack of toxicity criteria, risk-based COPC screening levels are not available for these chemicals in the Region 9 PRG table or FDEP CTL tables.

Risk-based screening levels are currently not available for several constituents detected at Site 43 [e.g., acenaphthylene, benzo(g,h,i)perylene, 1-methylnaphthalene, 2-methylnaphthalene, and phenanthrene]. Therefore, screening levels available for surrogate chemicals are used as screening levels for these constituents, as recommended by USEPA Region 1 (USEPA, August 1999). For example, in the COPC selection for soil at Site 43, the screening level for acenaphthene is used as a surrogate for acenaphthylene, pyrene for benzo(g,h,i)perylene and phenanthrene, and naphthalene for 1-methylnaphthalene and 2-methylnaphthalene.

Background Screen

Background concentrations are those that would exist in the absence of influence from site operations. The development of soil background datasets for NAS Pensacola is presented in the Site 1 — Sanitary Landfill Remedial Investigation Report (EnSafe/Allen & Hoshall, 1994b). The background concentrations for soil were obtained from two reference locations presented in this report and the background concentrations for groundwater were obtained from four reference locations. The background comparisons were conducted according to USEPA Region 4 risk assessment guidance which states, "For naturally occurring inorganics and radionuclides, compare the on-site maximum detected concentration to 2 times the average site-specific background concentration. Eliminate the chemical as a COPC if it is less than 2 times the background level." (USEPA Region 4, May 2000). Therefore, if the detected site concentrations of an analyte are less than two times the mean of the background levels, the analyte is not selected as a COPC. The background values used for COPC selection are presented in Tables 6-1 through 6-3. Note that no chemicals were eliminated solely on the basis of background in soil or groundwater at Site 43.

The elimination of chemicals as site-related COPCs on the basis of background comparisons follows Navy Policy on the Use of Background Chemical Levels (DON, 2004). This document also presents the Navy's interpretation of the USEPA guidance provided in the document titled Role of Background in the CERCLA Cleanup Program (USEPA, April 2002) and details the methodology to be used in evaluating background under the Navy's Environmental Restoration and Base Realignment and Closure (BRAC) programs. Navy policy applies to both the screening-level and baseline risk assessments and requires the following:

TABLE 6-1
SELECTION OF CHEMICALS OF POTENTIAL CONCERN - SURFACE SOIL
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Minimum Concentration (1)	Maximum Concentration (1)	Range of Nondetects (2)	Sample of Maximum Detection	Concentration Used for Screening(3)	Background Value(4)	Screening Levels based on Region 9 Residential PRGs (5)	USEPA Soil-to-Air SSLs (Inhalation)(6)	COPC Flag	Rationale for Contaminant Deletion or Selection (7)
	Semivolatile Organics (mg/kg)											
90-12-0	1-METHYLNAPHTHALENE	1/20	0.003 J	0.003 J	0.002 - 0.012	PEN-43-SS2401	0.003	NA	5.6	---	No	BSL
91-57-6	2-METHYLNAPHTHALENE	7/20	0.002 J	0.009 J	0.0006 - 0.0007	PEN-43-SS2401	0.009	NA	5.6	---	No	BSL
83-32-9	ACENAPHTHENE	5/20	0.001 J	0.003 J	0.0007 - 0.0008	PEN-43-SS2401	0.003	NA	370	---	No	BSL
208-96-8	ACENAPHTHYLENE	11/20	0.001 J	0.011 J	0.0006 - 0.0007	PEN-43-SS2501	0.011	NA	370	---	No	BSL
120-12-7	ANTHRACENE	17/20	0.0009 J	0.017 J	0.0008 - 0.0009	PEN-43-SS2801	0.017	NA	2200	---	No	BSL
191-24-2	BENZO(G,H,I)PERYLENE	19/20	0.004 J	0.11 J	0.002 - 0.002	PEN-43-SS2801	0.11	NA	230	---	No	BSL
206-44-0	FLUORANTHENE	20/20	0.005 J	0.28 J	---	PEN-43-SS2401	0.28	NA	230	---	No	BSL
86-73-7	FLUORENE	1/20	0.001675 J	0.003 J	0.0006 - 0.0008	PEN-43-SS1801-D	0.003	NA	270	---	No	BSL
91-20-3	NAPHTHALENE	9/20	0.001 J	0.003 J	0.0009 - 0.001	PEN-43-SS2701	0.003	NA	5.6	17	No	BSL
85-01-8	PHENANTHRENE	20/20	0.002 J	0.085	---	PEN-43-SS2801	0.085	NA	230	---	No	BSL
129-00-0	PYRENE	20/20	0.004 J	0.19	---	PEN-43-SS2401	0.19	NA	230	---	No	BSL
50-32-8	**CARCINOGENIC PAHS**	20/20	0.0045	0.3	---	PEN-43-SS2801	0.3	NA	**0.062**	---	**Yes**	**ASL**
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	3/20	0.11 J	0.87	0.079 - 0.096	PEN-43-SS3501	0.87	NA	35	---	No	BSL
84-74-2	DI-N-BUTYL PHTHALATE	2/20	0.93	1.2	0.089 - 0.11	PEN-43-SS2001	1.2	NA	610	---	No	BSL
	Inorganics (mg/kg)				-							
7440-38-2	**ARSENIC**	11/12	1.2	8	0.23 - 0.23	PEN-43-SS2801	8	**1.56**	**0.39**	58	**Yes**	**ASL**
7440-39-3	**BARIUM**	12/12	2.2	726	---	PEN-43-SS2801	726	**4.63**	**540**	1700	**Yes**	**ASL**
7440-50-8	**COPPER**	17/17	1.7	889	---	PEN-43-SS2401	889	**5.74**	**310**	---	**Yes**	**ASL**
7439-92-1	**LEAD**	17/17	10.7	7360	---	PEN-43-SS2801	7360	**7.32**	**400**	---	**Yes**	**ASL**
7440-62-2	**VANADIUM**	9/9	1.4	73.1	---	PEN-43-SS2801	73.1	**5.83**	**7.8**	---	**Yes**	**ASL**

Shaded cells indicate that the specified criterion or background level has been exceeded or that the chemical has been selected as a COPC.

Footnotes:

1 Sample and duplicate are counted as two separate samples when determining the minimum and maximum detected concentrations.
2 Values presented are sample-specific quantitation limits.
3 The maximum detected concentration is used for screening purposes.
4 To determine whether metal concentrations were within background levels, soil concentrations were compared to facilty background levels described in Section 6.1.1.1. If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.
5 USEPA Region IX Preliminary Remediation Goal (PRG). The noncarcinogenic values (denoted with a "N" flag) are the PRG divided by 10 to correspond to a target hazard quotient of 0.1. Carcinogenic values represent an incremental cancer risk of 1.0E-06 (carcinogens denoted with a "C" flag) (USEPA Region IX, October 2004, Updated December 28, 2004).
6 USEPA Soil Screening Levels calculated on the EPA Internet Site at http://risk.lsd.ornl.gov/calc_start.htm. The Soil to air SSLs for noncarcinogens are divided by 10.
7 A chemical is selected as a COPC if the maximum detected concentration exceeds the risk-based COPC screening level and is determined to be above background (for metals).

Associated Samples:

PEN-43-SS1801	PEN-43-SS2201	PEN-43-SS2801	PEN-43-SS3401
PEN-43-SS1801-AVG	PEN-43-SS2301	PEN-43-SS2901	PEN-43-SS3501
PEN-43-SS1801-D	PEN-43-SS2401	PEN-43-SS3001	PEN-43-SS3601
PEN-43-SS1901	PEN-43-SS2501	PEN-43-SS3101	PEN-43-SS3701
PEN-43-SS2001	PEN-43-SS2601	PEN-43-SS3201	
PEN-43-SS2101	PEN-43-SS2701	PEN-43-SS3301	

Definitions:
C = Carcinogen.
COPC = Chemical of potential concern.
J = Estimated value.
N = Noncarcinogen.

Rationale Codes:
For Selection as a COPC:
ASL = Above COPC screening level

For Elimination as a COPC:
BKG = Within background levels.
BSL = Below COPC screening level

TABLE 6-2

SELECTION OF CHEMICALS OF POTENTIAL CONCERN - SUBSURFACE SOIL
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Minimum Concentration (1)	Maximum Concentration (1)	Range of Nondetects (2)	Sample of Maximum Detection	Concentration Used for Screening(3)	Background Value(4)	Screening Levels based on Region 9 Residential PRGs (5)	USEPA Soil-to-Air SSLs (Inhalation)(6)	COPC Flag	Rationale for Contaminant Deletion or Selection (7)
	Semivolatile Organics (mg/kg)											
92-52-4	1,1-BIPHENYL	1/40	0.28 J	0.28 J	0.17 - 0.19	PEN-43-SB1401	0.28	NA	300	---	No	BSL
90-12-0	1-METHYLNAPHTHALENE	2/40	0.002 J	0.54 J	0.002 - 0.011	PEN-43-SB1401	0.54	NA	5.6	---	No	BSL
91-57-6	2-METHYLNAPHTHALENE	9/40	0.001 J	0.67	0.0006 - 0.0006	PEN-43-SB1401	0.67	NA	5.6	---	No	BSL
83-32-9	ACENAPHTHENE	3/40	0.001 J	1.8	0.0007 - 0.0008	PEN-43-SB1401	1.8	NA	370	---	No	BSL
208-96-8	ACENAPHTHYLENE	4/40	0.002 J	0.008 J	0.0006 - 0.006	PEN-43-SB1101	0.008	NA	370	---	No	BSL
120-12-7	ANTHRACENE	8/40	0.0009 J	8	0.0008 - 0.0009	PEN-43-SB1401	8	NA	2200	---	No	BSL
191-24-2	BENZO(G,H,I)PERYLENE	7/40	0.007 J	4.6 J	0.002 - 0.002	PEN-43-SB1401	4.6	NA	230	---	No	BSL
86-74-8	CARBAZOLE	1/40	2.8	2.8	0.063 - 0.068	PEN-43-SB1401	2.8	NA	24	---	No	BSL
132-64-9	DIBENZOFURAN	1/40	1.7	1.7	0.065 - 0.07	PEN-43-SB1401	1.7	NA	15	---	No	BSL
206-44-0	FLUORANTHENE	15/40	0.002 J	30	0.002 - 0.002	PEN-43-SB1401	30	NA	230	---	No	BSL
86-73-7	FLUORENE	2/40	0.002 J	1.7	0.0006 - 0.0007	PEN-43-SB1401	1.7	NA	270	---	No	BSL
91-20-3	NAPHTHALENE	8/40	0.001 J	2.4 J	0.0009 - 0.001	PEN-43-SB1401	2.4	NA	5.6	17	No	BSL
85-01-8	PHENANTHRENE	12/40	0.002 J	28	0.002 - 0.002	PEN-43-SB1401	28	NA	230	---	No	BSL
129-00-0	PYRENE	12/40	0.003 J	17 J	0.002 - 0.002	PEN-43-SB1401	17	NA	230	---	No	BSL
50-32-8	**CARCINOGENIC PAHS**	15/40	0.0029	14.8	0.0008 - 0.0008	PEN-43-SB1401	14.8	NA	**0.062**	---	**Yes**	**ASL**
84-74-2	DI-N-BUTYL PHTHALATE	4/40	0.65 J	1.2	0.088 - 0.098	PEN-43-SB0901	1.2	NA	610	---	No	BSL
	Inorganics (mg/kg)											
7440-38-2	**ARSENIC**	24/40	0.2075	14.6 J	0.17 - 0.27	PEN-43-SB2501	14.6	**1.56**	**0.39**	58	**Yes**	**ASL**
7440-39-3	**BARIUM**	39/40	0.56 J	939 J	0.32 - 0.32	PEN-43-SB1401	939	**4.63**	**540**	1700	**Yes**	**ASL**
7440-50-8	**COPPER**	39/40	0.26	3380	0.22 - 0.22	PEN-43-SB1101	3380	**5.74**	**310**	---	**Yes**	**ASL**
7439-92-1	**LEAD**	38/40	0.24	5500 J	0.56 - 0.58	PEN-43-SB1401	5500	**7.32**	**400**	---	**Yes**	**ASL**
7440-62-2	**VANADIUM**	39/40	0.83	156	0.44 - 0.44	PEN-43-SB1401	156	**5.83**	**7.8**	---	**Yes**	**ASL**

Shaded cells indicate that the specified criterion or background level has been exceeded or that the chemical has been selected as a COPC.

Footnotes:

1 Sample and duplicate are counted as two separate samples when determining the minimum and maximum detected concentrations.
2 Values presented are sample-specific quantitation limits.
3 The maximum detected concentration is used for screening purposes.
4 To determine whether metal concentrations were within background levels, soil concentrations were compared to facilty background levels described in Section 6.1.1.1. If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.
5 USEPA Region IX Preliminary Remediation Goal (PRG). The non-carcinogenic values (denoted with a "N" flag) are the PRG divided by 10 to correspond to a target hazard quotient of 0.1. Carcinogenic values represent an incremental cancer risk of 1.0E-06 (carcinogens denoted with a "C" flag) (USEPA Region IX, October 2004, Updated December 28, 2004).
6 USEPA Soil Screening Levels calculated on the USEPA Internet Site at http://risk.lsd.ornl.gov/calc_start.htm. The Soil to air SSLs for noncarcinogens are divided by 10.
7 A chemical is selected as a COPC if the maximum detected concentration exceeds the risk-based COPC screening level and is determined to be above background (for metals).

Associated Samples:

PEN-43-SB0601	PEN-43-SB1102	PEN-43-SB1601	PEN-43-SB2102
PEN-43-SB0602	PEN-43-SB1102-AVG	PEN-43-SB1602	PEN-43-SB2201
PEN-43-SB0701	PEN-43-SB1102-D	PEN-43-SB1701	PEN-43-SB2202
PEN-43-SB0702	PEN-43-SB1201	PEN-43-SB1702	PEN-43-SB2301
PEN-43-SB0801	PEN-43-SB1202	PEN-43-SB1801	PEN-43-SB2302
PEN-43-SB0802	PEN-43-SB1301	PEN-43-SB1802	PEN-43-SB2401
PEN-43-SB0901	PEN-43-SB1302	PEN-43-SB1901	PEN-43-SB2402
PEN-43-SB0902	PEN-43-SB1401	PEN-43-SB1902	PEN-43-SB2501
PEN-43-SB1001	PEN-43-SB1402	PEN-43-SB2001	PEN-43-SB2501-AVG
PEN-43-SB1002	PEN-43-SB1501	PEN-43-SB2002	PEN-43-SB2501-D
PEN-43-SB1101	PEN-43-SB1502	PEN-43-SB2101	PEN-43-SB2502

Definitions:
C = Carcinogen.
COPC = Chemical of potential concern.
J = Estimated value.
N = Noncarcinogen.

Rationale Codes:
For Selection as a COPC:
ASL = Above COPC screening level

For Elimination as a COPC:
BKG = Within background levels.
BSL = Below COPC screening level

TABLE 6-3

SELECTION OF CHEMICALS OF POTENTIAL CONCERN - GROUNDWATER
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Minimum Concentration (1)	Maximum Concentration (1)	Range of Nondetects (2)	Sample of Maximum Detection	Concentration Used for Screening(3)	Background Value(4)	USEPA Region 9 Tapwater PRGS (5)		Screening Levels based on Region 9 Tapwater PRGs (6)	USEPA MCL (7)	COPC Flag	Rationale for Contaminant Deletion or Selection (8)
	Volatile Organics (ug/L)													
67-64-1	ACETONE	5/12	2 J	5 J	4	PEN-43-GW10S01	5	NA	5500	N	550	---	No	BSL
67-66-3	**CHLOROFORM**	2/12	1 J	6	0.4	PEN-43-GW12S01	6	NA	0.17	C	**0.17**	80	**Yes**	**ASL**
79-01-6	TRICHLOROETHENE(9)	2/12	0.275 J	0.8 J	0.3	PEN-43-GW05D01	0.8	NA	1.4	C	1.4	5	No	BSL
	Inorganics (ug/L)													
7440-39-3	BARIUM	12/12	17	75.2	---	PEN-43-GW12S01	75.2	**13.22**	2600	N	260	2000	No	BSL
7440-70-2	CALCIUM	12/12	4350	56800	---	PEN-43-GW12S01	56800	**17560**	NA		---	---	No	NUT
7440-47-3	CHROMIUM	12/12	1.4	4.5	---	PEN-43-GW09S01	4.5	34.98	110	N	11	100	No	BSL,BKG
7440-50-8	COPPER	3/12	6	10.1	2.52	PEN-43-GW13S01	10.1	16.2	1500	N	150	1300	No	BSL,BKG
7439-89-6	**IRON**	9/12	192	4000	8 - 125	PEN-43-GW06S01	4000	**1707.8**	11000	N	**1100**	**300**	**Yes**	**ASL**
7439-92-1	**LEAD**	2/12	4	29.9	2.07	PEN-43-GW13S01	29.9	**1.6**	15	N	**15**	**15**	**Yes**	**ASL**
7439-95-4	MAGNESIUM	12/12	651	6580	---	PEN-43-GW12S01	6580	**2872.5**	NA		---	---	No	NUT
7439-96-5	**MANGANESE**	12/12	1.5	204	---	PEN-43-GW06S01	204	**21.92**	880	N	**88**	**50**	**Yes**	**ASL**
7439-97-6	MERCURY	6/12	0.02	0.05	0.02	PEN-43-GW13S01	0.05	0.2	11	N	1.1	2	No	BSL,BKG
7440-02-0	NICKEL	4/12	11.6	18.2	11.6	PEN-43-GW05S02-D	18.2	39.9	730	N	73	---	No	BSL,BKG
7440-09-7	POTASSIUM	12/12	1080	3620	---	PEN-43-GW12S01	3620	12167.5	NA		---	---	No	NUT, BKG
7440-23-5	SODIUM	12/12	6610	32600	---	PEN-43-GW05S02-D	32600	**18345**	NA		---	---	No	NUT
7440-66-6	ZINC	4/12	33.5	117	7.3 - 30	PEN-43-GW13S01	117	153.2	11000	N	1100	5000	No	BSL,BKG

Shaded cells indicate that the specified criterion or background level has been exceeded or that the chemical has been selected as a COPC.

Footnotes:
1 Sample and duplicate are counted as two separate samples when determining the minimum and maximum detected concentrations.
2 Values presented are sample-specific quantitation limits.
3 The maximum detected concentration is used for screening purposes.
4 To determine whether metal concentrations were within background levels, groundwater concentrations were compared to facilty background levels described in Section 6.1.1.1. If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.
5 USEPA Region 9 Preliminary Remediation Goals (PRGs), October 2004.
6 USEPA Region IX Preliminary Remediation Goal (PRG). The non-carcinogenic values (denoted with a "N" flag) are the PRG divided by 10 to correspond to a target hazard quotient of 0.1. Carcinogenic values represent an incremental cancer risk of 1.0E-06 (carcinogens denoted with a "C" flag) (USEPA Region IX, October 2004, Updated December 28, 2004).
7 Drinking Water Standards and Health Advisories (USEPA, Winter 2004).
8 A chemical is selected as a COPC if the maximum detected concentration exceeds the risk-based COPC screening level or the USEPA MCL and is determined to be above background (for metals).
9 The PRG for trichlroroethene is the "CAL Modified PRG" presented in the Region 9 PRG Table (USEPA, October 2004).

Associated Samples:

PEN-43-GW02S02	PEN-43-GW09S01
PEN-43-GW05D01	PEN-43-GW10S01
PEN-43-GW05S02	PEN-43-GW11S01
PEN-43-GW05S02-AVG	PEN-43-GW12S01
PEN-43-GW05S02-D	PEN-43-GW13S01
PEN-43-GW06D01	PEN-43-MW07S01
PEN-43-GW06S01	PEN-43-MW08S01

Definitions:
C = Carcinogen.
COPC = Chemical of potential concern.
J = Estimated value.
N = Noncarcinogen.

Rationale Codes:
For Selection as a COPC:
ASL = Above COPC screening level

For Elimination as a COPC:
BKG = Within background levels.
BSL = Below COPC screening level
NUT = Essential nutrient.

1. A clear and concise understanding of chemicals released from a site thus ensuring the Navy is focusing on remediating the release.

2. The use of background data in the screening-level risk assessment.

   a. The comparison of site chemical levels to risk-based screening criteria.

   b. The comparison of site chemical levels to background concentrations.

   c. The identification of site-related COPCs based on screening criteria comparisons and background comparisons. Site-related COPCs are those chemicals with concentrations exceeding risk-based screening criteria and background concentrations. To the extent possible, site-related COPCs are further evaluated quantitatively in the baseline risk assessment. (Non-site-related COPCs are further discussed in the risk characterization sections of the baseline risk assessments).

3. The consideration of background in the baseline risk assessment.

   a. The calculation of risk estimates for site-related COPCs only.

   b. The further evaluation of non-site-related COPCs in the risk characterization section only (e.g., the evaluation of chemicals detected at concentrations exceeding screening criteria but less than background concentrations). The Navy considers this comparison to be consistent with USEPA's Role of Background in the CERCLA Cleanup Program (USEPA, April 2002).

4. The selection of site cleanup remedial goals at levels not less than background levels. Additionally, cleanup levels should not be developed for chemicals not identified as COCs. As defined in the Navy guidance, COCs are site-related COPCs found to be the risk drivers in the baseline risk assessment and that may pose unacceptable human or ecological risks.

The results of the background screens are presented in Tables 6-1 through 6-3.

<u>Frequency Screen</u>

If an analyte is detected in less than 5 percent of the samples, it may not be selected as a COPC (FDEP, February 2005). A frequency screen is conducted only when there are 20 or more samples of the medium of concern. The decision to eliminate a chemical because of low detection frequency is also based on site history (i.e., is there a reason to believe a chemical may or may not be related to historical site activities) and the magnitude of the concentration (i.e., does the concentration of a chemical indicate a potential hotspot area). Note that no chemicals were eliminated as COPCs on the basis of frequency alone.

Decision Rules for Establishing COPCs

The applicable decision rules for the selection of COPCs are as follows:

- A chemical is selected as a COPC for soil or groundwater if the maximum detected concentration exceeds the screening level and if the background screen indicates the site concentrations are greater than the corresponding background concentrations.

- Individual chemicals may be eliminated as COPCs if they are detected at a frequency of less than 5 percent in any given medium but only if there are no other indications the chemical would pose an unacceptable risk to receptors (e.g., there is no evidence of a contaminant "hot spot"). Chemicals exhibiting unusually high concentrations or are clearly site-related may be retained as COPCs at the discretion of the human health risk assessor.

- If a chemical is not detected in any of the samples in a particular medium, and the detection limits exceeds the risk-based screening levels, the chemical is not selected as a COPC but is qualitatively discussed in the uncertainty analysis section.

- The essential nutrients (calcium, magnesium, potassium, and sodium) are not identified as COPCs.

- Chemicals with concentrations exceeding toxicity screening concentrations but determined to be less than background concentrations based on the background screen are not selected as COPCs. However, as stated previously, no chemicals were eliminated as COPCs on the basis of background alone.

6.1.2 Selection of COPCs for Human Health Risk Assessment – USEPA Methodology

The direct contact, USEPA Region 9 risk-based screening levels and USEPA MCLs (for groundwater) defined in Section 6.1.1.1.2 were used to select COPCs for quantitative evaluation at Site 43. A discussion of the chemicals selected as COPCs (i.e., those chemicals detected at concentrations in excess of USEPA direct contact screening criteria) and the rationale for COPC selection are provided in the following paragraphs. COPC selection tables for surface soil, subsurface soil, and groundwater are presented as Tables 6-1, 6-2, and 6-3, respectively.

6.1.2.1 Surface Soil

Eighteen PAHs, two phthalate esters, and five inorganics were detected in 20 surface soil samples collected at Site 43. A comparison of the maximum detected surface soil concentrations to screening

levels based on USEPA Region 9 PRGs for residential exposures is presented in Table 6-1. Also presented in Table 6-1 are the results of the site data-to-background data comparisons. The following chemicals were detected in surface soils at maximum concentrations exceeding the direct contact, risk based COPC screening levels and background, and were retained as COPCs for surface soil:

- Carcinogenic PAHs
- Inorganics (arsenic, barium, copper, lead, and vanadium)

These constituents were retained for the quantitative evaluation presented in Section 6.1.5. The maximum concentrations of barium, copper, and vanadium exceeded the Region 9 PRG-based screening level representing an HQ of 0.1 but were less than the non-adjusted PRG values based on an HQ of 1.0.

6.1.2.2 Subsurface Soil

Twenty PAHs, one phthalate ester, 1,1-biphenyl (in 1 of 40 samples), and five inorganics were detected in 40 subsurface soil samples collected at Site 43. A comparison of the maximum detected subsurface soil concentrations to screening levels based on USEPA Region 9 PRGs for residential exposures is presented in Table 6-2. Also presented in Table 6-2 are the results of the site data-to-background data comparisons. The following chemicals were detected in subsurface soils at maximum concentrations exceeding the direct contact, risk based COPC screening levels and background, and were retained as COPCs for subsurface soil:

- Carcinogenic PAHs
- Inorganics (arsenic, barium, copper, lead, and vanadium)

These constituents were retained for the quantitative evaluation presented in Section 6.1.5. The maximum concentration of barium exceeded the Region 9 PRG-based screening concentration but was less than the non-adjusted PRG value. Note that the maximum concentrations of most chemicals (both organic and inorganic) were detected in sample PEN-43-SB1401 within geophysical anomaly location 23 in the Former Fenced Drum Area. This sample location is outside the interim removal action excavation area and likely represents a “hotspot” area, particularly for lead and carcinogenic PAHs.

6.1.2.3 Groundwater

Three VOCs and 13 inorganics were detected in 12 groundwater samples collected at Site 43. A comparison of the maximum detected groundwater concentrations to screening levels based on USEPA Region 9 PRGs and USEPA MCLs for residential exposures is presented in Table 6-3. Also presented in Table 6-3 are the results of the site data-to-background data comparisons. The following chemicals were

detected in groundwater at maximum concentrations exceeding the direct contact, risk based COPC screening levels or the USEPA MCLs, and background, and were retained as COPCs for groundwater:

- Chloroform
- Inorganics (iron, lead, manganese)

Chloroform was detected in 2 of 12 samples at a maximum concentration that exceeded the screening levels based on the Region 9 PRG but was less than the USEPA MCL. The maximum concentrations of iron and manganese exceeded the Region 9 PRG-based screening levels but were less than the non-adjusted PRGs. The concentrations of iron and manganese also exceeded the USEPA Secondary MCLs, which are not based on health effects but on aesthetic effects, such as taste and odor. No chemicals in groundwater were eliminated as COPCs on the basis of background only.

6.1.3 Exposure Assessment/Estimation of Risk

The exposure assessment defines and evaluates, quantitatively or qualitatively, the type and magnitude of human exposure to the chemicals present at or migrating from the site. The exposure assessment is designed to depict the physical setting of the site, to identify potentially exposed populations and applicable exposure pathways, to determine concentrations of COPCs to which receptors might be exposed, and to estimate chemical intakes under the identified exposure scenarios. Actual or potential exposures at a site are determined based on the most likely pathways of contaminant release and transport, as well as human activity patterns. A complete exposure pathway has three components: (1) a source of chemicals that can be released to the environment, (2) a route of contaminant transport through an environmental medium, and (3) an exposure or contact point for a human receptor. These components can be integrated and described by means of a conceptual site model (CSM), which is an essential element of the exposure assessment.

Current or potential human exposures identified by the CSM are evaluated using the “risk-ratio” approach defined in Section 6.1.3.3. As noted above, this approach is supported by USEPA Region 4. The approach uses EPCs for the COPCs in soil and groundwater and relevant risk-based concentrations to generate cancer and non-cancer risk estimates for receptors of concern. The risk-based concentrations for soil used to estimate risk are the FDEP SCTLs developed for the residential and industrial land use scenarios and risk-based concentrations developed for other receptors using USEPA and FDEP guidance documents. The risk-based concentrations for groundwater used to estimate risks are the USEPA Region 9 Tap Water PRGs (USEPA Region 9, October 2004). The Region 9 PRGs were used for groundwater (instead of the FDEP CTLs), because most of the FDEP GCTLs are not risk-based values. The risk-based concentrations define and incorporate all the exposure factors (e.g., soil and water ingestion rates) used to determine chemical intake/exposure by receptors of concern.

6.1.3.1 Conceptual Site Model

The foundation of an exposure assessment is the CSM, which identifies site characteristics including potential contaminant sources, contaminant release mechanisms, transport routes, receptors under current and future land use scenarios, and other appropriate information. The CSM integrates information regarding the physical characteristics of the site, exposed populations, sources of contamination, and contaminant mobility (fate and transport) to identify potential exposure routes and receptors to be evaluated in the risk assessment. A well-defined CSM allows for a better understanding of the risks at a site and aids risk managers in the identification of the potential need for remediation. A general overview of CSM information relevant to Site 43 is provided below. Table 6-4 provides a general summary of the potential receptors and exposure routes evaluated in the risk assessment for Site 43.

TABLE 6-4

EXPOSURE ROUTES FOR QUANTITATIVE EVALUATION
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

Receptors	Exposure Routes
Adult and Adolescent Trespassers / Recreational Users	• Soil dermal contact (surface) • Soil ingestion (surface) • Inhalation of air/dust/emissions (surface soil)
Maintenance Workers	• Soil dermal contact (surface) • Soil ingestion (surface) • Inhalation of air/dust/emissions (surface)
Construction Workers	• Soil dermal contact (surface and subsurface) • Soil ingestion (surface and subsurface) • Inhalation of air/dust/emissions (surface and subsurface)
Occupational Workers	• Soil dermal contact (surface)[1] • Soil ingestion (surface)[1] • Inhalation of air/dust/emissions (surface)[1]
Residents (Adult/Children)	• Soil dermal contact (surface)[1] • Soil ingestion (surface)[1] • Inhalation of air/dust/emissions (surface)[1] • Groundwater ingestion • Groundwater inhalation

1 Occupational workers and residents are also evaluated for exposure to COPCs in subsurface soil. This scenario is included to account for the possibility that subsurface soil could be brought to the surface in future excavation projects.

As noted above, the CSM depicts the relationships among the following elements:

- Site sources of contamination
- Contaminant release mechanisms
- Transport/migration pathways
- Exposure routes
- Potential receptors

A general discussion of these elements is provided in following paragraphs.

Sources of Environmental Contamination

The primary sources of contamination at Site 43 are the buried drums discovered during the Site Characterization Investigation. The primary contaminant release mechanism is the leakage/spillage of the drums' contents into the soil at the site. Surface soil, subsurface soil to a depth of 3.5 feet, and groundwater were impacted by the historical use of Site 43 as a drum storage/disposal area (TtNUS, 2004a). Semivolatile organics (e.g., PAHs) and metals (e.g., antimony and lead) were the predominant COPCs identified for the site. Volatile organic chemicals and pesticides were not significant site contaminants. Surface soil, subsurface soil, and groundwater were the primary media impacted by environmental contamination. Surface water and sediment are not evaluated because no surface water bodies (other than intermittent streams/drainage ditches) are present in the immediate vicinity of Site 43 and these do not drain into any local surface water bodies. Analytical data used in this risk assessment were from samples collected after the removal action (in March 2005).

Potential Contaminant Migration Routes

Given that surface soil, subsurface soil, and groundwater contamination has occurred as a result of chemical usage/waste disposal and that chemicals may migrate to deeper subsurface soils and groundwater, the primary plausible contaminant release and migration mechanisms at Site 43 are as follows:

Migration of soil contaminants downward through the soil column with infiltrating precipitation. Chemicals may continue to migrate in groundwater via dispersion and advection in the downgradient direction. Depth to groundwater at the Site is approximately 15 feet bls. However, the COCs at the site (PAHs and metals) are not environmentally mobile and do not tend to readily leach through the soil column under typical environmental conditions (e.g., moderate pH). PAHs and metals in soil are much more likely to bind to soil and be transported via mass transport mechanisms rather than move in the dissolved phase. The

presence of these chemicals in subsurface soil and groundwater at the site is more likely due to releases from buried drums than leaching from the surface.

Migration of fugitive dusts from surface soils (and subsurface soils if construction/excavation activities occur) into ambient air. Currently, Site 43 is covered with grass; therefore the potential for migration of airborne fugitive dusts from surface soil is not significant. Also, as indicated in COPC selection Tables 6-1 and 6-2, the site soil concentrations of all detected chemicals were less than USEPA inhlalation SSLs and, therefore, the soil-to-air inhalation pathway is not considered significant and is not further evaluated in the risk assessment.

Contaminants in surface soils may also migrate from the site as a result of surface water/sediment run-off during rainfall events. However, there are no surface water bodies (other than intermittent streams/drainage ditches) in the immediate vicinity of Site 43 and these are not known to drain into any local surface water bodies. Therefore, surface waters and sediments were not sampled during environmental investigations conducted at Site 43 and are not evaluated in this HHRA.

Potential Current and Future Receptors of Concern and Exposure Pathways

NAS Pensacola is an active facility and will remain active for the foreseeable future. However, for purposes of completeness, the baseline risk assessment prepared for Site 43 considers receptor exposure under residential, industrial, and recreational land use scenarios. Based on current and potential future land use, the following potential receptors are assumed to be exposed to contaminated environmental media at Site 43:

- **Site Maintenance Worker** – An on-site receptor under current/future land use. This includes adult military or civilian personnel assigned to work (primarily groundskeeping/outdoor maintenance activities) at a site. This receptor could be exposed to surface soil by incidental ingestion, dermal contact, and inhalation (i.e., airborne particulates/vapors) during groundskeeping or maintenance activities. This receptor would not be expected to be routinely exposed to subsurface soils. This receptor is expected to be exposed to surface soil for 30 days per year based on professional judgment. Maintenance workers are considered one of the more likely receptors under current land use.

- **Construction/Excavation Worker** – A plausible on-site receptor under future land use if major construction activities were to occur. This receptor could be exposed to surface and subsurface soils by incidental ingestion, dermal contact, and inhalation (i.e., airborne particulates/vapors). The construction worker is assumed to be exposed to soil for 250 days per year (USEPA, December 2002b) assuming a Reasonable Maximum Exposure (RME) scenario. The receptor

may also be evaluated for inhalation of VOC vapors from groundwater if shallow groundwater were contacted during an excavation project. However, since only one VOC, chloroform, was selected as a COPC, with the maximum concentration well below the USEPA MCL and Florida GCTL, this exposure pathway is not evaluated for the construction worker.

- **Typical Occupational Worker** – An on-site receptor under future land use. Future occupational workers may work at the site if the facility were to further develop this area for industrial/military purposes of if the facility were to close and be developed for commercial/industrial uses. To provide information for risk management decisions, potential risks to future occupational workers are quantified in this risk assessment. This receptor could be exposed to surface soil by incidental ingestion, dermal contact, and inhalation (i.e., airborne particulates/vapors). This receptor would not be expected to be routinely exposed to subsurface soils. The occupational worker is expected to be exposed to surface soils for 250 days per year (USEPA, May 1993 and December 2002) but less intensely than the maintenance or construction worker.

- **Adult and Adolescent Recreational User/Trespasser** – A plausible receptor under current and future land use. Although access to the base is controlled, once inside the base, access to Site 43 is not limited by any physical constraints. This receptor may be exposed to potentially contaminated surface soil by incidental ingestion, dermal contact, and inhalation (i.e., airborne particulates/vapors). Recreational users/trespassers are assumed to be exposed to COPCs in soil for 45 days per year, based on professional judgment. Direct contact with subsurface soils is not anticipated for this receptor. Recreational users are considered one of the more likely receptors under current land use.

- **Hypothetical Future On-Site Child and Adult Resident** – The future residential scenario was quantitatively evaluated in the risk assessment for decision-making purposes although this scenario is unlikely for the NAS Pensacola. It is assumed a resident may be exposed to surface soils by incidental ingestion, dermal contract, and inhalation (i.e., airborne particulates/vapors). Future residents could also be exposed to groundwater only if drinking water wells were installed on the site in the future. This is very unlikely since the main source of water for the base is the Navy-owned well field located at Naval Technical Training Center (NTTC) Corry Station north of NAS Pensacola. However, the future residential drinking water scenario was evaluated for purposes of completeness. According to USEPA Region 4 and Region 9 guidance, a resident is assumed to be exposed to groundwater by ingestion and inhalation (i.e., airborne vapors). FDEP in Chapter 62-777, FAC assumes that a receptor is exposed to groundwater by ingestion only. Residential receptors are assumed to be exposed to groundwater 350 days per year (USEPA, May 1993) for a total of 30 years.

6.1.3.2 Calculation of Exposure Point Concentrations

The EPC, calculated for COPCs only, is a reasonable estimate of the chemical concentration likely to be contacted over time by a receptor and is used to calculate estimated exposure intakes. The calculation of EPCs considered guidance described in the USEPA's Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites (December 2002a) and Florida's 62-780, FAC (FDEP, April 2005).

The 95% UCL, which is based on the distribution of a dataset, is considered to be the best estimate of the exposure concentration for datasets with 10 or more samples (USEPA, May 1992). For datasets with less than 10 samples, the UCL is considered to be a poor estimate of the mean, and the EPC is defined as the maximum concentration. As specified in Chapter 62-780, FAC, the Florida UCL Calculator tool (Version 0.97) was used to calculate the UCLs.

The following decision rules were used to calculate EPCs:

- If a soil dataset contains fewer than 10 samples, the EPC is defined as the maximum detected concentration.
- If a soil dataset contains 10 or more samples, the 95% UCL on the arithmetic mean (calculated using the Florida UCL Calculator Tool), which is based on the distribution of the dataset, was selected as the EPC. If a dataset contains less than three positive results, the Florida UCL Calculator Tool recommends that the maximum detected concentration be used at the EPC.
- If the calculated 95% UCL exceeded the maximum detected concentration, the maximum concentration was used as the EPC.
- Sample and duplicate analytical results were averaged before the EPC was calculated.
- A data value less than the sample-specific detection limit was substituted with one-half the detection limit.
- The EPCs for groundwater used in the USEPA risk evaluation are the arithmetic averages of the wells in the highly concentrated area of the plume (USEPA Region 4, May 2000). For the chemicals selected as COPCs in groundwater, the EPCs were derived from the following locations:

Shallow Aquifer EPCs

- Chloroform (3.5 ug/L) – average of wells PEN-43-11S and PEN-43-12S
- Iron (2400 ug/L) = average of wells PEN-43-6S, PEN-43-9S, PEN-43-10S, and PEN-43-11S
- Manganese (115 ug/L) – average of wells PEN-43-6S and PEN-43-11S
- Lead (29.9 ug/L) – maximum (no plume area defined)

Deeper Aquifer EPCs

- Chloroform – not detected in deeper aquifer
- Iron (1600 ug/L) = average of wells PEN-43-5D and PEN-43-6D
- Manganese (27 ug/L) – average of wells PEN-43-5D and PEN-43-6D
- Lead – not detected in deeper aquifer

These groundwater EPCs are only used to evaluate groundwater risks according to the USEPA methodology. The maximum detected concentrations were used to evaluate risks according to FDEP methodology (see Section 6.1.6.2).

Note that an examination of the analytical data indicates that several "hotspot" areas exist on the site (e.g., the soil in and around Anomaly Areas 11 and 23), especially for lead. Potential risks associated with these areas are discussed Section 6.1.5.4.

6.1.3.3 Chemical Intake and Risk Estimation

To evaluate risks by USEPA methodology, cancer and non-cancer risk estimates for COPCs detected in soil and groundwater are determined using the following simple "risk ratio" technique, which involves the selection (or development) of risk-based concentrations established at the $1x10^{-6}$ cancer risk level or HQ of 1 and the calculation of cancer and non-cancer risks based on the EPC and the risk based concentration:

$$\frac{\text{Risk - based Concentration}}{\text{EPC for COPC}} = \frac{\text{HQ of 1 or Cancer Risk Estimate of 1E - 06}}{\text{HQ or Cancer Risk Estimate for COPC}}$$

This is a valid technique for estimating risk because all of the intake and risk characterization equations used to develop risk-based concentrations are linear. The risk-based concentrations used in this HHRA for the evaluation of the hypothetical future resident and typical worker exposure to soil are the State of Florida SCTLs or risk-based concentrations based on the methodology for the development of residential and industrial SCTLs presented in the draft Technical Report: Development of CTLs for Chapter 62-777 (FDEP, April 2005). Because most Florida GCTLs are not risk-based values, the risk-based Region 9

PRGs are used in the risk ratio calculations used to derive risk estimates for exposure to COPCs in groundwater.

Cancer and non-cancer risk estimates for all other receptors evaluated in the HHRA (i.e., the construction worker, the maintenance worker, and the recreational user/trespasser) are based on risk-based concentrations developed using the exposure dose assumptions and the simple intake equations presented in the following sections and the toxicity criteria (slope factors and reference doses) discussed in Section 6.1.4. The simple intake equations are combined to produce one risk-based concentration per chemical that accounts for ingestion, dermal, and inhalation exposures (The risk-based concentration calculations are presented in Appendix E). The risk-based concentrations are established by setting the cancer and non-cancer risk levels at $1x10^{-6}$ or HI of 1, respectively, and solving for the associated contaminant concentration in soil as demonstrated in the USEPA Risk Assessment Guidance for Superfund, Part B (USEPA December 1991). The exposure assumptions selected for the construction worker, the maintenance worker, and the recreational user/trespasser were based on current USEPA risk assessment guidance (December 1989 and July 2004) and State of Florida guidance (FDEP, April 2005), and are presented in the following sections. Risk assessment spreadsheets for the calculation of the risk estimates are presented in Appendix E.

6.1.3.3.1 Incidental Ingestion of Soil

Incidental ingestion of soil by potential receptors coincides with dermal exposure. Exposures associated with incidental ingestion were estimated in the following manner (USEPA, December 1989):

$$\text{Intake}_{si} = (C_{si})(IR_s)(FI)(EF)(ED)(CF)/(BW)(AT)$$

where:

Intake_{si}	=	intake of contaminant "i" from soil (mg/kg/day)
C_{si}	=	concentration of contaminant "i" in soil (mg/kg)
IR_s	=	ingestion rate (mg/day)
FI	=	fraction ingested from contaminated source (dimensionless)
EF	=	exposure frequency (days/year)
ED	=	exposure duration (year)
CF	=	conversion factor ($1x10^{-6}$ kg/mg)
BW	=	body weight (kg)
AT	=	averaging time (days);
		for noncarcinogens, AT = ED x 365 days/year;
		for carcinogens, AT = 70 years x 365 days/year

As noted above, the State of Florida SCTLs are used to calculate cancer and non-cancer risk estimates for the hypothetical future resident and a typical industrial worker exposed to soil. Exposure assumptions for the other receptors are described below and were used to develop risk-based concentrations for the construction worker, the maintenance worker, and the recreational user/trespasser.

A default value of 1.0 (USEPA, December 1989) is recommended for the fraction of soil ingested from the contaminated source. The ingestion rates were 330 mg per day for the construction worker (USEPA, December 2002b), 50 mg per day for the maintenance workers (FDEP, February 2005), and 100 mg per day for adult and adolescent trespassers/recreational users (USEPA, May 1993). The exposure frequencies used to estimate intakes for incidental ingestion of soil are presented in Section 6.1.3.1.

6.1.3.3.2 Dermal Contact with Soil

Direct physical contact with soil may result in the dermal absorption of chemicals. Exposures associated with the dermal route were estimated in the following manner (USEPA, December 1989 and July 2004):

$$\text{Intake}_{si} = (C_{si})(SA)(AF)(ABS)(CF)EF)(ED)/(BW)(AT)$$

where:

Intake_{si}	=	amount of chemical "i" absorbed during contact with soil (mg/kg/day)
C_{si}	=	concentration of chemical "i" in soil (mg/kg)
SA	=	skin surface area available for contact (cm^2/day)
AF	=	skin adherence factor (mg/cm^2)
ABS	=	absorption factor (dimensionless)
CF	=	conversion factor ($1x10^{-6}$ kg/mg)
EF	=	exposure frequency (days/year)
ED	=	exposure duration (year)
BW	=	body weight (kg)
AT	=	averaging time (days);
		for noncarcinogens, AT = ED x 365 days/year;
		for carcinogens, AT = 70 years x 365 days/year

As noted above, the State of Florida SCTLs were used to calculate cancer and non-cancer risk estimates for the hypothetical future resident and a typical industrial worker. Exposure assumptions for the other receptors are described below and were used to develop risk-based concentrations for the construction worker, the maintenance worker, and the recreational user/trespasser.

The exposed surface areas of the body available for dermal contact are determined on a receptor-specific basis and are based on assumed human activities and clothing worn during exposure events. Current guidance (USEPA, August 1997 and July 2004) was used to develop the assumptions concerning the amount of skin surface area available for contact for a receptor. The rationales used to select the skin areas are as follows:

- The head, hands, and forearms of excavation/construction worker and maintenance workers were assumed to be exposed to soils (assuming the receptors wear a short-sleeved shirt, long pants, and shoes). As recommended in the Risk Assessment Guidance for Superfund (RAGS) Part E (USEPA, July 2004), the skin surface area for a worker was assumed to be 3,300 centimeters squared (cm^2). This value represents the average of the 50th-percentile areas of males and females more than 18 years old.

- For the adolescent trespassers/recreational user, 25 percent of the total body surface area for an adolescent (aged 7 to 16) was assumed to be available for surface soil contact. The RME value (3,280 cm^2) was derived from the 95th-percentile surface area data.

- For the adult trespasser/recreational user assumed to be exposed to surface soil, the exposed skin surface area available for contact was the value recommended for the adult resident in Exhibit 3-5 of RAGS Part E (USEPA, July 2004), 5,700 cm^2. This surface area assumes the head, hands, forearms, and lower legs of the receptor are available for contact.

The following values of soil adherence factors and chemical-specific dermal absorption factors provided in RAGS Part E (USEPA, July 2004) were used to evaluate risks from exposure to soil:

- Maintenance Worker - 0.2 mg/cm^2 (Exhibit 3.5; USEPA, July 2004).

- Construction workers - 0.3 mg/cm^2. This value is the 95th-percentile value for construction workers, (Exhibit 3.3; USEPA, July 2004).

- Adolescent Trespassers/Recreational Users - 0.3 mg/cm^2. This adherence factor is the 95th-percentile value presented for soccer players (teens) playing in moist conditions (Exhibit 3.3; USEPA, July 2004).

- Future adult trespassers/recreational users - 0.07 mg/cm^2 (Exhibit 3.5; USEPA, July 2004).

For the constituents identified as COPCs in soil, the following dermal absorption factors were used (USEPA, Exhibit 3-4, July 2004):

- PAHs - 0.13
- Arsenic - 0.03

As indicated in RAGS Part E, absorption factors for the other metals selected as COPCs for soils have not been developed due to insufficient data. Therefore, risks from dermal absorption of metals (other than arsenic) from soil were not quantified in this HHRA. The uncertainty associated with the omission of these constituents is discussed in the uncertainty analysis.

The same exposure frequencies and durations used in the estimation of ingestion intakes were used to estimate exposure via dermal contact.

6.1.3.3.3 Inhalation of Air and Fugitive Dust/Volatile Emissions

The amount of a chemical a receptor takes in as a result of breathing is determined using the concentration of the contaminant in air. Intakes of both particulates and vapors/gases are calculated using the same equation, as follows (USEPA, December 1991 and July 1996):

$$\text{Intake}_{ai} = \frac{(C_{ai})(IR_a)(ET)(EF)(ED)}{(BW)(AT)}$$

where: Intake_{ai} = intake of chemical "i" from air via inhalation (mg/kg/day)
C_{ai} = concentration of chemical "i" in air (mg/m^3)
IR_a = inhalation rate (m^3/hour)
ET = exposure time (hours/day)
EF = exposure frequency (days/year)
ED = exposure duration (year)
PEF = Particulate Emission Factor (m^3/kg)
VF = Volatilization Factor (chemical-specific) (m^3/kg)
BW = body weight (kg)
AT = averaging time (days);
= for noncarcinogens, AT = ED x 365 days/year;
= for carcinogens, AT = 70 year x 365 days/year

As noted above, the State of Florida SCTLs are used calculate cancer and non-cancer risk estimates for the hypothetical future resident and a typical industrial worker. Exposure assumptions for the other receptors are described below and were used to develop risk-based concentrations for the construction worker, the maintenance worker, and the recreational user/trespasser.

The same exposure frequencies and durations used in the estimation of ingestion and dermal intakes of soil were used to estimate exposure via inhalation of air and fugitive dust/volatile emissions. Additionally, for construction/excavation workers and maintenance workers, an inhalation rate of 2.5 m^3 per hour (USEPA, December 2002b) and an exposure time of 8 hours/day (i.e., 20 m^3 per day) were used to evaluate risks from inhalation of fugitive dusts and volatile emissions.

For adult and adolescent trespassers/recreational users, inhalation rates of 1.6 m^3 per hour and 1.2 m^3 per hour (USEPA, August 1997), respectively, and an exposure time of 4 hours per day were used to evaluate risks from inhalation of fugitive dusts and volatile emissions.

The concentrations of chemicals in air resulting from emissions from soil were developed following procedures presented in USEPA Soil Screening Guidance (July 1996 and December 2002b), as follows:

$$C_a = C_s \times \left[\frac{1}{PEF} + \frac{1}{VF} \right]$$

where:
- C_a = chemical concentration in air, mg/m^3
- C_s = chemical concentration in soil, mg/kg
- PEF = Particulate Emission Factor, 1.241×10^9 m^3/kg (FDEP, February 2005)
- VF = chemical-specific Volatilization Factor, m^3/kg

For chemicals in soil that are not classified as volatile, the above equation reduces to:

$$C_a = C_s \times \left[\frac{1}{PEF} \right]$$

The Particulate Emissions Factor (PEF) relates the concentration of the chemical in soil with the concentration of dust particles in air. The Volatilization Factor (VF) relates the concentration of the chemical in soil with the concentration in ambient air. The VFs used to calculate the alternate SCTLs were obtained from Table 4 of the 62-777 Technical Report (FDEP, February 2005). With the exception of the construction worker, the PEF value used to estimate risks from inhalation of fugitive dusts was 1.241×10^9 m^3/kg, which was developed by the State of Florida in FAC 62-777 (FDEP, February 2005). The PEF calculated for the construction worker was 2.43×10^6 m^3/kg (USEPA, December 2002).

6.1.3.3.4 Ingestion of Groundwater

Residents may be exposed to groundwater via direct ingestion. The Region 9 PRGs used in the risk calculations were derived using the following ingestion intake equation and exposure parameters (USEPA, 1989 and USEPA Region 9, October 2004):

$$Intake_{wi} = \frac{(C_{wi})(IR_w)(EF)(ED)}{(BW)(AT)}$$

where: $Intake_{wi}$ = intake of chemical "i" from water (mg/kg/day)
C_{wi} = concentration of chemical "i" in water (mg/L)
IR_w = ingestion rate for groundwater (L/day)
EF = exposure frequency (days/year)
ED = exposure duration (year)
BW = body weight (kg)
AT = averaging time (days);
for noncarcinogens, AT = ED x 365 days/year;
for carcinogens, AT = 70 years x 365 days/year

This scenario assumes that a receptor is exposed 350 days per year for 30 years using an adjusted intake factor (adult + child ingestion rates) of 1.1 L-year/kg-day for the evaluation of carcinogenic effects and an ingestion rate of 2 liters per day for the evaluation of non-carcinogenic effects (USEPA. Region 9, October 2004).

6.1.3.3.5 Inhalation of Volatiles from Groundwater

One volatile chemical, chloroform, was identified as a COPC for groundwater. Future residents may be exposed to VOC vapors from groundwater while bathing or showering. The Region 9 PRG used in the risk calculation for chloroform was derived using the following inhalation intake equation and exposure parameters (USEPA, Region 9, October 2004):

$$Intake_{winh} = \frac{(C_{wi})(VF_w)(InhF)(EF)(ED)}{(BW)(AT)}$$

where: $Intake_{winh}$= intake of chemical "i" from water by inhalation (mg/kg/day)
C_{wi} = concentration of chemical "i" in water (mg/L)
InhF = inhalation rate (m^3/day)
VF_w = volatilization factor for water (0.5 L/m^3)

EF	=	exposure frequency (days/year)
ED	=	exposure duration (year)
BW	=	body weight (kg)
AT	=	averaging time (days);
		for noncarcinogens, AT = ED x 365 days/year;
		for carcinogens, AT = 70 years x 365 days/year

The inhalation scenario assumes that a receptor is exposed 350 days per year for 30 years using an adjusted intake factor (adult + child ingestion rates) of 11 m^3-year/kg-day for the evaluation of carcinogenic effects and an inhalation rate of 20 m^3 per day for the evaluation of non-carcinogenic effects (USEPA. Region 9, October 2004).

The preceding ingestion and inhalation intake equations are combined to produce one risk-based concentration per chemical that accounts for ingestion and inhalation exposures (USEPA Region 9, October 2004).

6.1.3.3.6 Exposure to Lead

The equations and methodology presented in the previous sections cannot be used to evaluate exposure to lead because of the absence of published dose-response parameters. Exposure to lead was assessed using the following models:

- The latest version of the USEPA's Integrated Exposure Uptake Biokinetic (IEUBK) Model for lead (May 2002). This model is typically used to evaluate exposure to lead in various media (e.g., soil, water, air) assuming a residential land use scenario.

- The USEPA's TRW Model for Lead (January 2003). This model is typically used to evaluate exposure to lead in soil only assuming a non-residential land use scenario.

The IEUBK Model for lead (USEPA, May 2002) is designed to estimate blood levels of lead in children (under 7 years of age) based on either default or site-specific input values for air, drinking water, diet, dust, and soil exposure. Studies indicate that infants and young children are extremely susceptible to adverse effects from exposure to lead. Considerable behavioral and developmental impairments have been noted in children with elevated blood-lead levels. The threshold for toxic effects from this chemical is believed to be in the range of 10 to 15 micrograms per deciliter (µg/dL). Blood-lead levels greater than 10 µg/dL are considered to be a "concern."

The IEUBK Model for lead was used to address exposure to lead in children when detected groundwater concentrations exceed the 15 µg/L Federal Action Level promulgated under the Safe Drinking Water Act and when detected soil concentrations exceed the OSWER SSL of 400 mg/kg for residential land use (USEPA, July 1994). Average chemical concentrations, as well as default parameters for some input parameters, were used in the evaluation. Estimated blood-lead levels and probability density histograms are presented as support documentation for this analysis in Appendix E.

Non-residential adult exposure to lead in soil was evaluated using USEPA's TRW Model for lead (USEPA, January 2003). In this model, adult exposure to lead in soil is addressed by an evaluation of the relationship between the site soil lead concentration and the blood-lead concentration in the developing fetuses of adult women. The adult lead model generates a spreadsheet for each exposure scenario that is evaluated (i.e., industrial, recreational). The output of the spreadsheet is the probability that the blood-lead concentrations in the fetus exceeds 10 µg/L. The probability that the fetal blood-lead level will exceed 10 µg/L was calculated in accordance with the following USEPA guidelines:

- Use of the TRW Interim Adult Lead Methodology in Risk Assessment (USEPA, April 1999).
- Frequently Asked Questions (FAQs) on the Adult Lead Model (USEPA, online, July 2005).

No models are currently available to evaluate the periodic exposure of adolescent trespassers/recreational users to lead. Therefore, the results of the IEUBK Model for children are used to qualitatively assess exposure of this receptor because the potential adverse effects from exposure to lead are expected to be of a lesser magnitude for adolescent trespassers than for children.

6.1.4 Toxicity Assessment Protocol

The objective of a toxicity assessment is to identify the potential for human health hazards and adverse effects in exposed populations. A significant portion of the toxicity assessment of the HHRA has been completed because CSFs and RfDs were selected by USEPA during the development of the Region 9 PRGs and by the State of Florida during the development of the residential and industrial soil SCTLs and GCTLs. A CSF is an indicator of the potency of a chemical carcinogen (i.e., the greater the CSF, the more potent the carcinogen). An RfD is the dose at or below which adverse non-carcinogenic effects are not anticipated. These factors represent quantitative estimates of the relationship between the magnitude and types of exposures and the severity or probability of human health effects and were used to develop risk-based concentrations as described above.

6.1.4.1 Sources of Toxicity Criteria

Oral and inhalation RfDs and CSFs used in this HHRA were obtained from the following primary recommended USEPA sources:

- Integrated Risk Information System (IRIS) (online)
- USEPA Provisional Peer Reviewed Toxicity Values (PPRTVs) – The Office of Research and Development/National Center for Environmental Assessment (NCEA) Superfund Health Risk Technical Support Center develops PPRTVs on a chemical-specific basis when requested by USEPA's Superfund program.
- Tables 5a and 5b of the FDEP 62-777 Technical Report (FDEP, February 2005).
- Other Toxicity Values – These sources include but are not limited to California Environmental Protection Agency (Cal EPA) toxicity values, the Agency for Toxic Substances and Disease Registry (ATSDR) Minimal Risk Levels (MRLs), and the Annual Health Effects Assessment Summary Tables (HEAST) (USEPA, July 1997).

Although RfDs and CSFs can be found in several toxicological sources, USEPA's IRIS online database, which is continuously updated, is the preferred source of toxicity values. The USEPA Region 9 PRG Tables (USEPA, October 2004) and Region 3 Risk-Based Concentration tables (USEPA, April 2005) are also used as sources of toxicity criteria when criteria are not available from the aforementioned references.

6.1.4.2 Toxicity Criteria for Dermal Exposure

RfDs and CSFs found in literature are frequently expressed as administered doses; therefore, these values are considered to be inappropriate for estimating the risks associated with dermal routes of exposure. Oral dose-response parameters based on administered doses must be adjusted to absorbed doses before comparisons to estimated dermal exposure intakes are made.

The adjustment from administered to absorbed dose was made using the following chemical-specific absorption efficiencies published in RAGS Part E:

$$RfD_{dermal} = (RfD_{oral})(ABS_{GI})$$

$$CSF_{dermal} = (CSF_{oral})/(ABS_{GI})$$

where: ABS_{GI} = absorption efficiency in the gastrointestinal tract

6.1.4.3 Toxicity Criteria for Carcinogenic Effects of PAHs

Limited toxicity values are available to evaluate the carcinogenic effects from exposure to PAHs. The most extensively studied PAH is benzo(a)pyrene, which is classified by the USEPA as a probable human carcinogen. Although CSFs are available for benzo(a)pyrene, insufficient data are available to calculate CSFs for other carcinogenic PAHs. Toxic effects for these chemicals were evaluated using the concept of estimated orders of potential potency, as presented in USEPA Region 4 guidance (May 2000) and in the Rule 62-777 Technical Report. TEFs, which indicate the potency of each PAH compound relative to that of benzo(a)pyrene, are available for select carcinogenic PAHs. The equivalent oral and inhalation CSFs for PAHs other than benzo(a)pyrene are derived by multiplying the CSF for benzo(a)pyrene by the TEF for the PAH compounds (USEPA Region 4, May 2000 and FDEP, February 2005). The TEFs for the carcinogenic PAHs are listed in the following table.

Toxic Equivalency Factors for Carcinogenic PAHs

Contaminant	TEF
benzo(a)pyrene	1.0
benzo(a)anthracene	0.1
benzo(b)fluoranthene	0.1
benzo(k)fluoranthene	0.01
chrysene	0.001
dibenz(a,h)anthracene	1.0
indeno(1,2,3-cd)pyrene	0.1

These TEFs were used to convert the individual carcinogenic PAH concentrations to an equivalent concentration of benzo(a)pyrene. Both the COPC screening and quantitative risk estimates were based on an evaluation of the equivalent concentrations of benzo(a)pyrene. The carcinogenic PAHs actually detected at least once in a soil dataset were used in the calculation. Non-detect results were assigned a value of one-half the sample quantitation limit prior to the calculation. However, those carcinogenic PAHs not detected in any sample within the dataset were not considered in the calculation. If carcinogenic PAHs were not detected in a sample, one-half the sample quantitation limit presented for benzo(a)pyrene was used to calculate the equivalent concentration of benzo(a)pyrene in that sample.

6.1.5 Risk Characterization (USEPA Methodology)

This section provides a characterization of the human health risks associated with the potential exposures to chemicals in surface soil, subsurface soil, and groundwater at Site 43. The results of the risk characterization are discussed below. Potential risks (non-carcinogenic and carcinogenic) for individual chemicals detected in soil and groundwater at Site 43 were estimated using the simple risk ratio technique presented in Section 6.1.3.3. As discussed in Section 6.1.3.1, potential risks were

estimated for five receptors (the hypothetical future resident, the typical industrial worker, the construction worker, the maintenance worker, and the recreational user/trespasser) using USEPA and FDEP risk assessment guidance. The total risk from exposure to all COPCs was calculated in accordance with the risk assessment methods outlined in USEPA guidance (December 1989). Risks to human receptors are also characterized per FDEP guidelines/criteria established in Rule 62-780, FAC in Section 6.1.6. Supporting documentation for the site-specific HHRAs is presented in Appendix E.

6.1.5.1 Evaluation of Chemicals Other Than Lead

Quantitative estimates of risk for chemicals other than lead were calculated according to risk assessment methods outlined in Section 6.1.3.3. The methodology is based on standard USEPA guidance (December 1989). Lifetime cancer risks are expressed in the form of dimensionless probabilities referred to as ILCRs, which are based on CSFs. An ILCR of $1x10^{-6}$ indicates the exposed receptor has a one-in-one-million chance of developing cancer under the defined exposure scenario. Alternatively, such a risk may be interpreted as representing one additional case of cancer in an exposed population of one million persons. Cancer risk estimates developed for individual chemicals are summed and presented as the total cancer risk estimate for each receptor. Non-carcinogenic risk estimates for individual chemicals are presented as HQs, which are based on RfDs. An HQ is the ratio of the intake to the RfD and is an indicator of the potential for adverse non-carcinogenic health effects. An HI is generated by summing the individual HQs for all COPCs. The HI is not a mathematical prediction of the severity of toxic effects and therefore is not a true "risk"; it is simply a numerical indicator of the possibility of the occurrence of non-carcinogenic (threshold) effects. As discussed below, HIs were calculated on a target organ/target effect basis.

6.1.5.2 Evaluation of Lead

Exposure to lead was assessed using USEPA's (IEUBK) Model for lead and the TRW adult lead model (ALM), as described in Section 6.1.3.3.6. The results of the models are compared to USEPA levels of concern (i.e., predicted lead levels in children and adults should be less than 10 µg/dL and the probability of the blood lead concentrations in a child or fetus exceeding 10 µg/L should be less than 5 percent).

6.1.5.3 Interpretation of Quantitative Risk Assessment Results

To interpret the quantitative risks and to aid risk managers in determining the need for remediation at a site, quantitative risk estimates are compared to typical risk benchmarks. Calculated ILCRs are interpreted using the USEPA's target range ($1x10^{-6}$ to$1x10^{-4}$) (i.e., a one-in-ten-thousand to one-in-one-million chance of developing cancer) and the State of Florida goal for a total cancer risk of $1x10^{-6}$. HIs are evaluated using a value of 1.0.

The USEPA has defined the range of $1x10^{-6}$ to $1x10^{-4}$ as the ILCR target range for hazardous waste facilities addressed under the CERCLA and Resource Conservation and Recovery Act (RCRA). Individual or cumulative ILCRs greater than $1x10^{-4}$ are generally not considered as protective of human health. The State of Florida has established a cumulative cancer goal of $1x10^{-6}$ for receptors exposed to contaminated environmental media at a site. These benchmarks are used in the interpretation of the risk characterization results.

The non-carcinogenic goal for both the USEPA and FDEP is that the cumulative HI for a receptor be less than unity (1.0). An HI exceeding unity indicates there may be potential non-carcinogenic health risks associated with exposure. However, when an HI exceeds unity, target organ's effects associated with exposure to COPCs are considered. Only the HQs for those chemicals affecting the same target organ(s) or exhibit similar critical effect(s) are regarded as truly additive. Consequently, it may be possible for a cumulative HI to exceed 1.0, but no adverse health effects are anticipated if the COPCs do not affect the same target organ or exhibit the same critical effect (i.e., the HIs developed on a target-organ-specific basis do not exceed 1). A target organ analysis is typically performed when the cumulative HI exceeds unity. However, in this risk assessment, the HIs for all receptors were less than unity and the target organ analysis was not necessary.

Current USEPA policy regarding lead exposures is to limit the childhood risk (i.e., the probability) of exceeding a 10 µg/dL blood lead level to 5 percent.

6.1.5.4 Risk Characterization Using USEPA Guidelines

This section contains a summary of the results of the risk characterization for Site 43 conducted according to USEPA guidance. Quantitative risk estimates for potential human receptors were developed for those chemicals identified as COPCs in Section 6.1.2. Potential cancer risks and HIs were calculated using the methodology presented in Section 6.1.3 and are summarized in Table 6-5. The results are discussed below. Chemical-specific risks are presented in Appendix E.

Non-Carcinogenic Risk

Cumulative HIs estimated for exposures to surface soil, subsurface soil, and groundwater by all receptors were less than 1, indicating that adverse non carcinogenic effects are not anticipated for these receptors under the conditions established in the exposure assessment. HIs for all receptors are presented in Table 6-5.

TABLE 6-5

SUMMARY OF CANCER RISKS AND HAZARD INDICES
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

Receptor	Media	Cancer Risk	Chemicals with Cancer Risks $> 10^{-4}$	Chemicals with Cancer Risks $> 10^{-5}$ and $\leq 10^{-4}$	Chemicals with Cancer Risks $> 10^{-6}$ and $\leq 10^{-5}$	Hazard Index	Chemicals with HI > 1
Industrial Workers	Surface Soil	1E-06	- -	- -	- -	0.04	- -
	Subsurface Soil	3E-06	- -	- -	Carcinogenic PAHs	0.02	- -
Construction Workers	Surface Soil	8E-07	- -	- -	- -	0.7	- -
	Subsurface Soil	1E-06	- -	- -	- -	0.3	- -
Maintenance Workers	Surface Soil	5E-07	- -	- -	- -	0.008	- -
Adolescent Recreational Users	Surface Soil	7E-07	- -	- -	- -	0.03	- -
Adult Recreational Users	Surface Soil	8E-07	- -	- -	- -	0.02	- -
Lifelong Recreational Users	Surface Soil	2E-06	- -	- -	Arsenic	NA	- -
Hypothetical Future Residents	Surface Soil	6E-06	- -	- -	Carcinogenic PAHs, Arsenic	0.7	- -
	Subsurface Soil	2E-05	- -	Carcinogenic PAHs	Arsenic	0.6	- -
	Groundwater - shallow	2E-05	- -	Chloroform	- -	0.6	- -
	Groundwater - deep[1]	---	- -	- -	- -	0.2	- -

Notes:
1. No carcinogenic COPCs were detected in the deep groundwater samples.
NA - Not applicable.
HI - Hazard Index.

Carcinogenic Risk

Cumulative ILCRs for exposure to surface soil, subsurface soil, and groundwater were less than or within USEPA's target risk range of 10^{-4} to 10^{-6} for all receptors. However, ILCRs exceeded the State of Florida's target risk level of 1 x 10^{-6} for exposure to surface soil by residents and lifelong recreational users, for exposure to subsurface soil by residents, industrial workers, and lifelong recreational users, and for exposure to groundwater by future residents. These exceedances of the Florida target risk level are due to arsenic and carcinogenic PAHs in surface and subsurface soil and to chloroform in groundwater. Note that risks for arsenic in surface soil are based on the maximum detected concentration because the calculated UCL (based on a lognormal distribution) exceeded the maximum concentration, as recommended by the Florida UCL Calculator Tool. Also, although the ILCR for chloroform in groundwater (shallow aquifer) was $2x10^{-5}$, the maximum detected concentration of chloroform (6 ug/L) is less than the USEPA MCL (80 ug/L) and the Florida GCTL (70 ug/L). ILCRs for residential use of the deeper aquifer at Site 43 were less than 1 x 10^{-6}. ILCRs for all receptors are presented in Table 6-5.

Exposure to Lead

Lead was identified as a COPC for surface and subsurface soil at Site 43 because maximum detected concentrations (7,360 mg/kg and 5,550 mg/kg, respectively) exceeded the 400 mg/kg OSWER SSL for residential land use. Lead was also identified as a COPC for groundwater because the maximum detected groundwater concentration (29.9 µg/L) exceeded the 15 µg/L USEPA action level at the tap. The maximum lead concentrations in soils and groundwater exceed background benchmark concentrations.

As stated previously, published toxicity criteria (CSFs, RfDs) are not currently available for lead. The USEPA recommends that environmental lead exposures be evaluated using the IEUBK childhood lead model for the residential exposure scenario and the TRW adult lead model for non-residential exposure scenarios. The blood-lead concentration of a receptor is considered a key indicator of the potential for adverse health effects. The IEUBK and TRW models calculate the probability of a receptor's blood-lead level exceeding 10 µg/dL. The USEPA goal is to limit the childhood risk (probability) of exceeding a 10 µg/dL blood-lead concentration to five percent.

<u>Child Lead Model Results</u>

Current USEPA guidance recommends using the average concentration to evaluate exposure to lead. Therefore, the average lead concentration in surface soil (1,080 mg/kg) and the average concentration in subsurface soil (274 mg/kg), and model default values for other model parameters were used in the

IEUBK and TRW model analyses for soil. Lead was detected in two groundwater samples located in different areas of the site. Exposure to lead in groundwater was evaluated in the IEUBK model using the maximum detected groundwater concentration (29.9 ug/L) in sample PEN-43-GW13S01 located in Anomaly Area No. 11.

The results of the IEUBK model evaluation for surface soil indicate that the estimated geometric mean blood-lead level for a child resident is 9.972 µg/dL. This blood-lead level is less than the established level of concern (10 µg/dL). However, approximately 49.765 percent of children assumed to be exposed to surface soil are expected to experience blood-lead levels greater than 10 µg/dL. This estimate is greater than USEPA's goal of limiting exposure to lead so that no more than 5 percent of the exposed children have an estimated blood-lead level greater than the established level of concern (i.e.,10 µg/dL). Lead concentrations exceeding 400 mg/kg were found in the following three areas of the site:

1) The area near geophysical Anomaly Area No.11 (average lead concentration = 1,260 mg/kg)
2) The area near geophysical Anomaly Area No. 23 (average concentration = 3,032 mg/kg)
3) The former Tennis Court Area (2,080 mg/kg in sample PEN-43-SS21).

The results of the IEUBK model evaluation for subsurface soil [based on an average concentration of 274 mg/kg (i.e., all Site 43 subsurface soil samples)] indicate that the estimated geometric mean blood-lead level for a child resident is 4.049 µg/dL. This blood-lead level is less than the established level of concern (10 µg/dL). Approximately 2.72 percent of children assumed to be exposed to subsurface soil are expected to experience blood-lead levels greater than 10 µg/dL. This estimate is less than USEPA's goal of limiting exposure to lead so that no more than 5 percent of the exposed children have an estimated blood-lead level greater than the established level of concern (i.e.,10 µg/dL). Note that lead concentrations in six subsurface soil samples (427, 519, 1,365, 1,370, 1,460, and 5,500 mg/kg) exceeded the 400 mg/kg screening level. These samples are located within or near the interim removal action excavation area at a depth range of 2 to 4 feet bls. The average lead concentration of samples within this area and depth range is 1,355 mg/kg and the average concentration of samples outside this area and at greater depths is 3.9 mg/kg. If the IEUBK model is run using a lead concentration of 1,355 mg/kg, the predicted blood lead level is 11.662 µg/dL and 62.822 percent of children are expected to have blood-lead levels greater than 10 µg/dL. These values exceed the USEPA benchmarks for exposure to lead.

The results of the IEUBK model evaluation for groundwater (based on the maximum detected concentration of 29.9 ug/L) indicate that the estimated geometric mean blood-lead level for a child resident is 5.242 µg/dL. This blood-lead level is less than the established level of concern (10 µg/dL). Approximately 8.469 percent of children assumed to be exposed to groundwater are expected to experience blood-lead levels greater than 10 µg/dL. This estimate is greater than USEPA's goal of

limiting exposure to lead so that no more than 5 percent of the exposed children have an estimated blood-lead level greater than the established level of concern (i.e., 10 µg/dL).

The results of the IEUBK model analysis indicate that blood-lead levels of children exposed to lead in soil and groundwater at Site 43 may be greater than the USEPA goal of 10 µg/dL. The results of the IEUBK model are presented in Appendix E.

Adult Lead Model Results

This section presents the results of the ALM evaluation. Full time workers, construction workers, and recreational users were evaluated for exposure to lead in surface soil and full time workers and construction workers were evaluated for exposure to lead in subsurface soil using average concentrations across the site. The following table summarizes the results of the Adult Lead Model analysis.

ADULT LEAD MODEL RESULTS

Receptor	Predicted Adult Blood Lead Level (ug/Dl)	Probability that fetal Blood Lead Level Will Exceed 10 ug/dL	Exceeds USEPA Goal ?
Surface Soil (average concentration = 1,080 mg/kg)[1]			
Full Time Worker	3.1 – 3.3	4.1 – 7.0	Yes
Construction Worker	4.7 – 4.9	12.3 – 16.3	Yes
Recreational User	2.1 – 2.3	1.3 – 3.1	No
Subsurface Soil (average concentration = 274 mg/kg)[1]			
Full Time Worker	1.9 -2.1	0.9 – 2.3	No
Construction Worker	2.3 – 2.5	1.7 – 3.7	No

1. Lead concentrations are averages of samples across the entire site (40,000 ft^2 or approximately 1 acre). The concentrations and risks presented in the table do not account for local "hotspots" as discussed for the IEUBK Model evaluation of lead in soils presented above.

As shown in the table, the central estimate blood-lead levels for full time occupational workers, construction workers, and recreational users exposed to the average concentration of lead in surface soil (1,080 mg/kg) were less than the USEPA level of concern of 10 µg/dL. However, more than 5 percent of the exposed children (i.e., unborn fetuses) are predicted to have estimated blood-lead levels greater than the established level of concern (i.e., 10 µg/dL).

The predicted blood lead levels and probabilities of exceeding the blood-lead goal of 10 µg/dL for exposure to the average concentration of lead in subsurface soil (274 mg/kg) across the site are

acceptable for all potential receptors. However, as detailed in the discussion for the preceding IEUBK Model evaluation, the average lead concentration for subsurface soil samples in the removal action excavation area at a depth range of 2 to 4 feet is 1,355 mg/kg. If the ALM model is run using a lead concentration of 1,355 mg/kg, the probabilities that blood-lead levels of fetuses of occupational workers and construction workers would be greater than 10 µg/dL exceeds the USEPA's goal of 5 percent.

In summary, the results of the TRW adult lead model evaluations indicate that the probability of workers having children with blood-lead levels greater than 10 µg/dL exceed the USEPA's goal of five percent. The results of the TRW modeling are presented in Appendix E.

6.1.6 Risk Characterization Using FDEP Rules 62-777 and 62-780, FAC

This section describes the State of Florida methodology used to evaluate risks for exposure to chemicals detected in soil and groundwater at Site 43. The risk assessment methodology is based on guidance provided in Rule 62-780, FAC, which makes use of a phased risk-based corrective action process that is iterative and tailors site rehabilitation to site-specific conditions and risks. Rule 62-780 is used in conjunction with Rule 62-777, FAC, which provides the methodology used to establish the FDEP CTLs for the residential, commercial/industrial, or alternate land use scenarios. The methodologies described in the following paragraphs are presented in Appendix D and Appendix E of the Technical Report for Chapter 62-777 FAC (FDEP, February 2005).

The FDEP risk characterization is performed, in part, through a series of tables in which concentrations of chemicals detected at a site are compared to various FDEP soil and groundwater criteria or to criteria developed according to guidelines presented in Chapter 62-777 FAC. The soil criteria include SCTLs for direct contact (i.e., ingestion, dermal contact, and inhalation), SCTLs for leachability to groundwater, soil saturation concentrations (C_{sat}) for an evaluation of free product, and background levels for metals. The groundwater criteria include CTLs for direct contact with groundwater (based on ingestion), water solubility values for evaluating the potential for the presence of free product (for organic chemicals), and background levels for metals.

6.1.6.1 Florida Methodology for Evaluating Soil

Using the guidance provided in Rules 62-780 and 62-777, soil at Site 43 was evaluated for the following land use scenarios:

- Residential land use [Risk Management Option (RMO)Level I]
- Commercial/industrial land use (RMO Level II)
- Recreational land use (RMO Level III)

The evaluation of the hypothetical future residential and commercial/industrial land use of a site is described under RMO Levels I and II, respectively, of Rule 62.780.680. RMO Level III of the rule allows for the development and use of alternative SCTLs based on, for example, a site-specific risk assessment. In this risk assessment, alternative SCTLs were calculated for a recreational user/trespasser using the equations provided in Chapter 62-777 FAC, the most recent toxicological information presented in IRIS, and the exposure factors presented in Section 6.1.3.3.

The surface and subsurface soils at Site 43 were first evaluated for residential land use (Level I) by a comparison of chemical concentrations in soils to the relevant SCTLs. The process is then repeated for the commercial/industrial land use (Level II) and a potential recreational land use (Level III). The comparisons conducted for each level are presented in a Tables 6-6 through 6-14 with the chemicals exceeding the relevant screening levels (i.e., the potential COCs) highlighted. Supporting documentation is presented in Appendix E, as necessary. Using the guidance provided in Chapters 62-777 and 62-780 the following evaluations were performed for Site 43:

- ***Comparison with Direct Contact SCTLs***. According to the FDEP guidance documents, under Risk Management Options Level I and Level II, the maximum detected concentration of each contaminant detected in soil may be compared with the respective default SCTL listed in Chapter 62-777, FAC or, the 95% UCL of the mean of the site concentrations can be compared with apportioned chronic toxicity-based SCTLs. Under Risk Management Option Level III, UCLs must be compared with apportioned chronic toxicity-based SCTLs only.

  In this risk assessment, for RMO Levels I and II, maximum detected surface and subsurface soil concentrations are compared to the default (non-apportioned) SCTLs because an initial review of the analytical data, the maximum detected concentrations, and the EPCs (calculated as described in Section 6.1.3.3) indicated the list of COCs potentially requiring remediation would not change if the maximum detected concentration versus the EPC were evaluated using the default SCTLs (non-apportioned or apportioned). Therefore, if the maximum detected concentration for a chemical exceeds the direct contact SCTL for RMO Levels I and II (and background levels for metals), the constituent is identified as a potential COC and may be further evaluated using various apportionment approaches described in the following sections.

<u>Methods of Apportioning the SCTLs</u>

- **Simple Apportionment.** For situations in which apportionment is applicable, several methods of apportionment are available, as described in Appendix D of the Technical Report. The most straightforward method is simple apportionment. For simple apportionment, the default SCTL for

TABLE 6-6

FLORIDA LEVEL 1 (RESIDENTIAL) DIRECT CONTACT EVALUATION - SURFACE SOIL
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Maximum Concentration	Sample of Maximum Detection	Background Value(1)	Non-Apportioned Florida Residential SCTL- Direct Contact (2)		Ratio of Maximum Concentration/ Non-apportioned Residential SCTL	Is Chemical a Potential Level 1 COC ? (3)	Rationale/Comments
	Semivolatile Organics (mg/kg)									
90-12-0	1-METHYLNAPHTHALENE	1/20	0.003 J	PEN-43-SS2401	NA(4)	200	N	1.5E-05	No	maximum < SCTL
91-57-6	2-METHYLNAPHTHALENE	7/20	0.009 J	PEN-43-SS2401	NA	210	N	4.3E-05	No	maximum < SCTL
83-32-9	ACENAPHTHENE	5/20	0.003 J	PEN-43-SS2401	NA	2400	N	1.3E-06	No	maximum < SCTL
208-96-8	ACENAPHTHYLENE	11/20	0.011 J	PEN-43-SS2501	NA	1800	N	6.1E-06	No	maximum < SCTL
120-12-7	ANTHRACENE	17/20	0.017 J	PEN-43-SS2801	NA	21000	N	8.1E-07	No	maximum < SCTL
191-24-2	BENZO(G,H,I)PERYLENE	19/20	0.11 J	PEN-43-SS2801	NA	2500	N	4.4E-05	No	maximum < SCTL
206-44-0	FLUORANTHENE	20/20	0.28 J	PEN-43-SS2401	NA	3200	N	8.8E-05	No	maximum < SCTL
86-73-7	FLUORENE	1/20	0.003 J	PEN-43-SS1801-D	NA	2600	N	1.2E-06	No	maximum < SCTL
91-20-3	NAPHTHALENE	9/20	0.003 J	PEN-43-SS2701	NA	55	N	5.5E-05	No	maximum < SCTL
85-01-8	PHENANTHRENE	20/20	0.085	PEN-43-SS2801	NA	2200	N	3.9E-05	No	maximum < SCTL
129-00-0	PYRENE	20/20	0.19	PEN-43-SS2401	NA	2400	N	7.9E-05	No	maximum < SCTL
50-32-8	**CARCINOGENIC PAHS**	20/20	0.3	PEN-43-SS2801	NA	**0.1**	C	2.9E+00	**Yes**	maximum > SCTL
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	3/20	0.87	PEN-43-SS3501	NA	72	C	1.2E-02	No	maximum < SCTL
84-74-2	DI-N-BUTYL PHTHALATE	2/20	1.2	PEN-43-SS2001	NA	8200	N	1.5E-04	No	maximum < SCTL
	Inorganics (mg/kg)									
7440-38-2	**ARSENIC**	11/12	8	PEN-43-SS2801	**1.56**	**2.1**	C	3.8E+00	**Yes**	maximum > SCTL maximum/SCTL ratio > 3
7440-39-3	**BARIUM**	12/12	726	PEN-43-SS2801	**4.63**	**120**	N	6.1E+00	**Yes**	maximum > SCTL maximum/SCTL ratio > 3
7440-50-8	**COPPER**	17/17	889	PEN-43-SS2401	**5.74**	**150**	N	5.9E+00	**Yes**	maximum > SCTL maximum/SCTL ratio > 3
7439-92-1	**LEAD**	17/17	7360	PEN-43-SS2801	**7.32**	**400**		1.8E+01	**Yes**	maximum > SCTL maximum/SCTL ratio > 3
7440-62-2	**VANADIUM**	9/9	73.1	PEN-43-SS2801	**5.83**	**67**	N	1.1E+00	**Yes**	maximum > SCTL

Shaded cells indicate that the specified criterion or background level has been exceeded or that the chemical has been selected as a potential COC.

Footnotes:

1 To determine whether metal concentrations were within background levels, soil concentrations were compared to facilty background levels described in Section 6.1.1.1. If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.

2 Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, FAC, Florida Department of Environmental Protection (FDEP), April 2005.

3 A chemical is selected as a potential COC if the maximum concentration exceeds the non-apportioned SCTL and, for metals, if the site concentrations exceed background levels.

4 NA - Not Applicable. According to Rule 62-780 only naturally occurring (inorganic) constituents are considered in the background evaluation.

TABLE 6-7

FLORIDA LEVEL 2 (COMMERCIAL/INDUSTRIAL) DIRECT CONTACT EVALUATION - SURFACE SOIL
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Maximum Concentration	Sample of Maximum Detection	Background Value(1)	Non-Apportioned Florida Industrial SCTL- Direct Contact (2)		Ratio of Maximum Concentration/ Non-apportoned Residential SCTL	Is Chemical a Potential Level 2 COC ? (3)	Rationale/Comments
	Semivolatile Organics (mg/kg)									
90-12-0	1-METHYLNAPHTHALENE	1/20	0.003 J	PEN-43-SS2401	NA(4)	1800	N	1.7E-06	No	maximum < SCTL
91-57-6	2-METHYLNAPHTHALENE	7/20	0.009 J	PEN-43-SS2401	NA	2100	N	4.3E-06	No	maximum < SCTL
83-32-9	ACENAPHTHENE	5/20	0.003 J	PEN-43-SS2401	NA	20000	N	1.5E-07	No	maximum < SCTL
208-96-8	ACENAPHTHYLENE	11/20	0.011 J	PEN-43-SS2501	NA	20000	N	5.5E-07	No	maximum < SCTL
120-12-7	ANTHRACENE	17/20	0.017 J	PEN-43-SS2801	NA	300000	N	5.7E-08	No	maximum < SCTL
191-24-2	BENZO(G,H,I)PERYLENE	19/20	0.11 J	PEN-43-SS2801	NA	52000	N	2.1E-06	No	maximum < SCTL
206-44-0	FLUORANTHENE	20/20	0.28 J	PEN-43-SS2401	NA	59000	N	4.7E-06	No	maximum < SCTL
86-73-7	FLUORENE	1/20	0.003 J	PEN-43-SS1801-D	NA	33000	N	9.1E-08	No	maximum < SCTL
91-20-3	NAPHTHALENE	9/20	0.003 J	PEN-43-SS2701	NA	300	N	1.0E-05	No	maximum < SCTL
85-01-8	PHENANTHRENE	20/20	0.085	PEN-43-SS2801	NA	36000	N	2.4E-06	No	maximum < SCTL
129-00-0	PYRENE	20/20	0.19	PEN-43-SS2401	NA	45000	N	4.2E-06	No	maximum < SCTL
50-32-8	CARCINOGENIC PAHS	20/20	0.3	PEN-43-SS2801	NA	0.7	C	4.1E-01	No	maximum < SCTL
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	3/20	0.87	PEN-43-SS3501	NA	390	C	2.2E-03	No	maximum < SCTL
84-74-2	DI-N-BUTYL PHTHALATE	2/20	1.2	PEN-43-SS2001	NA	170000	N	7.1E-06	No	maximum < SCTL
	Inorganics (mg/kg)									
7440-38-2	ARSENIC	11/12	8	PEN-43-SS2801	1.56	12	C	6.7E-01	No	maximum < SCTL
7440-39-3	BARIUM	12/12	726	PEN-43-SS2801	4.63	130000	N	5.6E-03	No	maximum < SCTL
7440-50-8	COPPER	17/17	889	PEN-43-SS2401	5.74	89000	N	1.0E-02	No	maximum < SCTL
7439-92-1	LEAD	17/17	7360	PEN-43-SS2801	7.32	1400		5.3E+00	Yes	maximum > SCTL maximum/SCTL ratio > 3
7440-62-2	VANADIUM	9/9	73.1	PEN-43-SS2801	5.83	10000	N	7.3E-03	No	maximum < SCTL

Shaded cells indicate that the specified criterion or background level has been exceeded or that the chemical has been selected as a potential COC.

Footnotes:

1 To determine whether metal concentrations were within background levels, soil concentrations were compared to facilty background levels described in Section 6.1.1.1 If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.

2 Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, FAC, Florida Department of Environmental Protection (FDEP), April 2005.

3 A chemical is selected as a potential COC if the maximum concentration exceeds the non-apportioned SCTL and, for metals, if the site concentrations exceed backgrourd levels.

4 NA - Not Applicable. According to Rule 62-780 only naturally occurring (inorganic) constituents are considered in the background evaluation.

TABLE 6-8

FLORIDA LEVEL 3 (RECREATIONAL) DIRECT CONTACT EVALUATION - SURFACE SOIL
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Maximum Concentration	Exposure Point Concentration (1)	Sample of Maximum Detection	Background Value(2)	Non-Apportioned Florida Recreational SCTL- Direct Contact (3)		Ratio of Maximum Concentration/ Non-apportioned Residential SCTL	Target Organ (4)	Simple Apportioned Florida Recreational SCTL- Direct Contact (5)	Is Maximum Concentration / Apportioned Recreational SCTL Ratio > 3 ?	Is Chemical a Potential Level 3 COC ? (6)	Rationale/Comments
	Semivolatile Organics (mg/kg)													
90-12-0	1-METHYLNAPHTHALENE	1/20	0.003 J	0.003	PEN-43-SS2401	NA(7)	12000	N	2.5E-07	Nasal	12000	No	No	Maximum/SCTL ratio <0.1
91-57-6	2-METHYLNAPHTHALENE	7/20	0.009 J	0.005	PEN-43-SS2401	NA	12000	N	7.5E-07	Nasal	12000	No	No	Maximum/SCTL ratio <0.1
83-32-9	ACENAPHTHENE	5/20	0.003 J	0.002	PEN-43-SS2401	NA	190000	N	1.6E-08	Liver	190000	No	No	Maximum/SCTL ratio <0.1
208-96-8	ACENAPHTHYLENE	11/20	0.011 J	0.004	PEN-43-SS2501	NA	190000	N	5.8E-08	Liver	190000	No	No	Maximum/SCTL ratio <0.1
120-12-7	ANTHRACENE	17/20	0.017 J	0.01	PEN-43-SS2801	NA	1000000	N	1.7E-08	None specified	1000000	No	No	Maximum/SCTL ratio <0.1
191-24-2	BENZO(G,H,I)PERYLENE	19/20	0.11 J	0.06	PEN-43-SS2801	NA	110000	N	1.0E-06	Neurological	110000	No	No	Maximum/SCTL ratio <0.1
206-44-0	FLUORANTHENE	20/20	0.28 J	0.2	PEN-43-SS2401	NA	64000	N	4.4E-06	Blood, Kidney , Liver	64000	No	No	Maximum/SCTL ratio <0.1
86-73-7	FLUORENE	1/20	0.003 J	0.002	PEN-43-SS1801-D	NA	140000	N	2.1E-08	Blood	140000	No	No	Maximum/SCTL ratio <0.1
91-20-3	NAPHTHALENE	9/20	0.003 J	0.002	PEN-43-SS2701	NA	4400	N	6.8E-07	Nasal	4400	No	No	Maximum/SCTL ratio <0.1
85-01-8	PHENANTHRENE	20/20	0.085	0.05	PEN-43-SS2801	NA	110000	N	7.7E-07	Kidney	110000	No	No	Maximum/SCTL ratio <0.1
129-00-0	PYRENE	20/20	0.19	0.1	PEN-43-SS2401	NA	110000	N	1.7E-06	Kidney	110000	No	No	Maximum/SCTL ratio <0.1
50-32-8	CARCINOGENIC PAHS	20/20	0.3	0.2	PEN-43-SS2801	NA	0.8	C	7.2E-01	Carcinogen	0.4	No	No	EPC < Simple Apportioned SCTL
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	3/20	0.87	0.4	PEN-43-SS3501	NA	480	C	1.8E-03	Liver, Carcinogen	480	No	No	Maximum/SCTL ratio <0.1
84-74-2	DI-N-BUTYL PHTHALATE	2/20	1.2	1.2	PEN-43-SS2001	NA	180000	N	6.7E-06	Mortality	180000	No	No	Maximum/SCTL ratio <0.1
	Inorganics (mg/kg)													
7440-38-2	ARSENIC	11/12	8	8	PEN-43-SS2801	**1.56**	9.4	C	8.5E-01	Cardiovascular, Skin, Carcinogen	9.4	No	No	EPC < Simple Apportioned SCTL
7440-39-3	BARIUM	12/12	726	546	PEN-43-SS2801	**4.63**	251000	N	2.9E-03	Cardiovascular	251000	No	No	Maximum/SCTL ratio <0.1
7440-50-8	COPPER	17/17	889	357	PEN-43-SS2401	**5.74**	146000	N	6.1E-03	Gastrointestinal	146000	No	No	Maximum/SCTL ratio <0.1
7439-92-1	LEAD	17/17	7360	1080	PEN-43-SS2801	**7.32**	3000		2.5E+00	---	3000	No	No	EPC < Simple Apportioned SCTL
7440-62-2	VANADIUM	9/9	73.1	73.1	PEN-43-SS2801	**5.83**	3650	N	2.0E-02	Hair Loss	3650	No	No	Maximum/SCTL ratio <0.1

Shaded cells indicate that the specified criterion or background level has been exceeded or that the chemical has been selected as a potential COC.

Footnotes:

1 Exposure point concentrations (EPCs) are maximum concentrations or 95 % upper confidence limits (UCLs) on the arithmetic mean as determined by statistical tests and calculations performed by Florida's UCL Calculator.
2 To determine whether metal concentrations were within background levels, soil concentrations were compared to facilty background levels described in Section 6.1.1.1. If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.
3 SCTLs for recreational users were developed using the methods presented in Chapter 62-777, FAC, April 2005 and the most current toxicological data available in IRIS. The recreational users are assumed to be exposed 45 days per year by ingestion, inhalation, and dermal contact. Calculations of the recreational SCTLs are presented in Appendix D.
4 Target organs are obtained from Table II, Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, FAC, Florida Department of Environmental Protection (FDEP), April 2005.
5 Values of the simple apportioned SCTLs are determined by dividing the non-apportioned SCTL by the number carcinogenic chemicals or by the number of chemicals impacting the same target organ for noncarcinogens as defined by Chapter 62-777 F.A.C. Chemicals with maximum concentrations less than 0.1 of the non-apportioned SCTL are not included in the apportionment process.
6 A chemical is selected as a potential COC if the maximum concentration is greater than 3 times the non-apportioned SCTL or if the EPC is greater than the apportioned SCTL, and, for metals, if the site concentrations exceed background levels.
7 NA - Not Applicable. According to Rule 62-780 only naturally occurring (inorganic) constituents are considered in the background evaluation.

TABLE 6-9

COMPARISON WITH SCTLs FOR LEACHABILITY TO GROUNDWATER AND C_{SAT} LIMITS · SURFACE SOIL
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Maximum Concentration	Sample of Maximum Detection	Background Value(1)	Florida Leachability to GW (2)	Soil Saturation Limit, Csat (3)
	Semivolatile Organics (mg/kg)						
90-12-0	1-METHYLNAPHTHALENE	1/20	0.003 J	PEN-43-SS2401	NA(4)	3.1	410
91-57-6	2-METHYLNAPHTHALENE	7/20	0.009 J	PEN-43-SS2401	NA	8.5	---
83-32-9	ACENAPHTHENE	5/20	0.003 J	PEN-43-SS2401	NA	2.1	---
208-96-8	ACENAPHTHYLENE	11/20	0.011 J	PEN-43-SS2501	NA	27	---
120-12-7	ANTHRACENE	17/20	0.017 J	PEN-43-SS2801	NA	2500	---
191-24-2	BENZO(G,H,I)PERYLENE	19/20	0.11 J	PEN-43-SS2801	NA	32000	---
206-44-0	FLUORANTHENE	20/20	0.28 J	PEN-43-SS2401	NA	1200	---
86-73-7	FLUORENE	1/20	0.003 J	PEN-43-SS1801-D	NA	160	---
91-20-3	NAPHTHALENE	9/20	0.003 J	PEN-43-SS2701	NA	1.2	---
85-01-8	PHENANTHRENE	20/20	0.085	PEN-43-SS2801	NA	250	---
129-00-0	PYRENE	20/20	0.19	PEN-43-SS2401	NA	880	---
56-55-3	BENZO(A)ANTHRACENE	20/20	0.31 J	PEN-43-SS2401	NA	0.8	---
50-32-8	BENZO(A)PYRENE	19/20	0.18	PEN-43-SS2801	NA	8	---
205-99-2	BENZO(B)FLUORANTHENE	20/20	0.41	PEN-43-SS2801	NA	2.4	---
207-08-9	BENZO(K)FLUORANTHENE	20/20	0.13	PEN-43-SS2501	NA	24	---
218-01-9	CHRYSENE	20/20	0.16	PEN-43-SS2401	NA	77	---
53-70-3	DIBENZO(A,H)ANTHRACENE	6/20	0.036	PEN-43-SS2401	NA	0.7	---
193-39-5	INDENO(1,2,3-CD)PYRENE	19/20	0.098	PEN-43-SS2401	NA	6.6	---
50-32-8	CARCINOGENIC PAHS	20/20	0.3	PEN-43-SS2801	NA	8	---
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	3/20	0.87	PEN-43-SS3501	NA	3600	31000
84-74-2	DI-N-BUTYL PHTHALATE	2/20	1.2	PEN-43-SS2001	NA	47	110
	Inorganics (mg/kg)						
7440-38-2	ARSENIC	11/12	8	PEN-43-SS2801	1.56	---	---
7440-39-3	BARIUM	12/12	726	PEN-43-SS2801	4.63	1600	---
7440-50-8	COPPER	17/17	889	PEN-43-SS2401	5.74	---	---
7439-92-1	LEAD	17/17	7360	PEN-43-SS2801	7.32	---	---
7440-62-2	VANADIUM	9/9	73.1	PEN-43-SS2801	5.83	980	---

Shaded cells indicate that the specified criterion or background level has been exceeded.

Footnotes:

1 To determine whether metal concentrations were within background levels, soil concentrations were compared to facilty background levels described in Section 5.1.1.1. If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.
2 Soil Cleanup Target Levels (SCTLs) for Leachability Based on Groundwater Criteria, Table 2, Chapter 62-777 Technical Report (FDEP February 2005).
3 Soil Saturation Limits (C_{SAT}), Table 8, Chapter 62-777 Technical Report (FDEP, February 2005).
4 NA - Not Applicable. According to proposed Florida Rule 62-780 only naturally occurring (inorganic) constituents are considered in the background evaluation.

TABLE 6-10

FLORIDA LEVEL 1 (RESIDENTIAL) DIRECT CONTACT EVALUATION - SUBSURFACE SOIL
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Maximum Concentration	Sample of Maximum Detection	Background Value(1)	Non-Apportioned Florida Residential SCTL- Direct Contact (2)		Ratio of Maximum Concentration/ Non-apportioned Residential SCTL	Is Chemical a Potential Level 1 COC ? (3)	Rationale for Contaminant Deletion or Selection
	Semivolatile Organics (mg/kg)									
92-52-4	1,1-BIPHENYL	1/40	0.28 J	PEN-43-SB1401	NA(4)	3000	N	9.3E-05	No	maximum < SCTL
90-12-0	1-METHYLNAPHTHALENE	2/40	0.54 J	PEN-43-SB1401	NA	200	N	2.7E-03	No	maximum < SCTL
91-57-6	2-METHYLNAPHTHALENE	9/40	0.67	PEN-43-SB1401	NA	210	N	3.2E-03	No	maximum < SCTL
83-32-9	ACENAPHTHENE	3/40	1.8	PEN-43-SB1401	NA	2400	N	7.5E-04	No	maximum < SCTL
208-96-8	ACENAPHTHYLENE	4/40	0.008 J	PEN-43-SB1101	NA	1800	N	4.4E-06	No	maximum < SCTL
120-12-7	ANTHRACENE	8/40	8	PEN-43-SB1401	NA	21000	N	3.8E-04	No	maximum < SCTL
191-24-2	BENZO(G,H,I)PEFYLENE	7/40	4.6 J	PEN-43-SB1401	NA	2500	N	1.8E-03	No	maximum < SCTL
86-74-8	CARBAZOLE	1/40	2.8	PEN-43-SB1401	NA	49	C	5.7E-02	No	maximum < SCTL
132-64-9	DIBENZOFURAN	1/40	1.7	PEN-43-SB1401	NA	320	N	5.3E-03	No	maximum < SCTL
206-44-0	FLUORANTHENE	15/40	30	PEN-43-SB1401	NA	3200	N	9.4E-03	No	maximum < SCTL
86-73-7	FLUORENE	2/40	1.7	PEN-43-SB1401	NA	2600	N	6.5E-04	No	maximum < SCTL
91-20-3	NAPHTHALENE	8/40	2.4 J	PEN-43-SB1401	NA	55	N	4.4E-02	No	maximum < SCTL
85-01-8	PHENANTHRENE	12/40	28	PEN-43-SB1401	NA	2200	N	1.3E-02	No	maximum < SCTL
129-00-0	PYRENE	12/40	17 J	PEN-43-SB1401	NA	2400	N	7.1E-03	No	maximum < SCTL
50-32-8	**CARCINOGENIC PAHS**	15/40	14.8	PEN-43-SB1401	NA	**0.1**	C	1.5E+02	**Yes**	maximum > SCTL maximum/SCTL ratio > 3
84-74-2	DI-N-BUTYL PHTHALATE	4/40	1.2	PEN-43-SB0901	NA	8200	N	1.5E-04	No	maximum < SCTL
	Inorganics (mg/kg)									
7440-38-2	**ARSENIC**	24/40	11.4 J	PEN-43-SB2501	**1.56**	**2.1**	C	5.4E+00	**Yes**	maximum > SCTL maximum/SCTL ratio > 3
7440-39-3	**BARIUM**	39/40	939 J	PEN-43-SB1401	**4.63**	**120**	N	7.8E+00	**Yes**	maximum > SCTL maximum/SCTL ratio > 3
7440-50-8	**COPPER**	39/40	3380	PEN-43-SB1101	**5.74**	**150**	N	2.3E+01	**Yes**	maximum > SCTL maximum/SCTL ratio > 3
7439-92-1	**LEAD**	38/40	5500 J	PEN-43-SB1401	**7.32**	**400**		1.4E+01	**Yes**	maximum > SCTL maximum/SCTL ratio > 3
7440-62-2	**VANADIUM**	39/40	156	PEN-43-SB1401	**5.83**	**67**	N	2.3E+00	**Yes**	maximum > SCTL

Shaded cells indicate that the specified criterion or background level has been exceeded or that the chemical has been selected as a potential COC.

Footnotes:

1 To determine whether metal concentrations were within background levels, soil concentrations were compared to facility background levels described in Section 6.1.1.1. If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.

2 Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, FAC, Florida Department of Environmental Protection (FDEP), April 2005.

3 A chemical is selected as a potential COC if the maximum concentration exceeds the non-apportioned SCTL and, for metals, if the site concentrations exceed background levels.

4 NA - Not Applicable. According to Rule 62-780 only naturally occurring (inorganic) constituents are considered in the background evaluation.

TABLE 6-11

FLORIDA LEVEL 2 (COMMERCIAL/INDUSTRIAL) DIRECT CONTACT EVALUATION - SUBSURFACE SOIL
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Maximum Concentration	Sample of Maximum Detection	Background Value(1)	Non-Apportioned Florida Industrial SCTL- Direct Contact (2)		Ratio of Maximum Concentration/ Non-Apportioned Residential SCTL	Is Chemical a Potential Level 2 COC ? (3)	Rationale/Comments
	Semivolatile Organics (mg/kg)									
92-52-4	1,1-BIPHENYL	1/40	0.28 J	PEN-43-SB1401	NA(4)	34000	N	8.2E-06	No	maximum < SCTL
90-12-0	1-METHYLNAPHTHALENE	2/40	0.54 J	PEN-43-SB1401	NA	1800	N	3.0E-04	No	maximum < SCTL
91-57-6	2-METHYLNAPHTHALENE	9/40	0.67	PEN-43-SB1401	NA	2100	N	3.2E-04	No	maximum < SCTL
83-32-9	ACENAPHTHENE	3/40	1.8	PEN-43-SB1401	NA	20000	N	9.0E-05	No	maximum < SCTL
208-96-8	ACENAPHTHYLENE	4/40	0.008 J	PEN-43-SB1101	NA	20000	N	4.0E-07	No	maximum < SCTL
120-12-7	ANTHRACENE	8/40	8	PEN-43-SB1401	NA	300000	N	2.7E-05	No	maximum < SCTL
191-24-2	BENZO(G,H,I)PERYLENE	7/40	4.6 J	PEN-43-SB1401	NA	52000	N	8.8E-05	No	maximum < SCTL
86-74-8	CARBAZOLE	1/40	2.8	PEN-43-SB1401	NA	240	C	1.2E-02	No	maximum < SCTL
132-64-9	DIBENZOFURAN	1/40	1.7	PEN-43-SB1401	NA	6300	N	2.7E-04	No	maximum < SCTL
206-44-0	FLUORANTHENE	15/40	30	PEN-43-SB1401	NA	59000	N	5.1E-04	No	maximum < SCTL
86-73-7	FLUORENE	2/40	1.7	PEN-43-SB1401	NA	33000	N	5.2E-05	No	maximum < SCTL
91-20-3	NAPHTHALENE	8/40	2.4 J	PEN-43-SB1401	NA	300	N	8.0E-03	No	maximum < SCTL
85-01-8	PHENANTHRENE	12/40	28	PEN-43-SB1401	NA	36000	N	7.8E-04	No	maximum < SCTL
129-00-0	PYRENE	12/40	17 J	PEN-43-SB1401	NA	45000	N	3.8E-04	No	maximum < SCTL
50-32-8	**CARCINOGENIC PAHS**	15/40	14.8	PEN-43-SB1401	NA	0.7	C	2.1E+01	**Yes**	maximum > SCTL
84-74-2	DI-N-BUTYL PHTHALATE	4/40	1.2	PEN-43-SB0901	NA	170000	N	7.1E-06	No	maximum < SCTL
	Inorganics (mg/kg)									
7440-38-2	ARSENIC	24/40	11.4 J	PEN-43-SB1401	**1.56**	12	C	9.5E-01	No	maximum < SCTL
7440-39-3	BARIUM	39/40	939 J	PEN-43-SB1401	**4.63**	130000	N	7.2E-03	No	maximum < SCTL
7440-50-8	COPPER	39/40	3380	PEN-43-SB1101	**5.74**	89000	N	3.8E-02	No	maximum < SCTL
7439-92-1	**LEAD**	38/40	5500 J	PEN-43-SB1401	**7.32**	1400		3.9E+00	**Yes**	maximum > SCTL maximum/SCTL ratio > 3
7440-62-2	VANADIUM	39/40	156	PEN-43-SB1401	**5.83**	10000	N	1.6E-02	No	maximum < SCTL

Shaded cells indicate that the specified criterion or background level has been exceeded or that the chemical has been selected as a potential COC.

Footnotes:

1 To determine whether metal concentrations were within background levels, soil concentrations were compared to facility background levels described in Section 6.1.1.1. If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.

2 Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, F.A.C., Florida Department of Environmental Protection (FDEP), April 2005.

3 A chemical is selected as a potential COC if the maximum concentration exceeds the non-apportioned SCTL and, for metals, if the site concentrations exceed background levels.

4 NA - Not Applicable. According to Rule 62-780 only naturally occurring (inorganic) constituents are considered in the background evaluation.

TABLE 6-12

FLORIDA LEVEL 3 (RECREATIONAL) DIRECT CONTACT EVALUATION - SUBSURFACE SOIL
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Maximum Concentration	Exposure Point Concentration (1)	Sample of Maximum Detection	Background Value(2)	Non-Apportioned Florida Recreational SCTL- Direct Contact (3)		Ratio of Maximum Concentration/ Non-apportioned Residential SCTL	Target Organ (4)	Simple Apportioned Florida Recreational SCTL- Direct Contact (5)	Is Maximum Concentration / Apportioned Recreational SCTL Ratio > 3 ?	Is Chemical a Potential Level 3 COC ? (6)	Rationale/Comments
	Semivolatile Organics (mg/kg)													
92-52-4	1,1-BIPHENYL	1/40	0.28 J	0.28	PEN-43-SB1401	NA(7)	150000	N	1.87E-06	Kidney	150000	No	No	Maximum/SCTL ratio <0.1, Frequency
90-12-0	1-METHYLNAPHTHALENE	2/40	0.54 J	0.54	PEN-43-SB1401	NA	12000	N	4.50E-05	Nasal	12000	No	No	Maximum/SCTL ratio <0.1
91-57-6	2-METHYLNAPHTHALENE	9/40	0.67	0.09	PEN-43-SB1401	NA	12000	N	5.58E-05	Nasal	12000	No	No	Maximum/SCTL ratio <0.1
83-32-9	ACENAPHTHENE	3/40	1.8	0.2	PEN-43-SB1401	NA	190000	N	9.47E-06	Liver	190000	No	No	Maximum/SCTL ratio <0.1
208-96-8	ACENAPHTHYLENE	4/40	0.008 J	0.003	PEN-43-SB1101	NA	190000	N	4.21E-08	Liver	190000	No	No	Maximum/SCTL ratio <0.1
120-12-7	ANTHRACENE	8/40	8	1	PEN-43-SB1401	NA	1000000	N	8.00E-06	None specified	1000000	No	No	Maximum/SCTL ratio <0.1
191-24-2	BENZO(G,H,I)PERYLENE	7/40	4.6 J	0.6	PEN-43-SB1401	NA	110000	N	4.18E-05	Neurological	110000	No	No	Maximum/SCTL ratio <0.1
86-74-8	CARBAZOLE	1/40	2.8	2.8	PEN-43-SB1401	NA	330	C	8.48E-03	Carcinogen	330	No	No	Maximum/SCTL ratio <0.1, Frequency
132-64-9	DIBENZOFURAN	1/40	1.7	1.7	PEN-43-SB1401	NA	5900	N	2.88E-04	None specified	5900	No	No	Maximum/SCTL ratio <0.1, Frequency
206-44-0	FLUORANTHENE	15/40	30	4	PEN-43-SB1401	NA	64000	N	4.69E-04	Blood, Kidney , Liver	64000	No	No	Maximum/SCTL ratio <0.1
86-73-7	FLUORENE	2/40	1.7	1.7	PEN-43-SB1401	NA	140000	N	1.21E-05	Blood	140000	No	No	Maximum/SCTL ratio <0.1
91-20-3	NAPHTHALENE	8/40	2.4 J	0.3	PEN-43-SB1401	NA	4400	N	5.45E-04	Nasal	4400	No	No	Maximum/SCTL ratio <0.1
85-01-8	PHENANTHRENE	12/40	28	4	PEN-43-SB1401	NA	110000	N	2.55E-04	Kidney	110000	No	No	Maximum/SCTL ratio <0.1
129-00-0	PYRENE	12/40	17 J	2	PEN-43-SB1401	NA	110000	N	1.55E-04	Kidney	110000	No	No	Maximum/SCTL ratio <0.1
50-32-8	**CARCINOGENIC PAHS**	15/40	14.8	2	PEN-43-SB1401	NA	0.8	C	1.85E+01	Carcinogen	**0.4**	**Yes**	**Yes**	EPC >Simple Apportioned SCTL, Maximum/Non-Apportioned SCTL Ratio> 3
84-74-2	DI-N-BUTYL PHTHALATE	4/40	1.2	0.4	PEN-43-SB0901	NA	180000	N	6.67E-06	Mortality	180000	No	No	Maximum/SCTL ratio <0.1
	Inorganics (mg/kg)													
7440-38-2	ARSENIC	24/40	11.4 J	3	PEN-43-SB1401	**1.56**	18.7	C	6.10E-01	Cardiovascular, Skin, Carcinogen	9.4	No	No	EPC <Simple Apportioned SCTL
7440-39-3	BARIUM	39/40	939 J	195	PEN-43-SB1401	**4.63**	251000	N	3.74E-03	Cardiovascular	251000	No	No	Maximum/SCTL ratio <0.1
7440-50-8	COPPER	39/40	3380	566	PEN-43-SB1101	**5.74**	146000	N	2.32E-02	Gastrointestinal	146000	No	No	Maximum/SCTL ratio <0.1
7439-92-1	LEAD	38/40	5500 J	274	PEN-43-SB1401	**7.32**	3000		1.83E+00	---	3000	No	No	EPC < Simple Apportioned SCTL
7440-62-2	VANADIUM	39/40	156	27	PEN-43-SB1401	**5.83**	3650	N	4.27E-02	Hair Loss	3650	No	No	Maximum/SCTL ratio <0.1

Shaded cells indicate that the specified criterion or background level has been exceeded or that the chemical has been selected as a potential COC.

Footnotes:

1 Exposure point concentrations (EPCs) are maximum concentrations or 95 % upper confidence limits (UCLs) on the arithmetic mean as determined by statistical tests and calculations performed by Florida's UCL Calculator.
2 To determine whether metal concentrations were within background levels, soil concentrations were compared to facility background levels described in Section 6.1.1.1. If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.
3 SCTLs for recreational users were developed using the methods presented in Chapter 62-777, FAC, April 2005 and the most current toxicological data available in IRIS. The recreational users are assumed to be exposed 45 days per year by ingestion, inhalation, and dermal contact. Calculations of the recreational SCTLs are presented in Appendix D.
4 Target organs are obtained from Table II, Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, FAC, Florida Department of Environmental Protection (FDEP), April 2005.
5 Values of the simple apportioned SCTLs are determined by dividing the non-apportioned SCTL by the number carcinogenic chemicals or by the number of chemicals impacting the same target organ for noncarcinogens as defined by Chapter 62-777 FAC. Chemicals with maximum concentrations less than 0.1 of the non-apportioned SCTL are not included in the apportionment process.
6 A chemical is selected as a potential COC if the maximum concentration is greater than 3 times the non-apportioned SCTL or if the EPC is greater than the apportioned SCTL, and, for metals, if the site concentrations exceed background levels.
7 NA - Not Applicable. According to Rule 62-780 only naturally occurring (inorganic) constituents are considered in the background evaluation.

TABLE 6-13

COMPARISON WITH SCTLs FOR LEACHABILITY TO GROUNDWATER AND C_{SAT} LIMITS - SUBSURFACE SOIL
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Maximum Concentration	Sample of Maximum Detection	Background Value(1)	Florida Leachability to GW (2)	Soil Saturation Limit, Csat (3)
	Semivolatile Organics (mg/kg)						
92-52-4	1,1-BIPHENYL	1/40	0.28 J	PEN-43-SB1401	NA(4)	0.2	---
90-12-0	1-METHYLNAPHTHALENE	2/40	0.54 J	PEN-43-SB1401	NA	3.1	410
91-57-6	2-METHYLNAPHTHALENE	9/40	0.67	PEN-43-SB1401	NA	8.5	---
83-32-9	ACENAPHTHENE	3/40	1.8	PEN-43-SB1401	NA	2.1	---
208-96-8	ACENAPHTHYLENE	4/40	0.008 J	PEN-43-SB1101	NA	27	---
120-12-7	ANTHRACENE	8/40	8	PEN-43-SB1401	NA	2500	---
191-24-2	BENZO(G,H,I)PERYLENE	7/40	4.6 J	PEN-43-SB1401	NA	32000	---
86-74-8	CARBAZOLE	1/40	2.8	PEN-43-SB1401	NA	0.2	---
132-64-9	DIBENZOFURAN	1/40	1.7	PEN-43-SB1401	NA	15	---
206-44-0	FLUORANTHENE	15/40	30	PEN-43-SB1401	NA	1200	---
86-73-7	FLUORENE	2/40	1.7	PEN-43-SB1401	NA	160	---
91-20-3	NAPHTHALENE	8/40	2.4 J	PEN-43-SB1401	NA	1.2	---
85-01-8	PHENANTHRENE	12/40	28	PEN-43-SB1401	NA	250	---
129-00-0	PYRENE	12/40	17 J	PEN-43-SB1401	NA	880	---
56-55-3	BENZO(A)ANTHRACENE	15/40	15 J	PEN-43-SB1401	NA	0.8	---
50-32-8	BENZO(A)PYRENE	10/40	10	PEN-43-SB1401	NA	8	---
205-99-2	BENZO(B)FLUORANTHENE	11/40	16 J	PEN-43-SB1401	NA	2.4	---
207-08-9	BENZO(K)FLUORANTHENE	11/40	5.7	PEN-43-SB1401	NA	24	---
218-01-9	CHRYSENE	12/40	8.7 J	PEN-43-SB1401	NA	77	---
53-70-3	DIBENZO(A,H)ANTHRACENE	4/40	1.1	PEN-43-SB1401	NA	0.7	---
193-39-5	INDENO(1,2,3-CD)PYRENE	8/40	5	PEN-43-SB1401	NA	6.6	---
50-32-8	CARCINOGENIC PAHS	15/40	14.8	PEN-43-SB1401	NA	8	---
84-74-2	DI-N-BUTYL PHTHALATE	4/40	1.2	PEN-43-SB0901	NA	47	110
	Inorganics (mg/kg)						
7440-38-2	ARSENIC	24/40	11.4 J	PEN-43-SB2501	1.56	---	---
7440-39-3	BARIUM	39/40	939 J	PEN-43-SB1401	4.63	1600	---
7440-50-8	COPPER	39/40	3380	PEN-43-SB1101	5.74	---	---
7439-92-1	LEAD	38/40	5500 J	PEN-43-SB1401	7.32	---	---
7440-62-2	VANADIUM	39/40	156	PEN-43-SB1401	5.83	980	---

Shaded cells indicate that the specified criterion or background level has been exceeded.

Footnotes:

1 To determine whether metal concentrations were within background levels, soil concentrations were compared to facility background levels described in Section 6.1.1.1. If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.
2 Soil Cleanup Target Levels (SCTLs) for Leachability Based on Groundwater Criteria, Table 2, Chapter 62-777 Technical Report (FDEP, February 2005).
3 Soil Saturation Limits (CSAT), Table 8, Chapter 62-777 Technical Report (FDEP, February 2005).
4 NA - Not Applicable. According to proposed Florida Rule 62-780 only naturally occurring (inorganic) constituents are considered in the background evaluation.

TABLE 6-14

FLORIDA LEVEL 1 (RESIDENTIAL) DIRECT CONTACT EVALUATION - GROUNDWATER
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

CAS No.	Parameter	Frequency of Detection	Maximum Concentration	Background Value(1)	Non-Apportioned Florida Groundwater CTL(2)		Ratio of Maximum Concentration/ Non-apportioned Residential SCTL	Is Chemical a Potential Level 1 COC ? (3)	Rationale for Contaminant Deletion or Selection
	Volatile Organics (ug/L)								
67-64-1	ACETONE	5/12	5 J	NA(4)	6300	N	7.9E-04	No	maximum < CTL
67-66-3	CHLOROFORM	2/12	6	NA	70	C	8.6E-02	No	maximum < CTL
79-01-6	TRICHLOROETHENE	2/12	0.8 J	NA	3	S	2.7E-01	No	maximum < CTL
	Inorganics (ug/L)								
7440-39-3	BARIUM	12/12	75.2	13.22	2000	S	3.8E-02	No	maximum < CTL
7440-70-2	CALCIUM	12/12	56800	17560	---		---	No	NUT
7440-47-3	CHROMIUM	12/12	4.5	34.98	100	S	4.5E-02	No	maximum < CTL, background
7440-50-8	COPPER	3/12	10.1	16.2	1000	S	1.0E-02	No	maximum < CTL, background
7439-89-6	IRON	9/12	4000	1707.8	300	S	1.3E+01	Yes	maximum > SCTL maximum/SCTL ratio > 3
7439-92-1	LEAD	2/12	29.9	1.6	15	S	2.0E+00	Yes	maximum > CTL
7439-95-4	MAGNESIUM	12/12	6580	2872.5	---		---	No	NUT
7439-96-5	MANGANESE	12/12	204	21.92	50	S	4.1E+00	Yes	maximum > SCTL maximum/SCTL ratio > 3
7439-97-6	MERCURY	6/12	0.05	0.2	2	S	2.5E-02	No	maximum < CTL, background
7440-02-0	NICKEL	4/12	18.2	39.9	100	S	1.8E-01	No	maximum < CTL, background
7440-09-7	POTASSIUM	12/12	3620	12167.5	---		---	No	NUT, background
7440-23-5	SODIUM	12/12	32600	18345	---		---	No	NUT
7440-66-6	ZINC	4/12	117	153.2	5000	S	2.3E-02	No	maximum < CTL, background

Shaded cells indicate that the specified criterion or background level has been exceeded or that the chemical has been selected as a potential COC.

1 To determine whether metal concentrations were within background levels, groundwater concentrations were compared to facility background levels described in Section 6.1.1.1. If the maximum concentration of a chemical is less than the background value, that chemical was not selected as a COPC.
2 Groundwater Cleanup Target Levels (CTLs) for Chapter 62-777, FAC, Florida Department of Environmental Protection (FDEP), April 2005.
3 A chemical is selected as a potential COC if the maximum concentration exceeds the non-apportioned SCTL and, for metals, if the site concentrations exceed background levels.
4 NA - Not Applicable. According to proposed Florida Rule 62-780 only naturally occurring (inorganic) constituents are considered in the background evaluation.

Definitions:

C = Carcinogen.
COC = Chemical of concern.
J = Estimated value.
N = Noncarcinogen.
NUT = Essential nutrient
S = Primary or secondary standard

each chemical is divided by the number of chemicals that produce the same type of toxicity. For carcinogens, the value of the simple apportioned SCTL is calculated by dividing the non-apportioned SCTL (residential, commercial/industrial, or recreational) by the number carcinogenic chemicals detected in a surface or subsurface soil dataset. For example, if five carcinogens were detected in a surface soil dataset for a site, the simple apportioned SCTLs for carcinogens are the non-apportioned SCTLs divided by 5 (FDEP, February 2005). For noncarcinogens, the simple apportioned SCTL is determined by dividing the non-apportioned SCTL by the number of chemicals impacting the same target organ. If the liver, for example, is identified as the target organ for 7 noncarcinogens in a dataset, the simple apportioned SCTLs for those chemicals are the non-apportioned values divided by 7.

Not all SCTLs should be apportioned. The Technical Report (FDEP, February 2005) lists the following exceptions to apportioning:

1. Do not apportion an SCTL based on natural background concentration or a practical quantitation limit. These are criteria that are not directly risk-based and, therefore, are not subject to apportionment.

2. Do not apportion an SCTL based on acute toxicity. These SCTLs are always regarded as not-to-exceed values, and the default value should be compared with the maximum concentration on site. (Note that acute toxicity SCTLs are applicable only in situations where small children might be present, such as a residence, playground, or school). Of the chemicals detected in soil at Site 43, the residential SCTLs for barium, copper, and vanadium are acute values.

3. Do not apportion lead (Pb) SCTLs. Both residential and commercial/industrial lead SCTLs are based on a unique type of toxicological analysis that is not amenable to the standard apportionment process.

4. Do not apportion the SCTLs for chemicals present in low concentrations. Eliminate from consideration at a site chemicals whose maximum concentration is less than or equal to 1/10 the default SCTL. Chemicals present in low concentrations are unlikely to contribute substantially to risk and unnecessarily complicate the apportionment process. As shown in Tables 6-6 through 6-12, the maximum concentrations of most detected chemicals (all except the carcinogenic PAHs, arsenic, barium, copper, lead, and vanadium) were less than 1/10 of the default SCTLs for surface and subsurface soil. Therefore, the SCTLs for most chemicals detected in soil at Site 43 were not apportioned.

5. Do not apportion the SCTLs for chemicals detected infrequently. A chemical can be eliminated from consideration at a site if it is detected a) in only one out of 10 or more samples, or 5 percent or fewer out of 20 or more samples, and in only one environmental medium; and b) in low concentrations (no more than the default SCTL); and c) there is no reason to believe that the chemical may be present due to historical site activities. These criteria are intended to eliminate chemical detections that are artifacts from sampling, analytical, or other problems. They are not intended to eliminate chemicals present due to site activities in localized areas of contamination.

- Weighted Apportionment. In most situations, simple apportionment will be overly conservative in that the sum of the risks represented by the individual chemical SCTLs are likely to be below FDEP target risks of $1x10^{-6}$ and a HI (for each target organ/system or effect) of 1. This can be avoided by weighted apportioning. One method of weighted apportioning involves calculation of ratios of the 95% UCLs for chemicals to their SCTLs. The 95% UCL for each chemical subject to apportionment is divided by its default SCTL. If the sum of the ratios is less than 1, the chemicals have met the FDEP's risk goals. If the sum is greater than 1, dividing the concentration of each by the sum of the ratios will yield apportioned SCTLs that match exactly the risk goals. In this approach, steps to achieve the apportioned SCTLs are expected to produce proportional decreases in the concentrations of each chemical. This approach makes sense if the chemicals are co-located, such that removal of one chemical results in similar reduction in others.

- Non-Proportional Weighted Apportionment. Another method of weighted apportionment is non-proportional reductions in default SCTLs among chemicals with additive effects. As with other methods, the objective of the reduction in default SCTLs is to achieve a situation in which the sum of the risks posed by apportioned SCTLs does not exceed FDEP's risk goals for any health effect. However, in this approach, the reduction may be taken unevenly among the chemicals. This approach is useful if the chemicals are not co-located, and removal of one or more chemicals can be achieved more easily or more economically than the others. Risks can be distributed optimally among the apportioned SCTLs based on site conditions, as long as the sums of the risks they represent meet the goals of $1x10^{-6}$ excess cancer risk and a HI of 1.

Weighted apportionment is performed on a chemical by chemical basis when it is feasible and appropriate, as determined by the human health risk assessor. In practice, weighted apportionment is often an option when cumulative quantitative risk assessment results derived as described in preceding sections are less than FDEP risk benchmarks (i.e., a cancer risk estimate of $1x10^{-6}$ for carcinogens and an HI of 1 for noncarcinogens).

When the 95% UCL approach is used to develop exposure concentrations, two criteria must be satisfied when comparing site concentrations to the SCTLs, either default or alternative:

1. The 95% UCL must meet or be below the apportioned SCTL; and

2. The maximum concentration remaining on site must meet or be below a concentration three-times the unapportioned SCTL in Risk Management Option Levels I and II, and below three-times the apportioned SCTL in Risk Management Option Level III. Using the 95% UCL as the basis to determine whether the SCTL has been achieved for a site means that some areas can have concentrations above the SCTL, as long as other areas are below. In this context, it is important to insure that concentrations above the SCTL allowed to remain do not constitute an unacceptable health risk.

In the risk assessment for Site 43, SCTLs were apportioned (by simple apportionment) for Risk Management Option Level III. In the Level III evaluations, only the maximum concentrations of carcinogenic PAHs and lead were more than three times their respective non-apportioned SCTLs and these constituents were selected as potential COCs for soil.

Comparison with Leachability-Based SCTLs

The potential for leaching was addressed through comparisons with SCTLs for Leachability Based on Groundwater Criteria (FDEP, February 2005). Unlike direct contact SCTLs, which are based primarily on long-term exposure covering a specified area, leachability-based default SCTLs are intended to protect water resources at all locations. Consequently, maximum rather than average (or 95% UCL) concentrations are compared with leaching criteria. If the maximum concentration of a chemical exceeds its respective leachability SCTL, that chemical is identified as a potential COC.

Evaluation of Free Product in Soil

The potential for the presence of free product (for organic chemicals) was evaluated by comparing maximum site concentrations to C_{sat} limits. The C_{sat} values are provided in Table 8 of Chapter 62-777 FAC (FDEP, February 2005). The C_{sat} comparisons indicated the concentrations of all organic chemicals detected in soil at the sites evaluated in this report were significantly less than the C_{sat} levels. Therefore, it is unlikely these chemicals are present as free product at any of the sites. Note that FDEP provides C_{sat} values for only a few chemicals (1-methylnaphthalene, bis(2-ethylhexyl)phthalate, and di-n-butyl phthalate) detected is surface and subsurface soil at Site 43 and this analysis is not applicable to most of the chemicals detected at Site 43.

6.1.6.2 Florida Methodology for Evaluating Groundwater

This section describes the methodology used to evaluate groundwater at Site 43 using guidelines presented in Rules 62-780 and 62-777, FAC. A detailed discussion of the FDEP approach for evaluating groundwater is presented in Appendix E of the Rule 62-777 Technical Report (FDEP, February 2005).

As with soil, the FDEP risk characterization for groundwater is performed by comparing concentrations of chemicals detected in groundwater with FDEP groundwater criteria (or to criteria developed according to guidelines presented in Chapters 62-777, if necessary). The GCTLs are based on primary and secondary standards (e.g., MCLs) or on human health risk-based criteria, assuming that the groundwater is used as a potable water source (and are based on the ingestion route of exposure only). For contaminants that do not produce cancer, the risk-based CTLs are calculated based on a HI of 1 and incorporate a default relative source contribution factor of 0.2. The relative source contribution factor means, in effect, that no more than 20 percent of the total allowable intake of the contaminant can come from contaminated water. For carcinogens, the default GCTL is based on an excess cancer risk of 1×10^{-6}.

For groundwater at Site 43, only the CTLs for acetone and chloroform are risk-based values. The CTLs for all other detected chemicals are primary or secondary standards. The guidance presented in 62-777 Technical Report states that CTLs based on primary or secondary standards should not be apportioned. As with soils, if alternative CTLs are developed, the default values should be apportioned. However, the alternate CTLs should not be lower than the primary or secondary standard.

Using the guidance provided in Rules 62-780 and 62-777, groundwater at Site 43 was evaluated for residential land use (Risk Management Option Level I). In Risk Management Option Level I, the applicable CTL is usually the default value for that contaminant in the groundwater as presented in Table 1 of the Technical Report. If groundwater has the potential to impact surface water, demonstrated by monitoring well data, groundwater flow rate and direction, or fate and transport modeling, the appropriate marine surface water or freshwater surface water CTL also applies to groundwater. However, based on information presented in the SCR, (TtNUS, Inc., January 2004), groundwater at Site 43 has little potential to impact a surface water body. Therefore, the groundwater evaluation is based on comparison to GCTLs only.

The following evaluations for Site 43 were performed according to Rules 62-777 and 62-780:

- ***Comparison of maximum detected concentrations to GCTLs***. Comparing the GCTLs to maximum detected groundwater concentrations is appropriate for Site 43 because, as stated previously, the CTLs for all but two detected chemicals are primary or secondary standards and

the list of potential COCs would not change if CTLs were apportioned. If the maximum detected concentration for a chemical exceeds the CTL (and background levels for metals), the constituent is identified as a potential COC for the site.

- ***Evaluation of free product in groundwater***. The potential for the presence of free product (for organic chemicals) was evaluated by comparing maximum site concentrations to water solubility values presented in Table 4, Chapter 62-777, FAC (FDEP, April 2005). The water solubility comparisons indicated the concentrations of the few organic chemicals detected in groundwater at Site 43 in 2005 were significantly less than their respective water solubilities. Therefore, it is unlikely these chemicals are present as free product in groundwater at the site.

6.1.6.3 Risk Characterization Using State of Florida Guidelines

This section contains a summary of the results of the risk characterization for Site 43 conducted using guidelines presented in Florida Rule 62-780, FAC and the Rule 62-777 Technical Report. The results are summarized in Tables 6-6 through 6-14 and are discussed below.

6.1.6.3.1 Results of Surface Soil Evaluation – Florida Methodology

Level 1 Evaluation (Residential)

Table 6-6 presents a comparison of the maximum detected chemical concentrations in surface soil to the FDEP residential SCTLs. The following chemicals were identified as exceeding the Level 1 SCTLs and were retained as potential COCs for residential exposures to surface soil at Site 43:

- Carcinogenic PAHs (expressed as benzo(a)pyrene equivalents)
- Inorganics (arsenic, barium, copper, lead, and vanadium)

The maximum detected concentrations of arsenic, barium, copper, and lead also exceeded three times the residential SCTLs.

Level 2 (Industrial)

The results of the Level 1 evaluation identified six potential COCs; therefore, a Level 2 evaluation was conducted. A comparison of the maximum chemical concentrations in surface soil to the FDEP industrial SCTLs is presented in Table 6-7. The following constituent was identified as exceeding the Level 2 SCTL, and was retained as a potential COC for industrial exposures to surface soil at Site 43:

- Lead

Level 3 (Recreational)

The results of the Level 2 evaluation identified one potential COC (lead); therefore, a Level 3 evaluation was conducted assuming a future recreational land use scenario for Site 43. Alternative SCTLs for recreational exposures were derived following the methodology presented in Section 6.1.3.3. A comparison of the maximum detected chemicals concentrations and EPCs for surface soil to the alternative CTLs is presented in Table 6-8. As shown in the table, the EPCs for all constituents were less than the apportioned alternate SCTLs and the maximum concentrations were less than three times the non-apportioned Level 3 alternative SCTLs. Therefore, no constituents were retained as potential COCs for recreational exposure to surface soil at Site 43.

Comparison of Chemicals in Surface Soil with Leachability SCTLs

Table 6-9 presents comparisons of maximum detected concentrations in surface soil with Florida criteria based on leachability to groundwater. As shown in the table, maximum concentrations of all detected chemicals were less than the leachability criteria indicating that there is minimal potential for contaminants detected in surface soil to adversely impact groundwater. Table 6-9 also presents comparisons of maximum concentrations with soil saturation concentrations to evaluate the potential for presence of free product. As shown in the table, the concentrations of organic compounds in surface soil were significantly less than the C_{sat} concentrations (for three compounds only), indicating that free product is not present in surface soil.

6.1.6.3.2 Results of Subsurface Soil Evaluation – Florida Methodology

Level 1 Evaluation (Residential)

Table 6-10 presents a comparison of the maximum detected concentrations for subsurface soil to the FDEP residential SCTLs. The following chemicals were identified as exceeding the Level 1 SCTLs and were retained as potential COCs for residential exposures to subsurface soil at Site 43:

- Carcinogenic PAHs (expressed as benzo(a)pyrene equivalents)
- Inorganics (arsenic, barium, copper, lead, and vanadium)

The maximum detected concentrations of carcinogenic PAHs, arsenic, barium, copper, and lead also exceeded three times the residential SCTLs.

Level 2 (Industrial)

The results of the Level 1 evaluation identified six potential COCs; therefore, a Level 2 evaluation was conducted. A comparison of the maximum concentrations for subsurface soil to the FDEP industrial SCTLs is presented in Table 6-11. The following constituents were identified as exceeding the Level 2 SCTLs, and were retained as a potential COCs for industrial exposures to subsurface soil at Site 43:

- Carcinogenic PAHs (expressed as benzo(a)pyrene equivalents)
- Lead

The maximum concentrations of carcinogenic PAHs and lead also exceeded three times the residential SCTLs.

Level 3 (Recreational)

The results of the Level 2 evaluation identified two potential COCs (carcinogenic PAHs and lead); therefore, a Level 3 evaluation was conducted assuming a future recreational land use scenario. Alternative SCTLs for recreational exposures were derived following the methodology presented in Section 6.1.3.3. A comparison of the maximum detected concentrations and EPCs for subsurface soil to the alternative CTLs is presented in Table 6-12. The following constituents were identified as exceeding the Level 3 SCTLs, and were retained as a potential COCs for recreational exposures to subsurface soil at Site 43:

- Carcinogenic PAHs (expressed as benzo(a)pyrene equivalents)

The maximum concentration of carcinogenic PAHs also exceeded three times the residential SCTL. Consequently, carcinogenic PAHs were retained as potential COCs for subsurface soil.

Comparison of Chemicals in Subsurface Soil with Leachability SCTLs

Table 6-13 presents comparisons of maximum detected concentrations in subsurface soil with Florida criteria based on leachability to groundwater. The following exceeded the leachability criteria:

- 1,1-Biphenyl
- Carbazole
- Naphthalene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Dibenzo(a,h)anthracene

These exceedances occurred in only 1 of 40 subsurface soil samples (sample PEN-43-SB-1401). This sample also contained the highest concentrations of lead and other metals. Of the compounds listed above, only naphthalene is generally considered to be somewhat mobile in the environment. The other chemicals are classified as highly immobile (on calculated mobility indices) and do not tend to leach under normal conditions but rather are transported on particulate matter. Additionally, none of these compounds were detected in any groundwater samples. Based on these facts, it does not appear that the contaminants detected in subsurface soil have the potential to adversely impact groundwater.

Table 6-13 also presents comparisons of maximum concentrations with soil saturation concentrations to evaluate the potential for presence of free product. As shown in the table, the concentrations of organic compounds in subsurface soil were significantly less than the C_{sat} concentrations, indicating that free product is not present in subsurface soil.

6.1.6.3.3 Results of Groundwater Evaluation – Florida Methodology

Level 1 Evaluation (Residential)

Groundwater was evaluated for future residential use (Level 1). Table 6-14 presents a comparison of the maximum detected concentrations in groundwater to the FDEP GCTLs. The following chemicals were identified as exceeding the Level 1 CTLs and were retained as potential COCs for residential exposures to groundwater at Site 43:

- Inorganics (iron, lead, manganese)

Lead was detected in 2 of 12 groundwater samples, only one of which exceeded the GCTL. The maximum concentration (29.9 ug/L) was detected at well location PEN-43-13S in Anomaly Area No. 11. This area also contained elevated concentrations of lead in surface and subsurface soil The maximum detected concentrations of iron and manganese also exceeded three times the GCTLs. Note that GCTLs for iron (300 ug/L) and manganese (50 ug/L) are secondary standards which are not based on health effects but on aesthetic effects, such as taste and odor.

6.1.7 Human Health Risk Uncertainty Analysis

This section presents a summary of uncertainties inherent in the risk assessment and includes a discussion of how they may affect the quantitative risk estimates and conclusions of the risk analysis. The baseline HHRA for Site 43 was performed in accordance with current USEPA and Florida guidance. However, there are varying degrees of uncertainty associated with the baseline HHRA. The following sections discuss general uncertainties in risk assessment and uncertainties specific to the risk assessment for Site 43.

Uncertainty in the selection of COPCs was related to the current status of the predictive databases, the grouping of samples, the numbers, types and distributions of samples, data quality, and the procedures used to include or exclude constituents as COPCs. Uncertainty associated with the exposure assessment included the values used as input variables for a given intake route or scenario, the assumptions made to determine EPCs, and the predictions regarding future land use and population characteristics. Uncertainty in the toxicity assessment included the quality of the existing toxicity data needed to support dose-response relationships and the weight-of-evidence used to determine the carcinogenicity of COPCs. Uncertainty in risk characterization was associated with exposure to multiple chemicals and the cumulative uncertainty from combining conservative assumptions made in earlier steps of the risk assessment process.

Whereas there were various sources of random uncertainty and bias, the magnitude of bias and uncertainty and the direction of bias were influenced by the assumptions made throughout the risk assessment including selection of COPCs and selection of values for dose-response relationships. Throughout the entire risk assessment assumptions that considered safety factors were made so that the final calculated risks were overestimated (i.e., err on the side of safety).

Generally, risk assessments carry two types of uncertainty: measurement and informational uncertainty. Measurement uncertainty refers to the usual variance that accompanies scientific measurements. For example, this type of uncertainty is associated with analytical data collected for each site. The risk assessment reflects the accumulated variances of the individual values used.

Informational uncertainty stems from inadequate availability of information needed to complete the toxicity and exposure assessments. Often, this gap is significant, such as the absence of information on the effects of human exposure to low doses of a chemical, the biological mechanism of action of a chemical, or the behavior of a chemical in soil.

Once the risk assessment is complete, the results must be reviewed and evaluated to identify the type and magnitude of uncertainty involved. Reliance on results from a risk assessment without consideration of uncertainties, limitations, and assumptions inherent in the process can be misleading. For example, to account for uncertainties in the development of exposure assumptions, conservative estimates were made to ensure that the particular assumptions were protective of sensitive subpopulations or the maximum exposed individuals. If a number of conservative assumptions are combined in an exposure model, the resulting calculations can propagate the uncertainties associated with those assumptions, thereby producing a much larger uncertainty for the final results. This uncertainty is biased toward overpredicting both carcinogenic and non-carcinogenic risks. Thus, both the results of the risk

assessment and the uncertainties associated with those results must be considered when making risk management decisions.

This interpretation of uncertainty is especially relevant when the risks exceed the point of departure for defining "acceptable" risk. For example, when risks calculated using a high degree of uncertainty are less than an acceptable risk level (i.e., 10^{-6}), the interpretation of no significant risk is typically straightforward. However, when risks calculated using a high degree of uncertainty exceed an acceptable risk level (i.e., 10^{-4}), a conclusion can be difficult unless uncertainty is considered.

6.1.7.1 Uncertainty in Selection of COPCs

The most significant issues related to uncertainty in COPC selection were the usability of existing databases [i.e., the use of validated and unvalidated sample results (only validated data were used in this risk assessment) and the completeness, precision, and accuracy of the data set], the inclusion of chemicals potentially attributable to background in the quantitative risk assessment, the screening levels used, and the absence of screening levels for a few chemicals detected in the site media. A brief discussion of each of these issues is provided in the remainder of this section.

Usability and Completeness of Existing Databases

Data from samples collected in March 2005 were used to assess risks to potential human receptors at Site 43. The data were generally biased because samples were collected in areas of known or suspected contamination. For example, surface soil samples were collected from Anomaly Areas No. 11, 12, 13, 17, 18, 19, 21, 23, and 24, which, based on previous investigations, were known to contain contaminants that exceeded cleanup criteria.

The surface and subsurface soils were analyzed for a limited number of metals (arsenic, barium, copper, lead, and vanadium). Use of this limited list may underestimate risks but, as indicated in the Sampling and Analysis Plan for the 2005 sampling event, sampling at Site 43 was biased towards known or suspected contaminants and contaminated areas. These metals were chosen for analysis because concentrations from previous investigations exceeded the revised remedial goals, as discussed in the Sampling and Analysis Plan. Therefore, the sampling and analytical program should be adequate for characterizing site-related risks.

All the data were validated according the USEPA guidance. Data regarded as unreliable (i.e., qualified as "R" during the data validation process) were not used in the quantitative risk assessment. The elimination of data qualified “R” may increase the uncertainty in the risk assessment. However, the chemicals qualified “R” (e.g., 2-nitrophenol and benzaldehyde) are not typical constituents of concern at

Site 43. Therefore, it is unlikely that risks have been underestimated by the removal of the unreliable data from the data sets.

Chemicals Potentially Attributable to Background

No chemicals in soil or groundwater were eliminated from the risk assessment on the basis of background only. It is possible that risks for may be overestimated by the inclusion of some metals as COPCs. Note that the background concentrations for soil are based on data from only two locations and background levels for groundwater are based on four locations. Therefore, the background conditions for NAS Pensacola may not be adequately characterized. For example, arsenic was selected as a COPC for surface and subsurface soil because the maximum detected concentrations in these media (8 and 14.6 mg/kg, respectively) exceeded the arsenic screening level and the background reference concentration (1.56 mg/kg). USEPA Region 9 indicates that background levels of arsenic in the United States range from 0.1 to 97 mg/kg and ATSDR indicates a background range of 1 to 40 mg/kg. The maximum detections of arsenic in soil at NAS Pensacola are at the low end of these concentrations ranges and it is possible that levels of arsenic at Site 43 are naturally occurring.

COPC Screening Levels

The use of risk-based screening values (for the USEPA analysis) based on conservative land use scenarios (i.e., residential land use for soil and groundwater) corresponding to an ILCR of 10^{-6} and HI of 0.1 ensured that all the significant contributors to risk from a site were evaluated. The elimination of chemicals present at concentrations that correspond to an ILCR less than 10^{-6} and an HI less than 0.1 should not affect the final conclusions of the risk assessment because those chemicals are not expected to cause a potential health concern at the detected concentrations.

In the COPC screening for groundwater, a “CAL-Modified PRG” for TCE (1.4 ug/L) was used as the screening value for TCE instead of the USEPA Region 9 PRG (0.028 ug/L) which is based on a provisional NCEA cancer slope factor. Consequently, TCE (maximum concentration = 0.8 ug/L) was not selected as a COPC. The elimination of TCE as a COPC may result in an underestimation of risk. However, if TCE were evaluated in the quantitative risk assessment (EPC = 0.8 ug/L), the residential ILCR for TCE in groundwater would be less than $1x10^{-6}$ if the CAL-Modified toxicity criteria were used, and would be approximately $1x10^{-5}$, if the provisional USEPA toxicity values were used. Therefore, the effect of omitting TCE from the quantitative risk assessment is negligible. In addition, the maximum concentration of TCE is less than the USEPA MCL (5 ug/L) and the FDEP GCTL (3 ug/L).

Chemicals without Established Screening Levels

Region 9 PRGs are currently not available for some constituents (e.g., 1-methylnaphthalene, 2-methylnaphthalene, acenaphthylene, benzo(g,h,i)perylene, and phenanthrene). Appropriate surrogates were selected for these chemicals based on similar chemical structures, if available. For example, naphthalene was used as a surrogate for 1-methylnaphthalene and 2-methylnaphthalene, and pyrene was used as a surrogate for benzo(g,h,i)perylene and phenanthrene. Applying the toxicity values available for one compound to another increases the uncertainty in the risk assessment both in regard to the selection of COPCs and the calculated risks. The direction of the uncertainty is not known. Note that the State of Florida does provide CTLs for these compounds and they were evaluated in the analysis using FDEP methodology. Therefore, the uncertainty associated with the use of surrogates is likely to be minimal.

6.1.7.2 Uncertainty in the Exposure Assessment

Uncertainty in the exposure assessment arose because of the methods used to calculate EPCs, the determination of land use conditions, the selection of receptors and scenarios, the estimation of EPCs, and the selection of exposure parameters. Each of these is discussed below.

Land Use

The current land use patterns at NAS Pensacola are well established, thereby limiting the uncertainty associated with land use assumptions. Land use at Site 43 is currently limited and is expected to be limited in the future, as long as NAS Pensacola remains open. To be conservative, risks to potential and future construction workers, maintenance workers, occupational workers, recreational users, and on-site residents were estimated for the site. Maintenance workers and recreational users are considered to be the most likely receptors under current land use.

Exposure Point Concentrations

EPCs for soil were calculated using the Florida UCL Calculator (Version 0.97). Uncertainty is associated with the use of the 95 percent UCL on the mean concentration as the EPC. As a result of using the 95% UCL, the estimations of potential risk for the RME scenario were most likely overstated because this is a representation of the upper limit that potential receptors would be exposed to over the entire exposure period. In some cases (e.g., arsenic in soil), the maximum concentration was used as the EPC. Use of the maximum concentration as the EPC tends to overestimate potential risks because receptors are assumed to be exposed continuously to the maximum concentration for the entire exposure period. Uncertainty was also introduced when the nondetects results were assigned a value of one-half the

nondetect quantitation limit in the calculation of the EPC. This may either overstate or understate the risks to potential receptors.

As discussed in Section 6.1.3.2, the calculated risks for groundwater in the USEPA risk evaluation were based on the assumption that EPCs for groundwater were the concentrations in the most highly contaminated area of the plumes (for each COPC). The use of these averages is recommended by USEPA Regions 1 and 4 (USEPA Region 4, May 2000). The plume area used for averaging was selected based on concentrations and locations of each COPC. Using the most contaminated part of the plume may result in overestimation of risks. Note that maximum groundwater concentrations were used in the risk assessment performed according the FDEP methodology.
There was also uncertainty in assuming that current groundwater concentrations will not change in the future and this introduces additional uncertainty in the EPCs and risks for groundwater COPCs. Concentrations in groundwater may diminish over time due to natural attenuation processes involving source depletion and dilution. This is an important consideration for Site 43 because remediation has already occurred in some portions of the site.

Exposure Routes and Receptor Identification

The determination of various receptor groups and exposure routes of potential concern was based on current land use observed at the site and the anticipated future land use. Therefore, the uncertainty associated with the selection of exposure routes and potential receptors was minimal because they were considered to be well defined. Although residential use of groundwater was evaluated as an exposure scenario, groundwater is not currently used at the site nor is it expected to be used in the future (Three water wells located on NAS Pensacola provide emergency backup potable water supply. The backup water supply wells obtain groundwater from the sand and gravel aquifer at depths ranging from 224 to 250 feet bls). The nearest potable water well to Site 43 is located approximately 1,600 feet west-southwest of the site. The evaluation of direct exposure to groundwater in the HHRA was included primarily to aid in risk management decision making.

Exposure Parameters

The risk-based concentrations used to estimate risks by the USEPA methodology were calculated by the equations and exposure factors presented in Section 6.1.3.3. Each exposure factor selected for use in the risk assessment has some associated uncertainty. Generally, exposure factors were based on surveys of physiological and lifestyle profiles across the United States. The attributes and activities studied in these surveys generally have a broad distribution. The exposure factors used in this report, in most cases, were obtained from USEPA or Florida guidance documents for the RME, which generally specify the use of the 95th percentile value for most parameters. Therefore, the selected values for the

RME receptor represented an upper bound of the observed or expected habits of the majority of the population.

Generally, the uncertainty can be assessed quantitatively for many assumptions made in determining factors for calculating exposures and intakes. Many of these parameters were determined from statistical analyses on human population characteristics. Often, the database used to summarize a particular exposure parameter (i.e., body weight) is quite large. Consequently, the values chosen for such variables in the RME scenario have low uncertainty.

For many parameters for which limited information exists (i.e., dermal absorption of chemicals from soil), greater uncertainty exists. For example, current USEPA dermal guidance (USEPA, July 2004) does not provide dermal absorption factors for exposure to most metals (except arsenic and cadmium) in soil. Therefore, risks for dermal contact from soil were not evaluated for most metals in this risk assessment. Consequently, risks from exposure to soil may have been underestimated.

6.1.7.3 Uncertainty in the Toxicological Evaluation

The risk-based concentrations used to assess risk were also developed using the toxicity criteria discussed in Section 6.1.4. Uncertainties associated with the toxicity assessment (determination of RfDs and CSFs and use of available criteria) are presented in this section.

Derivation of Toxicity Criteria

Uncertainty associated with the toxicity assessment was associated with hazard assessment and dose-response evaluations for the COPCs. The hazard assessment dealt with characterizing the nature and strength of the evidence of causation or the likelihood that a chemical that induces adverse effects in animals will also induce adverse effects in humans. Hazard assessment of carcinogenicity was evaluated as a weight-of-evidence determination using USEPA methods. Positive animal cancer test data suggest that humans contain tissue(s) that may manifest a carcinogenic response; however, the animal data cannot necessarily be used to predict the target tissue in humans. In the hazard assessment of noncancer effects; however, positive animal data often suggest the nature of the effects (i.e., the target tissues and type of effects) anticipated in humans.

Uncertainty in hazard assessment arose from the nature and quality of the animal and human data. Uncertainty was reduced when similar effects were observed across species, strain, sex, and exposure route; when the magnitude of the response was clearly dose related; when pharmacokinetic data indicated a similar fate in humans and animals; when postulated mechanisms of toxicity were similar for

humans and animals; and when the COC was structurally similar to other chemicals for which the toxicity is more completely characterized.

Uncertainty in the dose-response evaluation included the determination of a CSF for the carcinogenic assessment and derivation of an RfD for the non-carcinogenic assessment. Uncertainty was introduced from interspecies (animal to human) extrapolation, which, in the absence of quantitative pharmacokinetic or mechanistic data, is usually based on consideration of interspecies differences in basal metabolic rate. Uncertainty also resulted from intraspecies variation. Most toxicity experiments are performed with animals that are very similar in age and genotype, so intragroup biological variation is minimal, but the human population of concern may reflect a great deal of heterogeneity, including unusual sensitivity or tolerance to the COPC. Even toxicity data from human occupational exposure reflect a bias because only those individuals sufficiently healthy to attend work regularly (the "healthy worker effect") and those not unusually sensitive to the chemical are likely to be occupationally exposed. Finally, uncertainty arises from the quality of the key study from which the quantitative estimate was derived and the database used. For cancer effects, the uncertainty associated with dose-response factors was mitigated by assuming the 95 percent upper bound for the slope factor. Another source of uncertainty in carcinogenic assessment is the method by which data from high doses in animal studies are extrapolated to the dose range expected for environmentally exposed humans. The linearized multistage model, which is used in nearly all quantitative estimations of human risk from animal data, is based on a nonthreshold assumption of carcinogenesis. Evidence suggests, however, that epigenetic carcinogens, as well as many genotoxic carcinogens, have a threshold below which they are noncarcinogenic. Therefore, the use of the linearized multistage model was conservative for chemicals that exhibited a threshold for carcinogenicity.

For noncancer effects, additional uncertainty factors may have been applied in the derivation of the RfD to mitigate poor quality of the key study or gaps in the database. Additional uncertainty for noncancer effects arose from the use of an effect level in the estimation of an RfD, because this estimation was predicated on the assumption of a threshold less than which adverse effects were not expected. Therefore, an uncertainty factor is usually applied to estimate a no-effect level. Additional uncertainty arose in estimation of an RfD for chronic exposure from subchronic data. Unless empirical data indicated that effects did not worsen with increasing duration of exposure, an additional uncertainty factor was applied to the no-effect level in the subchronic study. Uncertainty in the derivation of RfDs was mitigated by the use of uncertainty and modifying factors that normally ranged between 3 and 10. The resulting combination of uncertainty and modifying factors may have reached 1,000 or more.

The derivation of dermal RfDs and CSFs from oral values may have caused uncertainty. This was particularly the case when no gastrointestinal absorption rates were available in the literature or when only qualitative statements regarding absorption were available.

Uncertainty Associated with Evaluation of the Dermal Exposure Pathway

According to RAGS Part E (USEPA, July 2004), risks for dermal absorption of chemicals in soil may be quantitatively evaluated for arsenic, cadmium, chlordane, 2,4-dichlorophenoxyacetic acid, DDT, TCDD (and other dioxins), PAHs, PCBs, pentachlorophenol, and SVOCs only because of the limited information guidance available to evaluate dermal exposure to other constituents. Therefore, risks from dermal exposure to metals in soil (except for arsenic and cadmium) were not evaluated in the risk assessment. Consequently, potential risks may have been underestimated by excluding these constituents from the dermal risk assessment calculations. However, the dermal pathway was included in the development of the FDEP SCTLs. Consequently, the uncertainty associated with the omission of the dermal pathway in the USEPA analysis is likely to be minimal.

The Region 9 PRGs used to assess risks for groundwater are based on ingestion and inhalation (for volatiles) but dermal effects are not considered in the PRG calculations. For some chemicals (e.g., PCBs and PAHs) the omission of the aqueous dermal pathway can be significant. However, for the types of chemicals detected in groundwater at Site 43 (i.e., VOCs and metals), the aqueous dermal pathway is generally not important. Therefore, the effects of omitting dermal contact from the PRG calculations are expected to be negligible.

Use of Iron Toxicity Criteria

An NCEA provisional RfD was used to evaluate non-carcinogenic effects from exposure to iron. The provisional RfD for iron is based on allowable intakes rather than adverse effect levels. Therefore, there was some degree of uncertainty associated with the use of the RfD used to calculate risk-based concentrations for iron. Note that some USEPA regions (e.g., Region 1) consider the use of the oral RfD for iron inappropriate and recommend that this metal not be evaluated quantitatively in risk assessments.

Alternate RfD for Manganese

The oral RfD for manganese listed in the Region 9 PRG table (0.024 mg/kg/day) was used to calculate the PRG for evaluating risks for residential exposure to groundwater. This value includes a modification factor of 3 and an adjustment factor for the dietary contribution which is applied to the non-dietary reference dose (0.14 mg/kg/day) presented in IRIS. IRIS indicates that an adjustment for the dietary contribution should be subtracted from this allowable intake. Using the modified and adjusted RfD results in risk estimates six-times higher than if the non-dietary RfD were used.

6.1.7.4 Uncertainty in the Risk Characterization

Uncertainty in risk characterization resulted from assumptions made regarding additivity of effects from exposure to multiple COPCs from various exposure routes. High uncertainty existed when summing noncancer risks for several substances across different exposure pathways. This assumed that each substance has a similar effect and/or mode of action. Even when compounds affect the same target organs, they may have different mechanisms of action or differ in their fate in the body, so additivity may not have been an appropriate assumption. However, the assumption of additivity was considered because in most cases it represented a conservative estimate of risk.

Risks to any individual may also have been overestimated by summing multiple assumed exposure pathway risks for any single receptor. Although every effort was made to develop reasonable scenarios, not all individual receptors may have been exposed via all pathways considered.

Finally, the risk characterization did not consider antagonistic or synergistic effects. Little or no information was available to determine the potential for antagonism or synergism for the COPCs. Because chemical-specific interactions could not be predicted, the likelihood for risks to be overpredicted or underpredicted could not be defined, but the methodology used was based on current USEPA guidance.

6.1.8 Summary and Conclusions

An HHRA was conducted for the chemical concentrations detected in surface soil, subsurface soil, and groundwater samples collected at Site 43. The evaluation was conducted using both USEPA and State of Florida regulations and guidelines for HHRA. The results of the USEPA and Florida risk assessments are summarized in the following sections.

6.1.8.1 Summary of Risk Assessment per USEPA Methodology

The USEPA risk assessment considered five receptors, the hypothetical future resident, the typical industrial worker, the construction worker, the maintenance worker, and the trespasser/recreational user, assuming exposure via the ingestion, dermal contact, and inhalation route of exposures. However, maintenance workers and trespassers/recreational users are considered to be the most likely receptors at Site 43 under current land use.

An interim remedial action (soil removal) occurred at the site in 2003. The samples used in this HHRA were collected during the field investigation conducted in March 2005 and therefore represent current site conditions.

The list of COPCs for Site 43 included the following:

- Surface Soil – carcinogenic PAHs, arsenic, barium, copper, lead, and vanadium
- Subsurface Soil – carcinogenic PAHs, arsenic, barium, copper, lead, and vanadium
- Groundwater – chloroform, iron, lead, manganese

Quantitative estimates of non-carcinogenic and carcinogenic risks (HIs and ILCRs, respectively) were developed for potential human receptors. Exposure to lead was evaluated by the USEPA's Child Lead Model (IEUBK) and Adult Lead Model (ALM). Results of these evaluations are summarized below.

Potential risks associated with inhalation exposures were considered to be minimal for soil and groundwater. Inhalation of volatile emissions and fugitive dust from soil was evaluated qualitatively via a comparison of site data with USEPA generic SSLs for transfers from soil to air. Inhalation exposure for soil was considered to be relatively insignificant because all detected soil concentrations were less than the SSLs. Three VOCs were detected in groundwater at Site 43 and one VOC (chloroform) was identified as a COPC for groundwater. Risks for the inhalation of chloroform from groundwater were calculated in the risk assessment by comparing the site groundwater concentrations to the USEPA Region 9 Tap Water PRG, which is based solely on inhalation. The calculated risk (ILCR) was within the USEPA's risk management range. In addition, the maximum detected concentration of chloroform (6 ug/L) is well below the USEPA MCL (80 ug/L). Also, the soil and groundwater PRGs include the inhalation pathway and, therefore, the inhalation pathway is included in the quantitative risk assessment by comparing chemical concentrations to the PRG values.

Based on the USEPA evaluation, lead is the predominant COPC detected in soil and groundwater at Site 43 and is the primary chemical warranting further consideration as a site contaminant. Lead concentrations exceeding the OSWER SSL of 400 mg/kg were detected at six surface soil sampling locations (average concentration in the six locations = 2,525 mg/kg) and at six subsurface soil locations (average concentration = 1,350 mg/kg). Lead was detected in 2 of 12 groundwater samples with the concentration in one sample exceeding the 15 ug/L USEPA action level. Because published toxicity criteria are not available for lead, exposure to lead in soil was evaluated by the IEUBK Model and the TRW Adult Lead Model for residential and non-residential exposure scenarios, respectively. Results of the IEUBK and TRW adult lead model analyses indicate that exposure to average lead concentrations in surface and subsurface soil and the maximum detected concentration in groundwater would result in risks (i.e., probabilities) exceeding USEPA benchmarks.

Quantitative estimates of non-carcinogenic and carcinogenic risks were developed for the receptors listed above for exposure to COPCs in soil and groundwater. Cancer risk estimates (total ILCRs) developed for

excavation/construction workers and maintenance workers exposed to COPCs in surface and subsurface soil were less than $1x10^{-6}$. Total ILCRs for full time commercial/industrial workers, lifelong recreational users, and future residents hypothetically exposed to COPCs in soil and groundwater were within the USEPA target risk range of $1x10^{-6}$ to $1x10^{-4}$. The primary risk drivers were carcinogenic PAHs and arsenic in soil and chloroform in groundwater. However, there is considerable uncertainty associated with the risks calculated for arsenic and chloroform. The arsenic concentrations detected in soil exceed facility background concentrations but are well within naturally occurring levels in the U.S. (the average Site 43 soil concentration is approximately 3 mg/kg). In addition, the soil background dataset for NAS Pensacola consists of only two locations and background levels may not be adequately characterized. As stated above, chloroform was detected in only 2 of 12 samples; the maximum concentration is well below the USEPA MCL and the Florida GCTL. It is likely that carcinogenic PAHs are a "hotspot" contamination issue only because elevated concentrations of carcinogenic PAHs were detected mainly in subsurface soil Sample PEN-43-SB1401. Average carcinogenic PAH concentrations outside this area (approximately 0.08 mg/kg) slightly exceed the Region 9 Residential Soil PRG (0.062 mg/kg) and are less than the FDEP Residential Soil SCTL (0.1 mg/kg). This sample (SB1401) also contained the highest detected concentrations of lead and other metals in subsurface soil.

Noncancer risk estimates (total HIs) developed on a target organ/effect basis for all receptors evaluated were less than unity (1.0). Consequently, adverse non-carcinogenic health effects are not anticipated under the conditions established in the exposure assessment.

6.1.8.2 Summary of Risk Assessment per State of Florida Methodology

The risk assessment conducted per the State of Florida regulations and guidelines evaluated risks to a hypothetical future resident and a typical industrial worker using the published SCTLs for the residential and industrial land use scenario, respectively. Risks to a hypothetical future recreational user were evaluated using SCTLs specifically developed for this risk assessment as stipulated in the State of Florida regulations and guidelines. The following chemicals were identified as potential COCs for surface soils based on a comparison of maximum concentrations or EPCs to these SCTLs:

FLORIDA SURFACE SOIL EVALUATION

Residential SCTLs	Industrial SCTLs	Recreational SCTLs
Carcinogenic PAHs	Lead	
Arsenic		
Barium		
Copper		
Lead		
Vanadium		

The following chemicals were identified as potential COCs for subsurface soils based on a comparison of maximum concentrations or EPCs to the SCTLs:

FLORIDA SUBSURFACE SOIL EVALUATION

Residential SCTLs	Industrial SCTLs	Recreational SCTLs
Carcinogenic PAHs	Carcinogenic PAHs	Carcinogenic PAHs
Arsenic	Lead	
Barium		
Copper		
Lead		
Vanadium		

The following chemicals were identified as potential COCs for groundwater based on a comparison of maximum concentrations to GCTLs:

FLORIDA GROUNDWATER EVALUATION

Residential SCTLs
Iron
Lead
Manganese

Note that iron and manganese were identified as potential COCs for groundwater because the maximum concentrations exceeded CTLs which are USEPA Secondary MCLs. Secondary MCLs are criteria based not on health effects but rather on aesthetic effects such as taste and odor. Also, note that HQs for iron and manganese calculated in the USEPA evaluation were less than the USEPA and Florida goal of unity for non-carcinogenic health effects.

Chemicals detected in soil were also evaluated for the potential to impact groundwater quality at the site by comparing maximum concentrations with FDEP SCTLs for migration from soil to groundwater. This evaluation indicated that that the concentrations of constituents detected in soil were unlikely to adversely impact groundwater quality.

Please note that the above risk assessments (USEPA and FDEP) were conducted using maximum and UCL concentrations across the entire site but it is likely that several local “hotspot” areas exist within the site, as discussed previously (e.g., Section 6.1.5.4).

6.2 ECOLOGICAL RISK ASSESSMENT

This screening-level ecological risk assessment was conducted in accordance with USEPA Ecological Risk Assessment Guidance for Superfund (USEPA, 1997), USEPA Amended Guidance on Ecological Risk Assessment at Military Bases (USEPA, 2000), and the Navy Policy for Conducting Ecological Risk Assessments (DON, 1999). The risk assessment for Site 43 consists of Steps 1 through 3a of USEPA's 8-step ecological risk assessment process. Steps 1 through 3a consist of the following:

Step 1	Screening-Level Problem Formulation and Ecological Effects Evaluation
Step 2	Screening-Level Exposure Estimate and Risk Calculation
Step 3a	Refinement of Preliminary COPCs

Section 6.2.1.1 provides the environmental setting for Site 43. The fate and transport characteristics of the chemicals detected in soil are provided in Section 6.2.1.2. The ecotoxicity of site contaminants and potential ecological receptors are described in Section 6.2.1.3. Section 6.2.1.4 describes complete exposure pathways, while Section 6.2.1.5 provides assessment and measurement endpoints. Sections 6.2.2, 6.2.3, and 6.2.4 describe the ecological effects evaluation, exposure estimates, and risk calculation, respectively. Section 6.2.5 describes the refinement of preliminary COPCs. Uncertainties inherent with the ecological risk assessment are discussed in Section 6.2.6. The summary and conclusions of this ecological risk assessment are provided in Section 6.2.7.

6.2.1 Screening-Level Problem Formulation

6.2.1.1 Environmental Setting

Site 43 comprises approximately 0.92 acres. Site 43 is located at the southwest corner of the intersection of Murray and Taylor Roads and consists of an area approximately 200 feet by 200 feet in size (see Figure 1-2). The site lies in a shallow depression between these two roads and the site elevation is approximately 20 feet above mean sea level.

Site 43 is located in a developed area of the base. The site and adjacent area are covered with mowed turf grass. A few large oak trees, ornamental shrubs, and smaller trees are present. Bare soil covers the area where tennis courts were formerly located. Native understory is absent from the site and surrounding area. No perennial streams or other surface water bodies are located within or near Site 43. The nearest surface water is a drainage ditch approximately 500 feet east of Murray Road, but surface water is present in this ditch only intermittently. A "water line" shown on some site maps (Figures 1-2 and 3-1, for example) is an underground utility line, and not a ditch or stream.

A list of federally listed threatened and endangered species and species of special concern for Escambia County was obtained from the Ecological Services and Fisheries Resource Office of the U.S. Fish and Wildlife Service in Panama City, Florida (http://www.fws.gov/panamacity/resources/specieslist.html). Five fish, 12 amphibians/reptiles, 14 birds, 4 mammals, and 24 plants are listed as threatened, endangered, or a species of special concern for the county. However, the habitats associated with these special status species (i.e., estuarine, palustrine, upland forests, etc.) do not exist at Site 43 or adjacent areas. None of the special status species recorded in Escambia County would be expected at the site.

6.2.1.2 Contaminant Fate and Transport

Past activities at Site 43 include the undocumented burning and burial of drums containing unknown materials. Drums and buried metallic debris have been found in previous investigations. Metal debris, bricks, and glass are visible on the ground surface. The presence of these materials and previous activities have resulted in the contamination of soils with SVOCs and metals. A detailed discussion of contaminant fate and transport was presented in Section 5.0. The discussion below is limited to a brief review of the fate and transport of contaminants at Site 43 as related to contaminant migration pathways and ecological exposure.

Contaminant migration pathways applicable at this site include erosion and infiltration. Because the site is essentially covered with turf grass, wind erosion is not a significant migration pathway. However, if surface soil is disturbed through activities such as excavation, soils could serve as a source for airborne transport of contaminants; soil contaminants could then be transported to downwind locations. Soil erosion due to storm water runoff is probably minimal at Site 43 due to the essentially flat terrain and grass and vegetation cover.

Infiltrating precipitation has resulted in the contamination of subsurface soil and groundwater at Site 43. As explained in Section 6.2.1.1; however, surface water is not present at Site 43 Therefore, groundwater seeping into surface water is not a pathway of concern and is not discussed further in this section.

SVOCs detected in Site 43 surface soil consists of PAHs and phthalates. The fate and transport characteristics of PAHs are dependent on their molecular weights. Low molecular weight PAHs are more soluble and volatile, and therefore more mobile. They may volatilize and photolyze from soil and surface water, and they also may be biodegraded. High molecular weight PAHs tend to be immobile and insoluble, binding strongly to organic matter (reducing the potential for leaching to groundwater), and they are resistant to volatilization, photolysis, and biodegradation (Eisler, 2000). Upper tropic level organisms are exposed to PAHs primarily through diet, but most wildlife can metabolize and excrete PAHs. Foodchain transfer and biomagnification of PAHs is expected to be minimal. PAHs may be absorbed by plants but are expected to be translocated, metabolized, and potentially photodegraded. Accumulation

within plants is likely to occur only in heavily polluted locations where uptake exceeds metabolism and degradation (Edwards, 1983).

Phthalates are relatively persistent in the environment. Although numerous studies have demonstrated that phthalates undergo biodegradation, this is a slow process in soil. Some microorganisms have been shown to excrete products that increase the solubility of phthalates and enhance their biodegradation (Gibbons and Alexander, 1989). Biomagnification of phthalates does not occur.

Metals are highly persistent environmental contaminants. They do not biodegrade, photolyze, hydrolyze, etc. The major fate mechanisms for metals are adsorption to the soil matrix (as compared to being part of the soil structure) and bioaccumulation.

The mobility of metals is influenced primarily by their physical and chemical properties, in combination with the physical and chemical characteristics of the soil matrix. Factors that assist in predicting the mobility of inorganic species are the soil/pore water pH, soil/pore water Eh, and cation exchange capacity. The mobility of metals generally increases with decreasing soil pH and cation exchange capacity.

6.2.1.3 Ecotoxicity and Potential Receptors

SVOCs and metals were detected in surface soil samples.

Few generalizations can be made about the ecotoxicity of PAHs because of the extreme variability in toxicity and physiochemical properties of PAHs. Adverse impacts to plants from PAHs, however, are rare (Eisler, 2000). In most animal species, PAHs are metabolized by a mixed-function oxidase enzyme system into intermediates that may be toxic, mutagenic, or carcinogenic to the host. Some invertebrate species cannot efficiently metabolize PAHs (Eisler, 2000), and PAHs can be chronically toxic to invertebrates, but overall, very little is known about the toxicological mechanisms of PAHs in invertebrates (Erstfield and Snow-Ashbrook, 1999). PAHs can bind to cellular macromolecules and thereby disrupt their function in higher level organisms such as mammals and birds. Biological macromolecules include polymers of carbohydrates (e.g., starch), amino acids (proteins), and nucleotides (e.g., DNA). The cellular functions of these polymers include structure, energy storage, energy transfer, material transport, and the storage and transmittal of genetic information. PAHs show little tendency to biomagnify in the food web (Eisler, 2000). USEPA Region IV considers the potential toxicity of PAHs via the terrestrial food web to be generally negligible unless PAHs are present at extremely high concentrations (i.e., percent levels: 10,000 mg/kg) in soil. Microbial metabolism is the major process for degradation of PAHs in soil (ATSDR, 1997).

In general, phthalates have a low acute toxicity to animals (Amdur et al., 1991). Chronic oral exposures, however, have been shown to result in liver toxicity in mammals. Ingested phthalates metabolize to monoesters in the gut and are subsequently absorbed. Following absorption, phthalates distribute primarily to the liver and kidneys and may, in some species, concentrate in the testes (Rhodes et al., 1986). Liver carcinogenesis has been observed (ATSDR, 1997). Many receptors are able to metabolize and excrete phthalate esters, so their ability to bioaccumulate varies among species. Detailed ecotoxicity data for birds, plants, and invertebrates plants could not be located.

Many metals occur naturally at various concentrations in surface water and sediment primarily to chemical weathering of rocks and fallout from volcanoes. Most metals are toxic to aquatic (i.e., fish, invertebrates) and terrestrial (i.e., plants, invertebrates, vertebrates) ecological receptors above certain concentrations, with some metals being more toxic at lower concentrations than others. Also, different chemical forms of the metals may be more toxic than others. For example, methylmercury is more toxic than inorganic mercury. In addition, the toxicity of several metals (copper and lead) to aquatic receptors in freshwater systems decreases with increasing water hardness.

6.2.1.4 Complete Exposure Pathways

Soil invertebrates are exposed to soil contaminants at Site 43 through ingestion and dermal contact. Higher trophic level animals such as birds and small mammals will be exposed to site-related contamination through ingestion of contaminated food items. These animals can also incidentally ingest contaminants in soil while grooming fur, preening feathers, digging, grazing close to the soil, or feeding on items to which soil has adhered. Absorption of contaminants from the gastrointestinal tract is the primary pathway of intake for terrestrial receptors. Exposure to contaminants in the soil through dermal contact could occur but is unlikely to represent a major exposure pathway because fur, feathers, and chitinous exoskeletons minimize transfer of contaminants across dermal tissue. Higher trophic level animals at the site are expected to be limited to species typically found in urban areas, such as song birds, and small mammals such as moles, mice, and gray squirrels. Species such as rabbits, shrews, opossums, raccoons, and snakes might occasionally forage at the site.

The airborne transport of dust is a negligible pathway for terrestrial animals because the area is largely covered by turf grass. Similarly, the inhalation pathway is not significant.

Terrestrial vegetation could be exposed to contaminants via contact with soil and subsequent root translocation. Aerial deposition is a negligible pathway for plants and animals at Site 43 because the site is largely covered by turf grass, reducing the amount of bare soil and fugitive dust.

There are no surface water bodies at Site 43. A drainage ditch approximately 500 feet to the east of Murray Road is the nearest surface water body to Site 43, but surface water is present in this ditch only intermittently. Ecological receptors are not directly exposed to contaminants in groundwater at the site. Exposure to groundwater discharging as a seep or directly to a surface water body represents a complete exposure pathway when a surface water body is present. Because surface water is not present at or near Site 43, the groundwater pathway is not complete.

A complete exposure pathway has three components: a source of contaminants that can be released to the environment; a route of contaminant transport through an environmental medium; and an exposure or contact point for an ecological receptor. As explained in Step 1 of USEPA's ecological risk assessment guidance (USEPA, 1997), if an exposure pathway is not complete, that exposure pathway does not need to be evaluated. This is the case for groundwater at Site 43 and groundwater contaminants will not be evaluated in this ecological risk assessment.

In summary, complete exposure pathways and routes of entry into biota at Site 43 consist of

- Direct contact with soil
- Ingestion of soil
- Ingestion of contaminated food items

6.2.1.5 Preliminary Assessment and Measurement Endpoints

USEPA Region IV has specified that assessment endpoints for the screening-level assessment should be broad and generic. For the screening level assessment, the preliminary assessment endpoint is the protection of terrestrial biota from adverse effects of chemicals on their growth, survival, and reproduction. Measurement endpoints represent the assessment endpoints chosen for a site, and are measures of biological effects (USEPA, 1997). The preliminary measurement endpoints were chemical concentrations in surface soil that are associated with no adverse effects on growth, survival, and reproduction of terrestrial organisms. The measurement endpoints are represented by USEPA Region IV ecological screening values (ESVs) for surface soil. USEPA Ecological Soil Screening Levels (Eco-SSLs) were used in place of the USEPA Region IV ESVs as the measurement endpoints for chemicals when Eco-SSLs were available.

The USEPA Region IV ESVs for surface soil are based on conservative endpoints and sensitive ecological effects data, and thus, the screening values represent chemical concentrations associated with a low probability of unacceptable risks to ecological receptors. For this reason, USEPA Region IV considers their soil ESVs to be protective of terrestrial invertebrates and plants as well as upper level receptors such as birds and mammals. Additionally, the lowest of the plant, invertebrate, mammal, and avian Eco-SSL was used for chemicals when Eco-SSLs were available. In the SLERA, therefore, a

distinction is not made between measurement endpoints associated with direct toxicity to invertebrates and plants versus measurement endpoints associated with food chain effects.

6.2.2 Screening-Level Ecological Effects Evaluation

For the SLERA, maximum concentrations of chemicals detected in surface soil were compared to Eco-SSLs for chemicals which Eco-SSLs are available and to USEPA Region IV ESVs (USEPA, 2001) for all other detected chemicals. If the maximum concentration was less than the Eco-SSL (or the ESV), the chemical was eliminated from further consideration. If the maximum concentration equaled or exceeded the screening level, or if a screening level was not available, the chemical was then considered to be an ecological COPC and was retained for further study in the ecological risk assessment.

6.2.3 Screening-Level Exposure Estimate

The validated surface soil data set is presented in Appendix D. The term “surface soil” is used in this risk assessment to refer to soil collected form 0 to 1-foot depth, since USEPA Region IV considers this depth to be representative of surface soil.

All analytes (except calcium, magnesium, potassium, and sodium) detected in surface soil samples were assessed in this investigation. Calcium, magnesium, potassium, and sodium were excluded because they are essential nutrients that are toxic only at extremely high concentrations. Due to the scarcity of data for these essential nutrients, it was not possible to develop ranges of toxicity for them even at high concentrations.

6.2.4 Screening-Level Risk Calculation

The preliminary risk calculation step compared maximum concentrations of chemicals in surface soil to USEPA Eco-SSLs and USEPA Region IV ESVs. The ratio of the maximum concentration to the screening level is called the screening HQ. Analytes whose maximum concentrations did not exceed the screening level (i.e., HQ < 1.0) were dropped from further consideration, and those that equaled or exceeded the screening level (i.e., HQ ≥ 1.0), or did not have a screening level, were retained as ecological COPCs.

Four inorganics (barium, copper, lead, and vanadium) and three PAHs (benzo(a)pyrene, fluoranthene, and pyrene) as well as total PAHs were retained as COPCs because their maximum concentrations exceeded screening values (Table 6-15). Ten other PAHs and one phthalate (bis[2-ethylhexyl]phthalate) were retained as COPCs because screening levels were not available.

TABLE 6-15

SELECTION OF ECOLOGICAL CHEMICALS OF POTENTIAL CONCERN FOR SURFACE SOIL
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

PARAMETER	Frequency of Detection	Minimum Concentration	Maximum Concentration	Sample of Maximum Detection	Mean Concentration(1)	Average of Positive Detections	Soil Screening Value	HQ	COPC(2)	Rationale(3)
Semi Volatile Oorganic Chemicals (ug/kg)										
1-METHYLNAPHTHALENE	1/20	3 J	3 J	PEN-43-SS2401	4.5	3	NA	NA	Yes	NC
2-METHYLNAPHTHALENE	7/20	2 J	9 J	PEN-43-SS2401	2.1	5.4	NA	NA	Yes	NC
ACENAPHTHENE	5/20	1 J	3 J	PEN-43-SS2401	0.84	2.2	20,000	0.0002	No	BSL
ACENAPHTHYLENE	11/20	1 J	11 J	PEN-43-SS2501	2.8	4.9	NA	NA	Yes	NC
ANTHRACENE	17/20	0.9 J	17 J	PEN-43-SS2801	4.7	5.5	100	0.2	No	BSL
BENZO(A)ANTHRACENE	20/20	8 J	310 J	PEN-43-SS2401	75.6	75.6	NA	NA	Yes	NC
BENZO(A)PYRENE	19/20	6 J	180	PEN-43-SS2801	47.8	50.3	100	1.8	Yes	ASL
BENZO(B)FLUORANTHENE	20/20	11 J	410	PEN-43-SS2801	111	111	NA	NA	Yes	NC
BENZO(G,H,I)PERYLENE	19/20	4 J	110 J	PEN-43-SS2801	25.1	26.3	NA	NA	Yes	NC
BENZO(K)FLUORANTHENE	20/20	3 J	130	PEN-43-SS2501	32.3	32.3	NA	NA	Yes	NC
BIS(2-ETHYLHEXYL)PHTHALATE	3/20	110 J	870	PEN-43-SS3501	90	365	NA	NA	Yes	NC
CHRYSENE	20/20	3 J	160	PEN-43-SS2401	43.4	43.4	NA	NA	Yes	NC
DI-N-BUTYL PHTHALATE	2/20	930	1200	PEN-43-SS2001	148.7	1065	200,000	0.01	No	BSL
DIBENZO(A,H)ANTHRACENE	6/20	7 J	36	PEN-43-SS2401	7.3	22	NA	NA	Yes	NC
FLUORANTHENE	20/20	5 J	280 J	PEN-43-SS2401	84.4	84.4	100	2.8	Yes	ASL
FLUORENE	1/20	1.675 J	3 J	PEN-43-SS1801-D	0.4	1.7	30,000	0.0001	No	BSL
INDENO(1,2,3-CD)PYRENE	19/20	4 J	98	PEN-43-SS2401	27	28.4	NA	NA	Yes	NC
NAPHTHALENE	9/20	1 J	3 J	PEN-43-SS2701	0.97	1.6	100	0.03	No	BSL
PHENANTHRENE	20/20	2 J	85	PEN-43-SS2801	25.1	25.1	100	0.9	No	BSL
PYRENE	20/20	4 J	190	PEN-43-SS2401	56.4	56.4	100	1.9	Yes	ASL
TOTAL PAH	--	--	1919.35	PEN-43-SS2401	--	--	1,000	1.9	Yes	ASL
Inorganics (mg/kg)										
ARSENIC	11/12	1.2	8	PEN-43-SS2801	3.5	3.8	18	0.4	No	BSL
BARIUM	12/12	2.2	726	PEN-43-SS2801	205	205	330	2.2	Yes	ASL
COPPER	17/17	1.7	889	PEN-43-SS2401	114	114	40	22	Yes	ASL
LEAD	17/17	10.7	7360	PEN-43-SS2801	1077	1077	11	669	Yes	ASL
VANADIUM	9/9	1.4	73.1	PEN-43-SS2801	13.9	13.9	7.8	9.4	Yes	ASL

Footnotes:
1 - The mean concentration incorporates 1/2 the detection limit for non-detect samples.
2 - Chemicals retained as COPCs are evaluated further in the Step 3a evaluation.
3 - Rationale for COPC selection/deletion:
ASL = Maximum detected concentration above screening level
BSL = Maximum detected concentration below screening level
NA = Not available
NC = No criteria available
HQ = Hazard quotient

6.2.5 Refinement of Preliminary Chemicals of Potential Concern

At this point, the first two steps of the ecological risk assessment have been completed. The ecological risk assessment process includes a series of scientific/management decision points (SMDPs) (USEPA, 1997). The first SMDP occurs at the end of Step 2, and requires the risk managers to evaluate and approve or redirect the work up to that point and determine whether the risk assessment will continue into Step 3. However, USEPA Region IV recognizes that most ecological risk assessments will proceed into Step 3, and facilities are encouraged to submit the results of Steps 1 through 3 as a single deliverable document (USEPA, 2000). With this in mind, and since the SLERA indicates a potential for adverse effects, a more thorough assessment is warranted. Therefore, the risk assessment process for Site 43 will proceed into Step 3 (Baseline Risk Assessment Problem Formulation).

The baseline ecological risk assessment begins with a more balanced evaluation of the conservativeness inherent in the first two steps of the risk assessment process (USEPA, 1997; DON, 1999). The initial phase of Step 3 is typically known as Step 3a, and consists of a refinement of the conservative exposure assumptions in order to more realistically estimate potential risks to ecological receptors (i.e., plants, invertebrates, and wildlife receptors). Examples of factors considered during Step 3a include toxicological evaluation of COPCs, spatial distribution of contaminants, food-chain modeling, and habitat quality (USEPA, 1997; DON, 1999).

Food-chain modeling was conducted to investigate potential risks to representative receptors from ingested doses of surface soil COPCs that are known to bioaccumulate or biomagnify (USEPA, 2000). The methods used to model the doses that representative receptors could receive, as well as the selection of toxicity reference values (TRVs), are presented in Appendix F. The assessment endpoints associated with the food-chain modeling were the protection of insectivorous birds and mammals from adverse effects of COPCs on growth, survival, and reproduction. The term “insectivorous” is used here in a broad sense to describe birds and mammals that prey not only upon insects but on a variety of invertebrates (i.e., adult and larval insects, centipedes, millipedes, other arthropods, and worms). The short-tailed shrew was selected to represent insectivorous mammals and the American robin was selected to represent insectivorous birds. The associated measurement endpoints were doses of COPCs associated with adverse effects on growth, survival, and reproduction of these receptor groups.

Large terrestrial carnivorous birds and mammals (e.g., red fox, red-tailed hawk) were not selected as assessment endpoints because of the developed nature of the site and its small size compared to the typical foraging areas of carnivorous animals. Omnivores and herbivores were not selected as assessment endpoints because exposure to the site COPCs is greater for insectivores than for omnivores and herbivores.

6.2.5.1 Results of Food-Chain Modeling

Based on maximum concentrations and conservative assumptions, food-chain HQs exceeded 1.0 for copper and lead for both the robin and shrew (Table 6-16). The lead food chain HQs were greater for insectivorous birds (represented by the robin) than for insectivorous small mammals (represented by the shrew). Based on the average concentration scenario (see Appendix F), food-chain HQs exceeded 1.0 for lead only (Table 6-17).

6.2.5.2 Step 3a Discussion

The results of the screening level assessment and Step 3a considerations are discussed on a COPC-specific basis.

6.2.5.2.1 Semivolatile Organic Compounds

PAHs

Maximum screening HQs of three PAHs (benzo(a)pyrene, fluoranthene, and pyrene) as well as total PAHs exceeded 1.0, but were relatively low (1.8 to 2.8). The USEPA Region IV ESVs for these four PAHs and for total PAHs are based on concentrations that represent background concentrations in soil or detection limits (Friday, 1998). ESVs were not available for 10 other PAHs; however, the maximum concentration of total PAHs (1919 µg/kg, Table 6-15) was well below 20,000 µg/kg, which has been described as moderate soil contamination that requires additional study (Friday, 1998). For this reason, risks to plants and soil invertebrates from PAHs are negligible. Additionally, the toxicity of PAHs at Site 43 via the terrestrial food web is negligible. Therefore, PAHs pose negligible ecological risk at Site 43.

Bis(2-ethyhexyl)phthalate

An ESV was not available for bis(2-ethylhexyl)phthalate; therefore, the maximum bis(2-ethylhexyl) phthalate concentration was compared to other toxicity guidelines to evaluate risks to plants and invertebrates.

- Oak Ridge National Laboratory (ORNL) Plant (Diethylphthalate): 100 mg/kg (Efroymson et al., 1997a)
- ORNL Earthworm (Dimethylphthalate): 200 mg/kg (Efroymson et al., 1997b)

TABLE 6-16

TERRESTRIAL FOOD CHAIN MODEL - CONSERVATIVE SCENARIO
INSECTIVOROUS RECEPTORS
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

Chemical	American Robin		Short-Tailed Shrew	
	HQ_{NOAEL}	HQ_{LOAEL}	HQ_{NOAEL}	HQ_{LOAEL}
Metals				
Copper	4.8E+00	3.6E+00	1.3E+01	9.8E+00
Lead	1.6E+03	1.6E+02	1.5E+02	1.5E+01

Notes:
-Cells are shaded if the HQ value is greater than 1.0.
-See Appendix E for the HQ calculation spreadsheets.
HQ = Hazard Quotient
NOAEL = No observed adverse effect level
LOAEL = Lowest observed adverse effect level

TABLE 6-17

TERRESTRIAL FOOD CHAIN MODEL - AVERAGE SCENARIO
INSECTIVOROUS RECEPTORS
SITE 43 REMEDIAL INVESTIGATION REPORT
NAS PENSACOLA
PENSACOLA, FLORIDA

Chemical	American Robin		Short-Tailed Shrew	
	HQ_{NOAEL}	HQ_{LOAEL}	HQ_{NOAEL}	HQ_{LOAEL}
Metals				
Copper	1.9E-01	1.4E-01	4.5E-01	3.5E-01
Lead	3.9E+01	3.9E+00	3.3E+00	3.3E-01

Notes:
-Cells are shaded if the HQ value is greater than 1.0.
-See Appendix E for the HQ calculation spreadsheets.
HQ = Hazard Quotient
NOAEL = No observed adverse effect level
LOAEL = Lowest observed adverse effect level

No plant benchmarks are available for bis(2-ethylhexyl) phthalate, therefore, the ORNL plant benchmark for diethylphthalate (100 mg/kg) was used. The diethylphthalate ORNL benchmark for plants is based on an EC_{50} value of 134 mg/kg (which was rounded down to one significant figure for the plant benchmark as described in Efroymson et al., 1997a) based on effects on the growth of lettuce from seedling to 14 days in loam soils. Even though the ORNL benchmark is based on an EC_{50} concentration (a value indicating adverse effects to 50 percent of the test subjects), the maximum detected concentration (870 ug/kg) is much lower than the ORNL plant benchmark, so impacts to plants are not expected. Therefore, risks to plants from bis (2-ethylhexyl) phthalate are expected to be negligible.

No benchmarks are available for bis(2-ethylhexyl) phthalate to evaluate risks to earthworms; therefore, the ORNL earthworm benchmark for dimethylphthalate (200 mg/kg) was used because the toxicity of these two phthalates is probably similar in magnitude. The ORNL earthworm benchmark for dimethylphthalate was developed based on survival of adults of four earthworm species; the 14-day LC_{50} was 1,064 mg/kg. The ORNL earthworm value of 200 mg/kg for dimethylphthalate was obtained by dividing the LC_{50} (1,064 mg/kg) by a safety factor 5 (Efroymson et al., 1997b). Although there are uncertainties in comparing the maximum bis(2-ethylhexyl) phthalate concentration to toxicity information available for dimethylphthalate, and in applying a safety factor to an LC_{50} value to estimate a toxicity threshold, the maximum bis(2-ethylhexyl) phthalate concentration is less than the ORNL earthworm benchmark for dimethylphthalate and impacts to invertebrates are not likely.

Phthalates are common environmental contaminants due to their use in plastics. Their presence in Site 43 at these low concentrations might be an artifact of the sampling and/or analytical methods. For these reasons, risks to plants and soil invertebrates are probably negligible.

6.2.5.2.2 Inorganics

Barium

Barium was a COPC because the maximum soil concentration of 726 mg/kg exceeded the USEPA Eco-SSL for soil invertebrates of 330 mg/kg (USEPA, 2005a). The USEPA Eco-SSL was developed after a review of over 152 technical studies. Of these, three studies were accepted for inclusion in the development of the Eco-SSL based on a ranking that followed USEPA Study Acceptance Criteria. The Eco-SSL is the geometric mean of the EC_{20} values (based on reproduction) reported for each of three test species under three separate test conditions of pH (USEPA, 2005a). An Eco-SSL for plants is not available. The ORNL plant benchmark of 500 mg/kg is based on a study that found a 38 percent reduction in shoot growth of barley 14 days after the addition of 500 mg/kg barium, which was the lowest concentration tested (Efroymson et al., 1997a).

The three greatest concentrations of barium at Site 43 (710 mg/kg at PEN-43-SS21, 346 mg/kg at PEN-43-SS24, and 726 mg/kg at PEN-43-SS28) exceeded the Eco-SSL for soil invertebrates (330 mg/kg). These locations are in three distinct areas of Site 43: PEN-43-SS21 is within the former tennis court boundaries, PEN-43-SS-24 is within Anomaly Area 11, and PEN-43-SS-28 is within Anomaly Area 23. Two of these locations (PEN-43-SS-21 and PEN-43-SS-28) had sample concentrations also exceeding the 500 mg/kg plant benchmark of Efroymson et al. (1997a). In addition, location PEN-43-SS21 does not appear well bounded to the south, although it is bounded to the north and west by locations where concentrations are less than criteria and to the east by the excavated area. Location PEN-43-SS-24 is located on the southeastern corner of Anomaly Area 11 and is well bounded to the north and west by locations where concentrations are less than criteria and to the south by the entrance drive to the bachelor officer quarters, although it remains unbounded to the east. Location PEN-43-SS-28 is well bounded to the north and west by locations where concentrations are less than criteria and to the south and east by the excavation area; therefore, it appears that the elevated barium concentration at this location is isolated.

Overall it appears that three potentially isolated areas exist in which soil barium concentrations pose potential risks to soil invertebrates at Site 43: the vicinity of PEN-43-SS21, Anomaly Area 11, and Anomaly Area 23. Risks in other areas of the site are negligible.

Copper

Copper was a COPC because the maximum detected soil concentration of 889 mg/kg exceeded the Region IV ESV of 40 mg/kg. The maximum copper concentration was compared to other toxicity guidelines to further evaluate risks to plants and invertebrates.

- Canadian Soil Quality Guideline (SQG): 63 mg/kg (CCME, 1997)
- ORNL Plant: 100 mg/kg (Efroymson et al., 1997a)
- ORNL Earthworm: 60 mg/kg (Efroymson et al., 1997b)

The Canadian SQG of 63 mg/kg for copper is the 25th percentile of effects and no effects data distribution for plants and invertebrates, which is the 17th of 69 data points and corresponds to an effect on radish seedling emergence [Canadian Council of Ministers for the Environment (CCME), 1997]. Therefore, some studies showed effects below 63 mg/kg but many more studies did not show effects at this concentration. Copper concentrations below the Canadian SQG of 63 mg/kg are expected to be protective of plants and invertebrates. However, there is some level of uncertainty in assuming that concentrations slightly greater than the SQG present unacceptable risks because the copper sulfate, copper nitrate, and copper chloride used in the toxicity studies are likely to be more bioavailable than copper in soils from the site. Also, as discussed above, although some studies demonstrated

measurable effects to plants and invertebrates at copper concentrations less than 63 mg/kg, the effects concentrations in many other studies were much greater than 63 mg/kg.

The copper ORNL benchmark for plants (100 mg/kg) was based on toxicity data from three studies. Two of the studies demonstrated reductions in root and shoot weights of little bluestem grown in sandy soil to which 100 parts per million (ppm) copper (as copper sulfate) was added (Miles and Parker, 1979). The third study showed no effect on leaf and stem weights of bush beans grown in soil to which 100 ppm copper (as copper sulfate) was added, but leaf weight was reduced 26 percent when 200 ppm copper was added (Wallace et al., 1977).

The copper ORNL benchmark for invertebrates (60 mg/kg) was based on toxicity data from 15 studies. The endpoints for most of the studies cited in Efroymson et al. (1997b), are survival or impacts on reproduction (i.e., cocoon production, hatchling success). Because there were more than 10 studies, the benchmark was based on a 10th percentile lowest observable effect concentraion (LOEC) value. However, a review of the data in Appendix A.1 of Efroymson et al., (1997b) shows that most of the studies cited in that document have no observable effect concentrations (NOECs) that are greater than 60 mg/kg.

Copper was detected at four locations at concentrations exceeding the criteria for plants and soil invertebrates (locations PEN-43-SS-21, PEN-43-SS-24, PEN-43SS-25, and PEN-43-SS-34). Three of the four samples at these locations also had elevated barium concentrations (see above). These three samples were collected from within the former tennis court boundaries, Anomaly Area 11, and Anomaly Area 24. Location PEN-43-SS-34 appears to be well bounded on all sides by locations where sample concentrations are less than criteria; the elevated copper detection at this location appears isolated. Locations PEN-43-SS-24 and PEN-43-SS-25 are located on the southern edge of Anomaly Area 11 and are bounded to the north and west by locations where concentrations are less than criteria and to the south by the entrance drive to the bachelor officer quarters. These locations remain unbounded to the east.

Food-chain modeling was conducted for copper to evaluate risks to insectivorous mammals and birds. Both NOAEL and LOAEL-based HQs were greater than 1.0 under the conservative scenario (i.e., using maximum surface soil concentrations); however, no HQs exceeded 1.0 under the average scenario. The average scenario more realistically depicts actual risks to upper level receptors than does the conservative scenario because insectivorous small mammals and birds are exposed to chemical concentrations throughout the site as opposed to locations of the greatest concentrations only.

In summary, risks to plants and invertebrates from copper are possible in the vicinity of location PEN-43-SS21 in the former tennis court boundaries, Anomaly Area 11, and in the vicinity of location PEN-43-SS34 along the southern border of Anomaly Area 24. Risks to insectivorous mammals and birds, however, are not likely because HQs under the average food-chain scenario were less than 1.0.

Lead

Lead was a COPC because the maximum soil concentration of 7,360 mg/kg exceeded the USEPA Eco-SSL for birds of 11 mg/kg. Eight samples collected at Site 43 had lead concentrations ranging from 290 mg/kg to 7,360 mg/kg. Using a concentration of 290 mg/kg, food chain HQs for the robin are still greater than 1.0 for lead. The NOAEL-based HQ for the robin is also slightly greater than 1.0 (HQ = 3.4) when using the next greatest lead concentration of 88 mg/kg (at location SS19); however, the LOAEL-based HQ is less than 1.0. Therefore, the food chain modeling indicates risks to insectivorous mammals and especially to birds due to the eight highest lead concentrations (PEN-43-SS21, PEN-43-SS24 through PEN-43-SS29, and PEN-43-SS34). Food chain HQs for insectivorous mammals and birds are less than 1.0 at all other sample locations under the average scenario.

Because the Eco-SSL used in the conservative COPC screening is based on risks to wildlife and not risks to plants and invertebrates, lead concentrations were also compared to the following USEPA Eco-SSLs for soil invertebrates and plants to evaluate risks to these receptors.

- Eco-SSL for plants – 115 mg/kg (USEPA, 2005b)
- Eco-SSL for soil invertebrates – 1,700 mg/kg (USEPA, 2005b)

The Eco-SSL for plants is the geometric mean of the maximum acceptable toxicant concentration (MATC) values for four test species under three different test conditions (pH of 4.0 to 6.3), and the ecological endpoint was growth. The Eco-SSL for soil invertebrates is the geometric mean of the MATC values for one test species (*Folsomia candida*) under three different test conditions (pH of 4.5 to 6.0) and is based on a reproductive endpoint.

Eight samples collected at Site 43 had lead concentrations greater than the USEPA Eco-SSL for plants. Of these eight samples, four had concentrations greater than the USEPA Eco-SSL for soil invertebrates. These samples were collected from within the former tennis court boundaries, Anomaly Area 11, and Anomaly Area 23 and 24 (see Figure 3-1). These locations are where elevated levels of barium and copper have also been detected and represent “hot spots” of contamination. Lead concentrations at all other locations were 88 mg/kg and less, and thus, are less than the Eco-SSL for plants and invertebrates.

In summary, potential risks to plants and invertebrates from lead are possible in the vicinity of location PEN-43-SS21 in the former tennis court boundaries, Anomaly Area 11, Anomaly Area 23, and in the vicinity of location PEN-43-SS34 along the southern border of Anomaly Area 24. Risks to insectivorous mammals and especially birds from lead are also possible at locations PEN-43-SS21, PEN-43-SS24 through PEN-43-SS29, and PEN-43-SS34.

Vanadium

Vanadium was a COPC because the maximum concentration of 73.1 mg/kg exceeded the USEPA Eco-SSL for birds of 7.8 mg/kg. Because the Eco-SSL used in the conservative COPC screening is based on risks to wildlife and not risks to plants and invertebrates, vanadium concentrations at Site 43 were compared to the Canadian SQG (130 mg/kg; EC, 1999) to evaluate potential risks to plants and invertebrates.

The vanadium Canadian SQG of 130 mg/kg is the 25th percentile of effects and no effects data distribution for plants and invertebrates, which is the 4th of 14 data points and corresponds to a LOEC for lettuce seedling emergence [Environment Canada (EC), 1999]. The only study cited in the vanadium Canadian SQG for earthworms listed a NOEC of 207 mg/kg based on mortality after 14 days and a LOEC of 417 mg/kg. Some of the studies used for the Canadian SQG were conducted by Environment Canada and were designed to provide a range of effects (NOEC, EC_{25}, EC_{50}, and LOEC).

The maximum vanadium detection of 73.1 mg/kg is less than the Canadian SQG. All other detected concentrations were 11.6 mg/kg and less, which is less than the lowest NOEC of 55 mg/kg used to develop the Canadian SQG. Therefore, impacts to plants and invertebrates from vanadium in the soil are not expected

6.2.6 Uncertainty

Uncertainty is associated with all aspects of the ecological assessment methodology presented in the preceding sections. This section provides a summary of the uncertainties.

6.2.6.1 Uncertainty in the Problem Formulation

A major uncertainty in this risk assessment is the extent to which wildlife actually forage at the site. The site provides poor habitat, and as a result, significant foraging probably does not occur at the site. Risk to insectivorous receptors was evaluated as a conservative measure, but under current habitat conditions, the food chain HQs are believed to grossly overestimate risk at the site. The precise extent of overestimation is uncertain.

Another uncertainty related to the habitat at Site 43 is choice of representative receptors. The short-tailed shrew was selected to represent small mammals that consume soil invertebrates, but the site provides very little cover in which these timid animals can hide. Under current habitat conditions, the food chain HQs for mammals represented by the shrew are believed to grossly overestimate risk to insectivorous mammals.

Larger animals such as foxes, bobcats, and hawks were not selected as representative receptors due to conditions at the site. Bobcats are not found in developed areas such as Site 43 and the vicinity. Foxes might forage at Site 43 because these animals sometimes become habituated to developed areas, but such use would be only occasional at most. Similarly, the site would not be expected to provide foraging habitat to large predatory birds such as hawks. Additionally, the home ranges of larger animals are so great that the likelihood that these animals are present and forage at Site 43 only is highly unlikely. The uncertainty associated with not including large predatory mammals and birds is negligible.

Evidence indicates that the groundwater-to-surface water pathway is not complete at the site, and therefore, groundwater contaminants are presumed to pose no risk to ecological receptors. Extensive groundwater data, the absence of surface water bodies at the site, and the distance to downgradient surface water bodies supports this presumption. Thus, the uncertainty associated with this presumption appears to be negligible.

6.2.6.2 Uncertainty in the Ecological Effects Characterization

Laboratory-derived NOAELs and LOAELs might not adequately represent toxicity thresholds for receptors under field conditions. In addition, NOAELs and LOAELs derived for species used in toxicity tests might not adequately represent toxicity thresholds for other species. These uncertainties may overestimate or underestimate potential risks.

Toxicological data for a few of the chemicals (for a few of the receptor types) are limited or do not exist. This occurred for bis(2-ethylhexyl) phthalate in surface soil but it did not affect the outcome of the risk assessment because bis(2-ethylhexyl) phthalate was evaluated using a surrogate phthalate and the other Step 3a factors discussed in Section 6.2.5.2. Although there is uncertainty in using a surrogate chemical when evaluating toxicity, attempts were made to lessen the uncertainties by providing the toxicological basis of the alternate benchmarks when they were used.

Data for investigating toxicity to reptiles and amphibians from oral ingestion of contaminants are sparse. Thus, potential risks via the food chain were not evaluated for reptiles and amphibians. With the exception of toads, however, few reptiles and amphibians probably utilize the site.

6.2.6.3 Uncertainty in the Exposure Assessment

The dermal exposure for upper-level receptors was not evaluated, potentially underestimating risks. However, because few upper-level receptors probably use Site 43, this exposure route is considered negligible.

Literature-based bioaccumulation factors used in food-chain modeling often vary between species and sites. This can overestimate or underestimate potential risks.

Soil samples evaluated in this risk assessment consisted of samples no deeper than 1 foot below the soil surface. However, tree roots extend deeper than 1 foot below the surface, and mammals such as moles could burrow deeper than 1 foot. With the exception of moles and trees, terrestrial species at the site would rarely (if ever) be exposed to soils deeper than 1 foot below the surface. The uncertainty resulting in evaluating only surface soils is negligible.

6.2.6.4 Uncertainty in the Risk Characterization

This uncertainty results from the combination of the above uncertainties. For example, the assessment of risks to upper-level receptors via the food chain is hindered by uncertainties such as the derivation of the toxicity reference values, the process used to derive bioaccumulation factors, and the choice of the best species to represent mammal and bird receptors. A weight-of-evidence approach to assess risks was used to reduce the overall uncertainty in these situations.

Uncertainty in risk characterization also results from the lack of data regarding the toxicity of multiple chemicals. For example, soil concentrations of some COPCs were elevated at numerous locations. The extent to which these concentrations might contribute to cumulative toxicity is uncertain.

Finally, there is uncertainty in how the predicted risks to a species at a site translate into risk to the population in the area as a whole.

6.2.7 Summary and Conclusions

A SLERA was performed for Site 43 at NAS Pensacola. Several chemicals were retained as COPCs as a result of the initial screening of surface soil. These chemicals were further evaluated and data were scrutinized as a part of the Step 3a refinement. Section 6.2.5 presents a summary of the refinement of the initial COPCs including the overall conclusion of whether chemicals initially selected as COPCs actually pose significant ecological risk.

Plants and Soil Invertebrates

In surface soil, several chemicals were initially selected as COPCs. Concentrations of barium, copper, and lead pose risks to soil invertebrates and plants, especially from the cumulative toxicity of multiple metals. Concentrations of these metals were greater than alternate toxicity guidelines for plants and invertebrates at some locations. However, the locations where elevated concentrations for the final COPCs exist are primarily limited to three small isolated areas: within the vicinity of location PEN-43-SS21 (located within the former tennis court boundaries), Anomaly Area 11, and Anomaly Area 23. No impacts to plants and invertebrates at Site 43 are expected at other locations.

Summary of Food Chain Modeling

Potential risks to insectivorous small mammals and birds from copper and lead were evaluated. Based on the food chain modeling results, lead concentrations in eight soil samples pose potential risks to insectivorous small mammals and birds (see Section 6.2.5.1) that forage exclusively at Site 43. These eight samples were collected from primarily three isolated areas: the vicinity of location PEN-43-SS21 (located within the former tennis court boundaries), Anomaly Area 11, and Anomaly Area 23. The precise extent to which birds and mammals forage at Site 43 is uncertain, but due to the poor habitat at the site, birds and mammals probably do not forage to a significant extent there.

7.0 SUMMARY AND CONCLUSIONS

The primary objective of the RI is to provide data to evaluate the current environmental conditions and guide the selection of a remedy for any contamination present at Site 43 that is protective of human health and the environment. In order to achieve this primary objective, samples from various media were collected and analyzed to fill data gaps from previous investigations. Samples from various media were used to evaluate the extent of contamination previously documented at the site and evaluate the effect remedial actions have had on site conditions.

7.1 SITE HYDROLOGY

The depth to groundwater at Site 43 ranges from approximately 12 to 15 feet and is controlled primarily by surface topography. Groundwater flow direction in the shallow groundwater interval is to the east. The estimated average groundwater velocity for the shallow zone at the site was calculated at 0.88 feet/day. An upward vertical gradient was observed in adjacent pairs of shallow and deep monitoring wells.

7.2 SOIL ASSESSMENT

The release of contaminants at Site 43 appears to have resulted from undocumented burning and disposal of unknown materials. The source and nature of materials, as well as the time of disposal, are unknown. The detections of carcinogenic PAHs and metals at Site 43 supports burning and disposal as the probable source of contamination.

Ten surface soil samples with exceedances of one or more residential SCTL (including some industrial exceedances) were collected during the RI, including surface soil samples collected from Anomaly Areas 11, 12, 23, and 24 and the Tennis Court Area. Six shallow subsurface soil samples had exceedances of one or more residential SCTL (including some industrial exceedances). Four of these samples were collected in the footprint of the IRA excavation, and one each from Anomaly Areas 11 and 23. Contaminant concentrations in the deeper subsurface soil samples, collected from depths greater than 4 feet were less than SCTLs.

<u>Anomaly Area 17</u>

Contaminant concentrations in the surface and subsurface soil samples collected from Anomaly Area 17 were less than SCTLs; therefore, no further delineation is needed in this area.

Anomaly Area 11

All three of the surface soil samples and the shallow subsurface soil sample collected at Anomaly Area 11, located to the east of the IRA excavation, had exceedances of residential screening critieria. Surface soil samples PEN-43-SS24 and PEN-43-SS25 and subsurface soil sample PEN-43-SB2501, collected from 2 to 3 feet, had exceedances of the arsenic, barium, copper, lead, and carcinogenic PAH SCTLs. The lead concentrations in these samples exceeded the industrial SCTL. Surface soil sample PEN-43-SS26 exceeded only the residential carcinogenic PAH SCTL and none of the metals SCTLs. These analytical results indicate that horizontal and vertical delineation of the surface and subsurface soil contaminants has not been completed at Anomaly Area 11.

Anomaly Area 12

Two of the surface soil samples at collected at Anomaly Area 12 had exceedances of residential SCTLs, PEN-43-SS18 exceeded the carcinogenic PAH SCTL and PEN-43-SS19 exceeded the arsenic SCTL. The third surface soil sample PEN-43-SS20 had no SCTL exceedances. No SCTL exceedances were reported for the subsurface soil samples collected from PEN-43-SB19.

Anomaly Area 23

All three of the surface soil samples and one of the shallow subsurface soil sample collected at Anomaly Area 23, located adjacent to the northern edge of the IRA excavation, had exceedances of residential screening critieria. Surface soil samples PEN-43-SS27 and PEN-43-SS28 had exceedances of the arsenic, barium, and lead SCTLs. The lead concentration in PEN-43-SS28 also exceeded the industrial SCTL. The carcinogenic PAH concentration for PEN-43-SS28 exceeded the residential SCTL. Surface soil sample PEN-43-SS29 exceeded only the residential carcinogenic PAH SCTL and none of the metals SCTLs. The shallow subsurface soil sample collected at PEN-43-SB14 had exceedances of the arsenic, barium, copper, and vanadium residential SCTLs and the lead and carcinogenic PAH industrial SCTLs. Sample PEN-43-SB1401 contained some of the highest contaminant concentrations observed in samples collected for the RI. The remaining subsurface soil samples collected at Anomaly Area 23 had no SCTL exceedances.

Anomaly Area 24

One of the surface soil samples collected at Anomaly Area 24, located to the north of the IRA excavation, had exceedances of residential SCTLs. PEN-43-SS34 had exceedances of the copper and lead residential SCTLs. PEN-43-SS34 was collected from the southern perimeter of Anomaly Area 24, which is closest to Anomaly Area 23 and the IRA excavation. Contaminant concentrations in the other surface and subsurface soil samples collected from Anomaly Area 24 were less than SCTLs.

Tennis Court Area

One of the surface soil samples collected at the Tennis Court Area had exceedances of residential and industrial SCTLs. PEN-43-SS21 had exceedances of the arsenic, barium, and copper residential SCTL and the lead industrial SCTL. Contaminant concentrations in the other surface and subsurface soil samples collected from the Tennis Court Area were less than SCTLs.

IRA Excavation Area

Four of the soil boring locations advanced in the excavation area from the IRA had SCTL exceedances. The shallow subsurface soil samples collected at PEN-43-SB06, PEN-43-SB08, PEN-43-SB11, and PEN-43-SB17 had exceedances of the arsenic, barium, copper, and lead residential SCTLs. The lead concentration in PEN-43-SB1701 also exceeded the industrial SCTL. The carcinogenic PAH concentration for PEN-43-SB1101 and PEN-43-SB1701 exceeded the residential SCTL. The distribution of contaminants in the shallow subsurface zone suggests that subsurface soil contaminantion remaining at the site does not extend laterally much further than the IRA excavation. SCTL exceedances were not reported for the subsurface soil samples collected at Anomaly Areas 12, 17, and 24 or the Tennis Court Area.

7.3 GROUNDWATER ASSESSMENT

Groundwater samples collected at Site 43 were analyzed for TAL metals and TCL VOCs based on analytical results from previous sampling events. Detected VOC concentrations in the groundwater samples collected for the RI were less than the GCTLs.

Iron was detected in most of the monitoring wells sampled for the RI at concentrations exceeding the GCTL, which is a secondary standard, but less than the NAS Pensacola background iron concentration. Iron concentrations exceeded the background concentration in three monitoring wells, PEN-43-06S, PEN-43-09S, and PEN-43-10S. The highest iron concentration was observed in PEN-43-06S. These wells are located up and side gradient to the known disposal area, which would suggest that the iron concentrations in these wells are naturally occuring rather than due to site activity.

Manganese was detected in each of the groundwater samples collected at Site 43. The reported mangnese concentrations in two shallow wells, PEN-43-06S and PEN-43-07S, exceeded the GCTL, which is a secondary standard. PEN-43-06S is located to the south of the IRA excavation area and PEN-43-07S is located to the north of the IRA excavation area. The highest manganese concentration was observed in PEN-43-06S, which is located side gradient to the known disposal area. Manganese was less than the GCTL in PEN-43-06D, the deep well paired with PEN-43-06S.

Lead was detected in only two of the groundwater samples collected at Site 43. Lead only exceeded the GCTL in the sample collected from PEN-43-13S, which is located at the center of Anomaly Area 11, where surface and subsurface soil samples had lead concentrations exceeding residential and industrial SCTLs.

7.4 SUMMARY OF RISK ASSESSMENT

An HHRA was conducted for the chemical concentrations detected in surface soil, subsurface soil, and groundwater samples collected at Site 43. The evaluation was conducted using both USEPA and State of Florida regulations and guidelines for HHRA. The USEPA risk assessment considered five receptors, the hypothetical future resident, the typical industrial worker, the construction worker, the maintenance worker, and the trespasser/recreational user, assuming exposure via the ingestion, dermal contact, and inhalation route of exposures. However, maintenance workers and trespassers/recreational users are considered to be the most likely receptors at Site 43 under current land use.

The list of COPCs for Site 43 included the following:

- Surface Soil – carcinogenic PAHs, arsenic, barium, copper, lead, and vanadium
- Subsurface Soil – carcinogenic PAHs, arsenic, barium, copper, lead, and vanadium
- Groundwater – chloroform, iron, lead, manganese

Based on the USEPA evaluation, lead is the predominant COPC detected in soil and groundwater at Site 43 and is the primary chemical warranting further consideration as a site contaminant. Lead concentrations exceeding the OSWER SSL of 400 mg/kg were detected at six surface soil sampling locations (average concentration in the six locations = 2,525 mg/kg) and at six subsurface soil locations (average concentration = 1,350 mg/kg). Lead was detected in 2 of 12 groundwater samples with the concentration in one sample exceeding the 15 ug/L USEPA action level. Because published toxicity criteria are not available for lead, exposure to lead in soil was evaluated by the IEUBK Model and the TRW Adult Lead Model for residential and non-residential exposure scenarios, respectively. Results of the IEUBK and TRW adult lead model analyses indicate that exposure to average lead concentrations in surface and subsurface soil and the maximum detected concentration in groundwater would result in risks (i.e., probabilities) exceeding USEPA benchmarks.

Quantitative estimates of non-carcinogenic and carcinogenic risks were developed for the receptors listed above for exposure to COPCs in soil and groundwater. Cancer risk estimates (total ILCRs) developed for excavation/construction workers and maintenance workers exposed to COPCs in surface and subsurface soil were less than $1x10^{-6}$. Total ILCRs for full time commercial/industrial workers, lifelong recreational

users, and future residents hypothetically exposed to COPCs in soil and groundwater were within the USEPA target risk range of $1x10^{-6}$ to $1x10^{-4}$. The primary risk drivers were carcinogenic PAHs and arsenic in soil and chloroform in groundwater. However, there is considerable uncertainty associated with the risks calculated for arsenic and chloroform. The arsenic concentrations detected in soil exceed facility background concentrations but are well within naturally occurring levels in the United States (the average Site 43 soil concentration is approximately 3 mg/kg). In addition, the soil background dataset for NAS Pensacola consists of only two locations and background levels may not be adequately characterized. As stated above, chloroform was detected in only 2 of 12 samples; the maximum concentration is well below the USEPA MCL and the Florida GCTL. It is likely that carcinogenic PAHs are a "hotspot" contamination issue only because elevated concentrations of carcinogenic PAHs were detected mainly in subsurface soil Sample PEN-43-SB1401. Average carcinogenic PAH concentrations outside this area (approximately 0.08 mg/kg) slightly exceed the Region 9 residential soil PRG (0.062 mg/kg) and are less than the FDEP Residential Soil SCTL (0.1 mg/kg). This sample (SB1401) also contained the highest detected concentrations of lead and other metals in subsurface soil.

Noncancer risk estimates (total HIs) developed on a target organ/effect basis for all receptors evaluated were less than unity (1.0). Consequently, adverse non-carcinogenic health effects are not anticipated under the conditions established in the exposure assessment.

The risk assessment conducted per the State of Florida regulations and guidelines evaluated risks to a hypothetical future resident and a typical industrial worker using the published SCTLs for the residential and industrial land use scenario, respectively. Risks to a hypothetical future recreational user were evaluated using SCTLs specifically developed for this risk assessment as stipulated in the State of Florida regulations and guidelines. The following chemicals were identified as potential COCs for surface soils based on a comparison of maximum concentrations or EPCs to these SCTLs:

- Residential SCTL – carcinogenic PAHs, arsenic, barium, copper, lead, and vanadium
- Industrial SCTL - lead

The following chemicals were identified as potential COCs for subsurface soils based on a comparison of maximum concentrations or EPCs to the SCTLs:

- Residential SCTL – carcinogenic PAHs, arsenic, barium, copper, lead, and vanadium
- Industrial SCTL - carcinogenic PAHs, lead
- Recreational SCTL - carcinogenic PAHs

The following chemicals were identified as potential COCs for groundwater based on a comparison of maximum concentrations to GCTLs:

- Iron
- Lead
- Manganese

Note that iron and manganese were identified as potential COCs for groundwater because the maximum concentrations exceeded CTLs which are USEPA Secondary MCLs. Secondary MCLs are criteria based not on health effects but rather on aesthetic effects such as taste and odor. Also, note that HQs for iron and manganese calculated in the USEPA evaluation were less than the USEPA and Florida goal of unity for non-carcinogenic health effects.

Chemicals detected in soil were also evaluated for the potential to impact groundwater quality at the site by comparing maximum concentrations with FDEP SCTLs for migration from soil to groundwater. This evaluation indicated that that the concentrations of constituents detected in soil were unlikely to adversely impact groundwater quality.

The HHRA identified completed pathways in soil, subsurface soil, and groundwater, to unrestricted receptor populations. The analytes identified in the HHRA as contributing to risk to human receptors were lead in soil and groundwater. In addition, carcinogenic PAH hot spots may influence risk at the site. Arsenic, barium, copper, and vanadium were detected in surface and subsurface soil at concentrations exceeding FDEP residential risk based criteria. Lead and carcinogenic PAHs were detected at concentrations exceeding FDEP industrial risk based screening criteria.

The SLERA identified surface soil concentrations of barium, copper, and lead that may pose risks to soil invertebrates and plants, especially from the cumulative toxicity of multiple metals. The locations where elevated concentrations for the final COPCs exist are primarily limited to three small isolated areas: within the vicinity of location PEN-43-SS21 (located within the former tennis court boundaries), Anomaly Area 11, and Anomaly Area 23. No impacts to plants and invertebrates at Site 43 are expected at other locations.

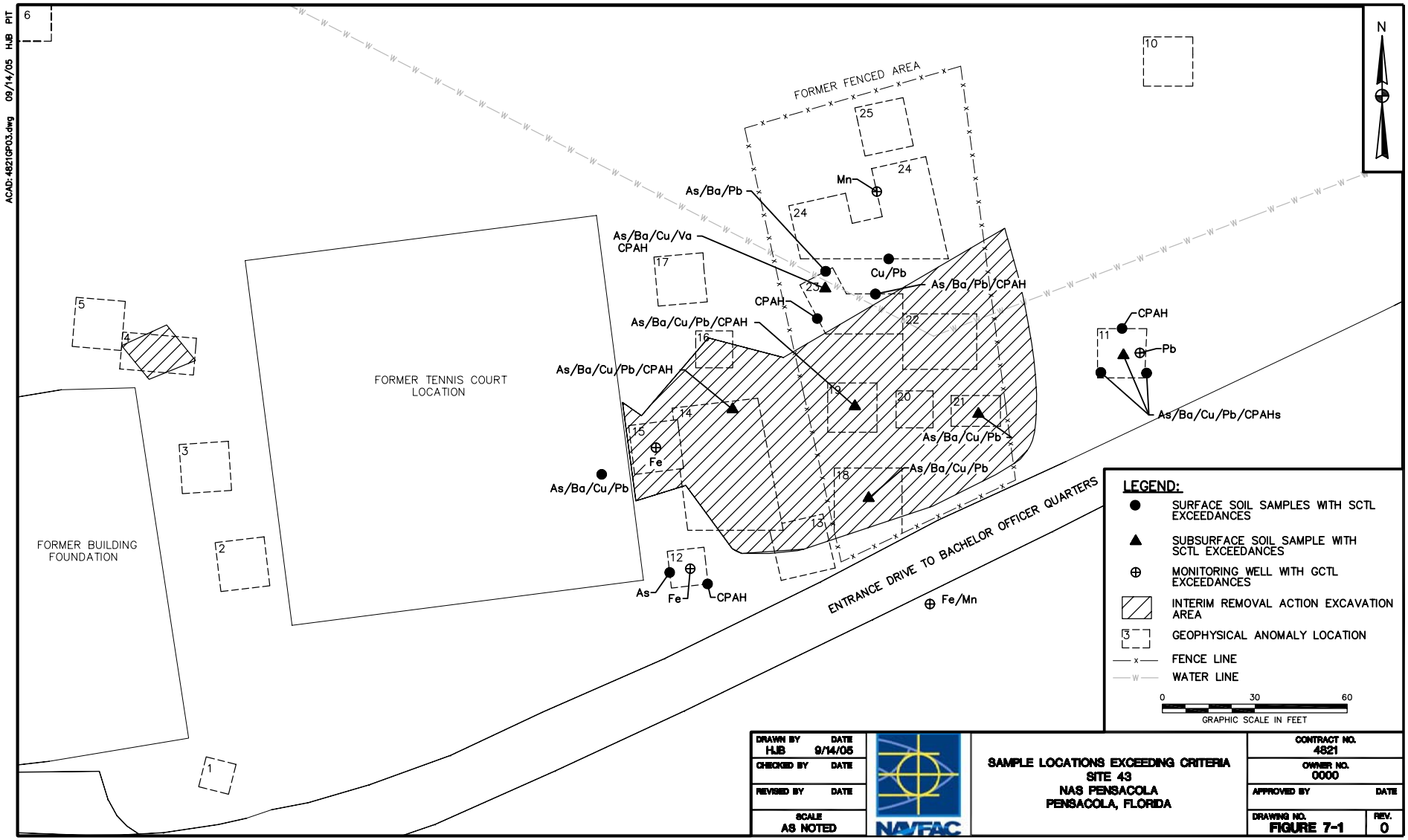
Potential risks to insectivorous small mammals and birds from copper and lead were evaluated. Based on the food chain modeling results, lead concentrations in eight soil samples pose potential risks to insectivorous small mammals and birds that forage exclusively at Site 43. These eight samples were collected from primarily three isolated areas: the vicinity of location PEN-43-SS21 (located within the former tennis court boundaries), Anomaly Area 11, and Anomaly Area 23. The precise extent to which

birds and mammals forage at Site 43 is uncertain, but due to the poor habitat at the site, birds and mammals probably do not forage to a significant extent there.

7.5 CONCLUSIONS

Metals and carcinogenic PAHs were detected in surface soil and subsurface soil samples at concentrations exceeding risk-based screening criteria. Metals in groundwater samples exceeded risk-based screening criteria (lead) and secondary standards (iron and manganese). Sample locations that exceeded risk based criteria are shown on Figure 7-1. Both the HHRA and SLERA identified risk to human and ecological receptors exceeding USEPA and FDEP benchmarks.

The remaining contaminants in Site 43 surface and subsurface soil will require measures to eliminate or minimize exposure by active cleanup, engineering controls, and/or institutional controls. To achieve no further action for residential or industrial criteria, exposure to surface soil at Anomaly Areas 11, 12, 23, 24, the Tennis Court Area and exposure to subsurface soil at Anomaly Areas 11, 23, and the the IRA area will have to be prevented. Exposure to groundwater at the site will also require control. A detailed evaluation of alternatives to achieve this goal should be presented in a Feasibility Study for Site 43. A confirmation sampling and analysis protocol will be incorporated in the Feasibility Study to verify that the selected remedy for Site 43 is effective for the nature and extent of contaminants at the site.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N
FORMER FENCED AREA
FORMER TENNIS COURT LOCATION
FORMER BUILDING FOUNDATION
ENTRANCE DRIVE TO BACHELOR OFFICER QUARTERS
As/Ba/Pb
Mn
As/Ba/Cu/Va CPAH
Cu/Pb
As/Ba/Pb/CPAH
CPAH
As/Ba/Cu/Pb/CPAH
As/Ba/Cu/Pb/CPAH
Fe
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Pb
As/Ba/Cu/Pb/CPAHs
LEGEND:
SURFACE SOIL SAMPLES WITH SCTL EXCEEDANCES
SUBSURFACE SOIL SAMPLE WITH SCTL EXCEEDANCES
MONITORING WELL WITH GCTL EXCEEDANCES
INTERIM REMOVAL ACTION EXCAVATION AREA
GEOPHYSICAL ANOMALY LOCATION
FENCE LINE
WATER LINE
0 30 60
GRAPHIC SCALE IN FEET
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SAMPLE LOCATIONS EXCEEDING CRITERIA
SITE 43
NAS PENSACOLA
PENSACOLA, FLORIDA
CONTRACT NO. 4821
OWNER NO. 0000
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DRAWING NO. FIGURE 7-1
REV. 0
FORM CADD NO. SDIV-BH.DWG – REV 1 – 9/10/98

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APPENDIX A

DOCUMENT REVIEW COMMENTS

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

August 4, 2006

Mr. Bill Hill
Code ES33
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
P.O. Box 190010
North Charleston, South Carolina 29419-9010

RE: Remedial Investigation Report for the Demolition Debris Disposal Area-Site 43, Naval Air Station Pensacola, Florida.

Dear Mr. Hill:

I have completed the technical review of the above referenced document dated March, 2006 (received March 8, 2006), and find it to be adequate for its intent. Please review the attached comments from the University of Florida and follow the directions listed below:

1. Comments 1-5 should be taken into consideration when writing the Feasibility Study for this site.

2. Comment 6 needs to be responded to prior to final approval of this document.

If I can be of any further assistance with this matter, please contact me at (850) 245-8998.

Sincerely,

Tracie L. Bolanos

Tracie L. Bolanos
Remedial Project Manager

JJC JJC ESN ESN

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

10/23/2006

4WD-FFB

.

William J. Hill
CodeES31
South Division
Naval Facilities Engineering Command
2155 Eagle Dr.
P.O. Box 190010
North Charleston, South Carolina, 29419-9010

Subject: Remedial Investigation Report Site 43, Naval Air Station – Pensacola in Pensacola, FL

Dear Mr. Hill:

EPA has reviewed the above referenced document and we offer the following comments.

This document was well written and organized. It is obvious that a major investment of time and effort was put into this investigation. We agree with the recommendations and conclusions outlined in the document.

If you have any questions or comments, please contact me in writing or at 404.562.8544.

Sincerely,

Gregory D. Fraley
Senior Remedial Project Manager

cc: Tracie Vaught, FDEP

UNIVERSITY OF
FLORIDA

Center for Environmental & Human Toxicology

P.O. Box 110885
Gainesville, Florida 32611-0885
Tel.: (352) 392-4700, ext. 5500
Fax: (352) 392-4707

June 5, 2006

Ligia Mora-Applegate
Bureau of Waste Cleanup
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Demolition Debris Disposal Area – Site 43

Dear Ms. Mora-Applegate:

We have reviewed at your request the *Remedial Investigation Report for the Demolition Debris Disposal Area – Site 43* at the Naval Air Station in Pensacola. This document was prepared by Tetra Tech Nus, Inc and is dated March 7, 2006. As expected, this document closely follows EPA and FDEP risk assessment procedures. We do, however, have the following comments:

1. Surface soil samples taken on the boarders of Anomaly Area 12 exceed residential SCTLs for arsenic and Benzo[a]pyrene (BaP). This suggests that the extent of the contaminated area may extend beyond the current boarders.

2. Surface soil samples taken on the boarders of Anomaly Area 23 contained a "hot spot" of arsenic and exceeded the residential SCTL for barium and vanadium. The adjacent area (Anomaly Area 24) was not analyzed for these metals but may also contain these chemicals of potential concern (COPC) in the surface soil.

3. Anomaly Area 17 was considered adequately delineated, but the surface soils were not tested for arsenic, barium, or vanadium. Adjacent areas have residential SCTL exceedances for these metals.

4. In Table 6-12 carbazole should be apportioned under the recreational user scenario.

5. SPLP tests were not conducted for arsenic, copper, or lead. Leachability may present a problem for arsenic and lead because these metals were found in surface soils above their residential and industrial SCTLs. Additionally, lead was detected above its GCTL in shallow groundwater at one location (PEN-43-GW13S01).

6. The Site 43 ecological risk assessment evaluates risk from surface soil contaminants only, as there are no surface water bodies or sediment on site. In addition, groundwater does not appear to pose risk to off-site surface water

bodies, as the directional groundwater flow does not form an exposure pathway to nearby surface waters. Maximum surface soil contaminants were compared to Region IV Ecological Screening Values as well as EPA Eco-Soil Screening Levels. This method is appropriate. However, upon comparison to the corresponding Region IV value of 1000 ug/kg, total PAHs were not retained even though the maximum value exceeded nearly twice the Region IV value (1919 ug/kg). The reasoning for this is not clear. A study was cited by Friday (1998), that used a value of 20,000 ug/kg to describe moderate PAH soil contamination. We do not believe it is appropriate to use alternative screening values without site-specific justification especially during the initial screening step, therefore we disagree with the elimination of total PAHs from further consideration. We do concur, however, with the report's conclusions that barium, copper and lead pose risks to invertebrates, small birds and mammals.

We would appreciate the opportunity to participate in a meeting to discuss these comments further.

Sincerely,

Stephen M. Roberts, Ph.D.

Leah D. Stuchal, Ph.D.

Response to University of Florida Comments
Site 43 RI Report

Comment 1: Surface soil samples taken on the borders of Anomaly Area 12 exceed residential SCTLs for arsenic and Benzo(a)pyrene (BaP). This suggests that the extent of contamination may extend beyond the current borders.

Response:
Agreed. A confirmation sampling and analysis protocol will be established in the Feasibility Study (FS) to verify that the selected remedy for Site 43 is effective for the nature and extent of contaminants at the site.

Comment 2: Surface soil samples taken on the borders of Anomaly Area 23 contained a "hot spot" of arsenic and exceeded the residential SCTL for barium and vanadium. The adjacent area (Anomaly Area 24) was not analyzed for these metals but may also contain these chemicals of potential concern (COPC) in the surface soil.

Response:
The selection of analytes for each of the anomaly areas was based on the results of previous investigations at the site. Analytical results for soil samples previously collected at Anomaly Area 24 did not indicate that arsenic, barium or vanadium concentrations in this area exceeded screening criteria. However; this concern will be addressed in the FS, please see the response to Comment 1.

Comment 3: Anomaly Area 17 was considered adequately delineated, but the surface soils were not tested for arsenic, barium or vanadium. Adjacent areas have residential exceedances for these metals.

Response:
Please see the response to Comment 2.

Comment 4: In Table 6-12 carbazole should be apportioned under the recreational user scenario.

Response:
The contribution of carbazole to human health risk under the residential user scenario will be considered following completion of confirmation sampling and analysis during the FS.

Comment 5: SPLP tests were not conducted for arsenic, copper, or lead. Leachability may present a problem for arsenic and lead, because these metals were found in surface soil samples above their residential and industrial SCTLs. Additionally, lead was detected above its GCTL in shallow groundwater at one location (PEN-43-GW13S01).

Response:
The potential for site contaminants to leach to groundwater will be considered in the design of confirmation sampling and analysis protocol and the selected remedy in the FS.

Response to University of Florida Comment # 6

Comment 6a: The Site 43 ecological risk assessment evaluates risk from surface soil contaminants only, as there are no surface water bodies or sediment on site. In addition, groundwater does not appear to pose risk to off-site surface water bodies, as the directional groundwater flow does not form an exposure pathway to nearby surface waters. Maximum surface soil contaminants were compared to Region IV Ecological Screening Values as well as EPA Eco-Soil Screening Levels. This method is appropriate. However, upon comparison to the corresponding Region IV value of 1000 µg/kg, total PAHs were not retained even though the maximum value exceeded nearly twice the Region IV value (1919 µg/kg). The reasoning for this is not clear. A study was cited by Friday (1998) that used a value of 20,000 µg/kg to describe moderate PAH soil contamination. We do not believe it is appropriate to use alternative screening values without site-specific justification especially during the initial screening step, therefore we disagree with the elimination of total PAHs from further consideration.

Response:
The Navy concurs that it is not appropriate to use alternative screening values during the initial screening step, and this was not done in the Site 43 ecological risk assessment. Instead, the EPA Region IV ecological screening value was used and total PAHs were retained as a preliminary COPC in the initial screening step, which is step 2 of USEPA's 8-step ecological risk assessment process (see Section 6.2.4).

Much of the comment refers to text in Section 6.2.5.1, which is part of Step 3 of USEPA's 8-step ecological risk assessment process. As explained in the first two paragraphs of Section 6.2.5, this step is a refinement of preliminary COPCs, and involves several factors. For clarity, the first paragraph of Section 6.2.5.1 discussing PAHs will be deleted and replaced with the following three paragraphs:

Maximum screening HQs of three PAHs (benzo(a)pyrene, fluoranthene, and pyrene) as well as total PAHs exceeded 1.0. Ecologically based toxicity values are sparse for PAHs in soil, and USEPA Region IV has established screening values for only eight of the 18 individual PAHs detected at the site. The USEPA Region IV screening values for six of these eight PAHs are based on values established in the Netherlands during the 1980s. In 1994, the Dutch modified their screening values for PAHs, establishing a "target" value of 1,000 µg/kg and an "intervention" value of 40,000 µg/kg for total PAHs (MHSP&E, 1994). The Dutch target values represent clean soil, the intervention values represent seriously contaminated soil, and the concentration midway between the target value and the intervention value was designated as the "intermediate" value. The Dutch guidelines specify that concentrations greater than the target value but less than the intermediate value require no further investigation (but minor restrictions may be applied on soil use), while further investigation is required when concentrations exceed the intermediate value but are less than the intervention value (Swartjes, 1999). The intermediate value for total PAHs in soil (i.e., the concentration midway between the target value and the intervention value) is 20,500 µg/kg.

The 20,500 µg/kg value is very near the ecological screening value of 20,800 µg/kg for total PAHs calculated by Lingenfelser (2000) for assessing risk to soil invertebrates. Lingenfelser's screening value was derived using toxicity equivalency factors and was based on a study by Neuhauser et al (1986) in which the effects of fluorene were evaluated using four species of earthworms. The similarity of Lingenfelser's screening value relative to the Dutch intermediate value provides credence for use of the Dutch value as a conservative screening value for total PAHs.

The toxicity of PAHs is often assumed to be additive, so evaluating PAH toxicity in soil by examining total PAH concentrations is especially useful when, as at Site 43, several PAHs were

detected for which ecological screening values do not exist. The maximum concentration of total PAHs at Site 43 (1,919 µg/kg, Table 6.2-1) was well below both the 20,000 µg/kg Dutch intermediate value and the Lingenfelser (2000) soil invertebrate toxicity threshold value of 20,800 µg/kg. Thus, risks to plants and soil invertebrates from PAHs are negligible. Additionally, the toxicity of PAHs at Site 43 via the terrestrial food web is negligible (see Section 6.2.1.3). Therefore, PAHs pose negligible ecological risk at Site 43.

Comment 6b: We do concur, however, with the report's conclusions that barium, copper and lead pose risks to invertebrates, small birds and mammals.

Response:
The ecological risk assessment does not conclude that barium and copper pose risks to small birds and mammals. Instead, the ecological risk assessment concluded that barium and copper pose risk to invertebrates and plants, but not to small birds and mammals.

The ecological risk assessment concluded that lead poses risk to invertebrates, plants, and small birds and mammals. However, potential risk to birds and mammals applies only to those individuals that forage exclusively at Site 43. The precise extent to which birds and mammals forage at Site 43 is uncertain, but due to the poor habitat at the site, birds and mammals probably do not forage to a significant extent there.

REFERENCES

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Neuhauser, E.F., P.R. Durkin, M.R. Malecki, and M. Anatra. 1986. Comparative toxicity of ten organic chemicals to four earthworm species. *Comp. Biochem. Physiol.* 83C(1):197-200.

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APPENDIX B

FIELD DATA SHEETS

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: PEN UST 43
Project No.: N 4821
Location: Site 43
Personnel: W.D. Olson/C. Odom
Weather Conditions: sunny 70's NW breeze
Measuring Device: Water level indicator
Tidally Influenced: Yes ____ No _X__
Remarks:

Well or Piezometer Number	Date	Time	TOC Elevation (feet)*	Installed Well Depth (feet)*	Measured Well Depth (feet)*	Water Level (feet)*	Groundwater Elevation (feet)*	Comments
MW-1S	3/5/2005	10:18	24.62	19.5	19.29	14.48	10.14	
MW-2S	3/5/2005	10:07	25.98	19.4	18.49	15.40	10.58	tree roots partially obstructing well
MW-5S	3/5/2005	10:56	25.00	19.0	18.97	14.52	10.48	
MW-5D	3/5/2005	11:00	24.87	50	50.76	13.56	11.31	
MW-6S	3/5/2005	10:48	26.21	25	24.94	15.73	10.48	
MW-6D	3/5/2005	10:50	26.22	50	50.79	14.97	11.25	
MW-7S	3/5/2005	10:21	23.03	25	23.23	12.51	10.52	
MW-8S	3/5/2005	10:25	25.58	25	24.75	14.98	10.6	
MW-9S	3/5/2005	10:30	23.27	25	26.08	12.41	10.86	
MW-10S	3/5/2005	10:36	23.18	25	26.24	12.18	11.00	
MW-11S	3/5/2005	10:40	25.61	25	25.33	15.24	10.37	
MW-12S	3/5/2005	10:45	25.78	25	25.21	15.15	10.63	
MW-13S	3/5/2005	10:13	25.27	25	24.02	15.02	10.25	

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: PEN UST 43
Project No.: N 4821
Location: Site 43
Personnel: W.D. Olson/C. Odom
Weather Conditions: overcast/foggy 60's calm
Measuring Device: Water level indicator
Tidally Influenced: Yes ____ No _X__
Remarks:

Well or Piezometer Number	Date	Time	TOC Elevation (feet)*	Installed Well Depth (feet)*	Measured Well Depth (feet)*	Water Level (feet)*	Groundwater Elevation (feet)*	Comments
MW-1S	3/26/2005	6:43	24.62	19.5		14.56	10.06	
MW-2S	3/26/2005	6:42	25.98	19.4	18.42	15.42	10.56	tree roots partially obstructing well
MW-5S	3/26/2005	6:51	25.00	19	18.89	14.55	10.45	
MW-5D	3/26/2005	6:50	24.87	50	50.75	13.60	11.27	
MW-6S	3/26/2005	6:33	26.21	25	24.86	15.76	10.45	
MW-6D	3/26/2005	6:28	26.22	50	50.83	15.00	11.22	
MW-7S	3/26/2005	6:40	23.03	25	23.22	12.53	10.50	
MW-8S	3/26/2005	6:41	25.58	25	24.75	15.00	10.58	
MW-9S	3/26/2005	6:38	23.27	25	26.07	12.44	10.83	
MW-10S	3/26/2005	6:37	23.18	25	26.24	12.19	10.99	
MW-11S	3/26/2005	6:53	25.61	25	25.34	15.26	10.35	
MW-12S	3/26/2005	6:35	25.78	25	25.20	15.18	10.60	
MW-13S	3/26/2005	6:45	25.27	25	24.27	15.05	10.22	

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

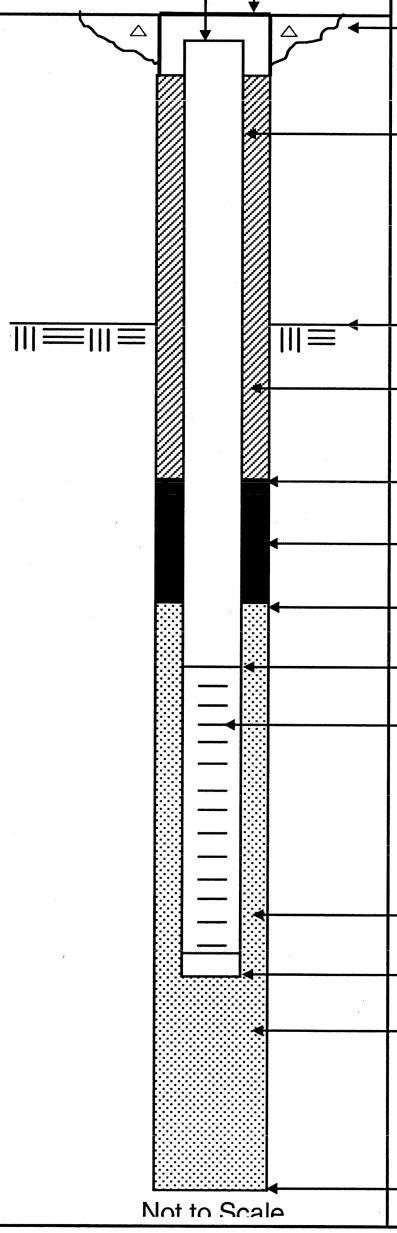
WELL No.: Pen-43-05D

MONITORING WELL SHEET

PROJECT:	Site 43	DRILLING Co.:	ProSonic	BORING No.:	
PROJECT No.:	2421	DRILLER:	Jeff Commings	DATE COMPLETED:	02/23/05
SITE:	Site 43	DRILLING METHOD:	Roto-Sonic	NORTHING:	
GEOLOGIST:	Larry Smith	DEV. METHOD:	Pump	EASTING:	

Ground Elevation =

Datum:



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Elevation / Height of Top of Surface Casing:		/
I.D. of Surface Casing:		
Type of Surface Casing:	Flush Mount	
Type of Surface Seal:	Concrete	
I.D. of Riser:	2 inch	
Type of Riser:	PVC	
Borehole Diameter:	6 inch	
Elevation / Depth Top of Rock:		NA /
Type of Backfill:	Type I Grount No bentonite added per NWFWMD	
Elevation / Depth of Seal:		37 ft /
Type of Seal:	Bentonite	
Elevation / Depth of Top of Filter Pack:		42 ft /
Elevation / Depth of Top of Screen:		45 ft /
Type of Screen:	PVC	
Slot Size x Length:	0.01 Slot	
I.D. of Screen:	2 inch	
Type of Filter Pack:	20 x 30 qtz	
Elevation / Depth of Bottom of Screen:		50 ft /
Elevation / Depth of Bottom of Filter Pack:		50 ft /
Type of Backfill Below Well:	NA	
Elevation / Total Depth of Borehole:		50 ft /

Tetra Tech NUS, Inc.

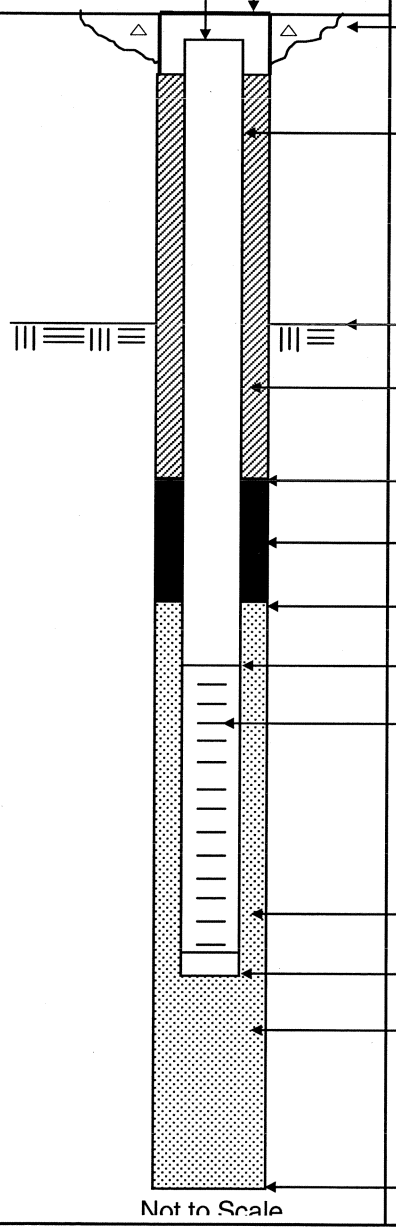
WELL No.: Pen-43-06S

MONITORING WELL SHEET

PROJECT:	Site 43	DRILLING Co.:	ProSonic	BORING No.:	
PROJECT No.:	2421	DRILLER:	Jeff Commings	DATE COMPLETED:	02/24/05
SITE:	Site 43	DRILLING METHOD:	Roto-Sonic	NORTHING:	
GEOLOGIST:	Larry Smith	DEV. METHOD:	Pump	EASTING:	

Ground Elevation =

Datum:



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Elevation / Height of Top of Surface Casing:		/
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Type of Surface Seal:	Concrete	
I.D. of Riser:	2 inch	
Type of Riser:	PVC	
Borehole Diameter:	6 inch	
Elevation / Depth Top of Rock:		NA /
Type of Backfill:	Type I Grount No bentonite added per NWFWMD	
Elevation / Depth of Seal:		11 ft /
Type of Seal:	Bentonite	
Elevation / Depth of Top of Filter Pack:		13 ft /
Elevation / Depth of Top of Screen:		15 ft /
Type of Screen:	PVC	
Slot Size x Length:	0.01 Slot	
I.D. of Screen:	2 inch	
Type of Filter Pack:	20 x 30 qtz	
Elevation / Depth of Bottom of Screen:		25 ft /
Elevation / Depth of Bottom of Filter Pack:		25 ft /
Type of Backfill Below Well:	NA	
Elevation / Total Depth of Borehole:		25 ft /

Tetra Tech NUS, Inc.

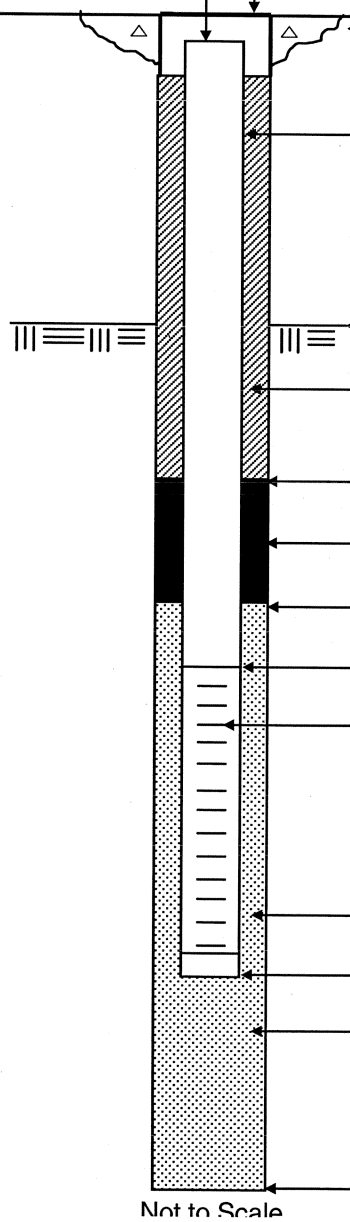
WELL No.: Pen-43-06S

MONITORING WELL SHEET

PROJECT:	Site 43	DRILLING Co.:	ProSonic	BORING No.:	
PROJECT No.:	2421	DRILLER:	Jeff Commings	DATE COMPLETED:	02/24/05
SITE:	Site 43	DRILLING METHOD:	Roto-Sonic	NORTHING:	
GEOLOGIST:	Larry Smith	DEV. METHOD:	Pump	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:		/
Elevation / Height of Top of Surface Casing:		/
I.D. of Surface Casing:		
Type of Surface Casing:	Flush Mount	
Type of Surface Seal:	Concrete	
I.D. of Riser:	2 inch	
Type of Riser:	PVC	
Borehole Diameter:	6 inch	
Elevation / Depth Top of Rock:		NA /
Type of Backfill:	Type I Grount No bentonite added per NWFWMD	
Elevation / Depth of Seal:		11 ft /
Type of Seal:	Bentonite	
Elevation / Depth of Top of Filter Pack:		13 ft /
Elevation / Depth of Top of Screen:		15 ft /
Type of Screen:	PVC	
Slot Size x Length:	0.01 Slot	
I.D. of Screen:	2 inch	
Type of Filter Pack:	20 x 30 qtz	
Elevation / Depth of Bottom of Screen:		25 ft /
Elevation / Depth of Bottom of Filter Pack:		25 ft /
Type of Backfill Below Well:	NA	
Elevation / Total Depth of Borehole:		25 ft /

Tetra Tech NUS, Inc.

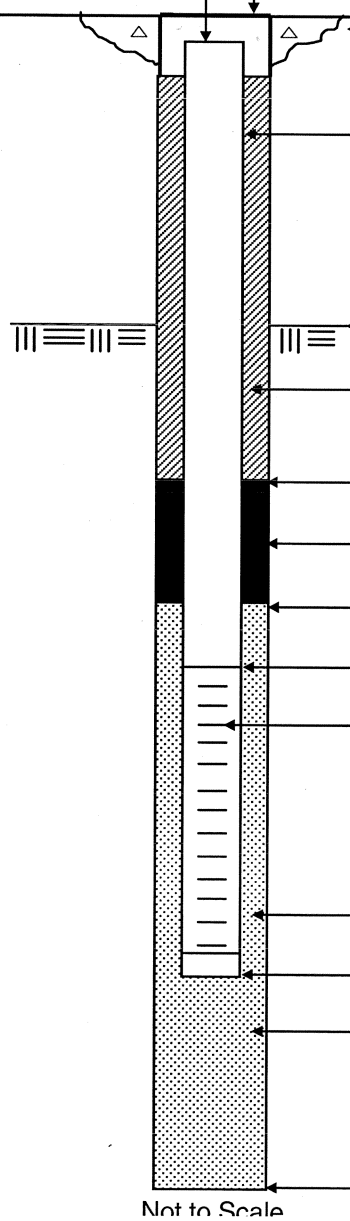
WELL No.: Pen-43-07S

MONITORING WELL SHEET

PROJECT:	Site 43	DRILLING Co.:	ProSonic	BORING No.:	
PROJECT No.:	2421	DRILLER:	Jeff Commings	DATE COMPLETED:	02/24/05
SITE:	Site 43	DRILLING METHOD:	Roto-Sonic	NORTHING:	
GEOLOGIST:	Larry Smith	DEV. METHOD:	Pump	EASTING:	

Ground Elevation =

Datum:



Elevation / Depth of Top of Riser:		/
Elevation / Height of Top of Surface Casing:		/
I.D. of Surface Casing:		
Type of Surface Casing:	Flush Mount	
Type of Surface Seal:	Concrete	
I.D. of Riser:	2 inch	
Type of Riser:	PVC	
Borehole Diameter:	6 inch	
Elevation / Depth Top of Rock:		NA /
Type of Backfill:	Type I Grount No bentonite added per NWFWMD	
Elevation / Depth of Seal:		11 ft /
Type of Seal:	Bentonite	
Elevation / Depth of Top of Filter Pack:		13 ft /
Elevation / Depth of Top of Screen:		15 ft /
Type of Screen:	PVC	
Slot Size x Length:	0.01 Slot	
I.D. of Screen:	2 inch	
Type of Filter Pack:	20 x 30 qtz	
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Elevation / Depth of Bottom of Filter Pack:		25 ft /
Type of Backfill Below Well:	NA	
Elevation / Total Depth of Borehole:		25 ft /

Tetra Tech NUS, Inc.

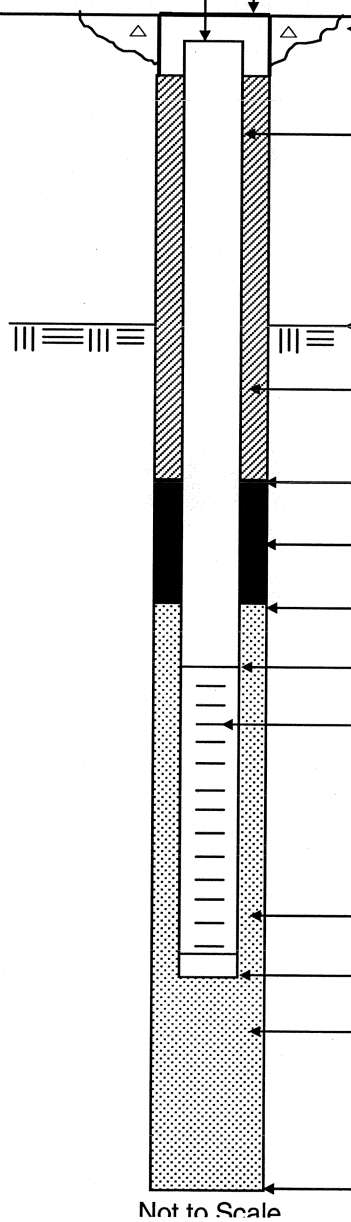
WELL No.: Pen-43-08S

MONITORING WELL SHEET

PROJECT:	Site 43	DRILLING Co.:	ProSonic	BORING No.:	
PROJECT No.:	2421	DRILLER:	Jeff Commings	DATE COMPLETED:	02/24/05
SITE:	Site 43	DRILLING METHOD:	Roto-Sonic	NORTHING:	
GEOLOGIST:	Larry Smith	DEV. METHOD:	Pump	EASTING:	

Ground Elevation =

Datum:



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Elevation / Height of Top of Surface Casing:		/
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Type of Surface Seal:	Concrete	
I.D. of Riser:	2 inch	
Type of Riser:	PVC	
Borehole Diameter:	6 inch	
Elevation / Depth Top of Rock:		NA /
Type of Backfill:	Type I Grount No bentonite added per NWFWMD	
Elevation / Depth of Seal:		11 ft /
Type of Seal:	Bentonite	
Elevation / Depth of Top of Filter Pack:		13 ft /
Elevation / Depth of Top of Screen:		15 ft /
Type of Screen:	PVC	
Slot Size x Length:	0.01 Slot	
I.D. of Screen:	2 inch	
Type of Filter Pack:	20 x 30 qtz	
Elevation / Depth of Bottom of Screen:		25 ft /
Elevation / Depth of Bottom of Filter Pack:		25 ft /
Type of Backfill Below Well:	NA	
Elevation / Total Depth of Borehole:		25 ft /

Tetra Tech NUS, Inc.

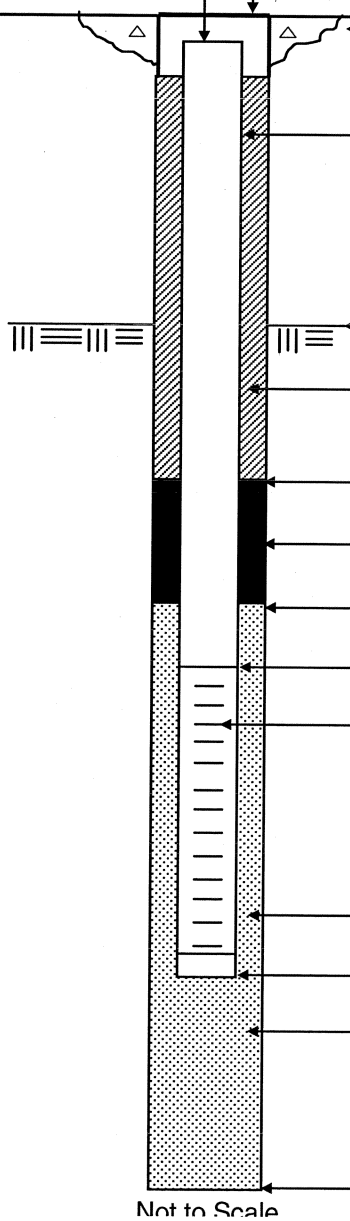
WELL No.: Pen-43-09S

MONITORING WELL SHEET

PROJECT:	Site 43	DRILLING Co.:	ProSonic	BORING No.:	
PROJECT No.:	2421	DRILLER:	Jeff Commings	DATE COMPLETED:	02/24/05
SITE:	Site 43	DRILLING METHOD:	Roto-Sonic	NORTHING:	
GEOLOGIST:	Larry Smith	DEV. METHOD:	Pump	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:		/
Elevation / Height of Top of Surface Casing:		/
I.D. of Surface Casing:		
Type of Surface Casing:	Flush Mount	
Type of Surface Seal:	Concrete	
I.D. of Riser:	2 inch	
Type of Riser:	PVC	
Borehole Diameter:	6 inch	
Elevation / Depth Top of Rock:		NA /
Type of Backfill:	Type I Grount No bentonite added per NWFWMD	
Elevation / Depth of Seal:		11 ft /
Type of Seal:	Bentonite	
Elevation / Depth of Top of Filter Pack:		13 ft /
Elevation / Depth of Top of Screen:		15 ft /
Type of Screen:	PVC	
Slot Size x Length:	0.01 Slot	
I.D. of Screen:	2 inch	
Type of Filter Pack:	20 x 30 qtz	
Elevation / Depth of Bottom of Screen:		25 ft /
Elevation / Depth of Bottom of Filter Pack:		25 ft /
Type of Backfill Below Well:	NA	
Elevation / Total Depth of Borehole:		25 ft /

Tetra Tech NUS, Inc.

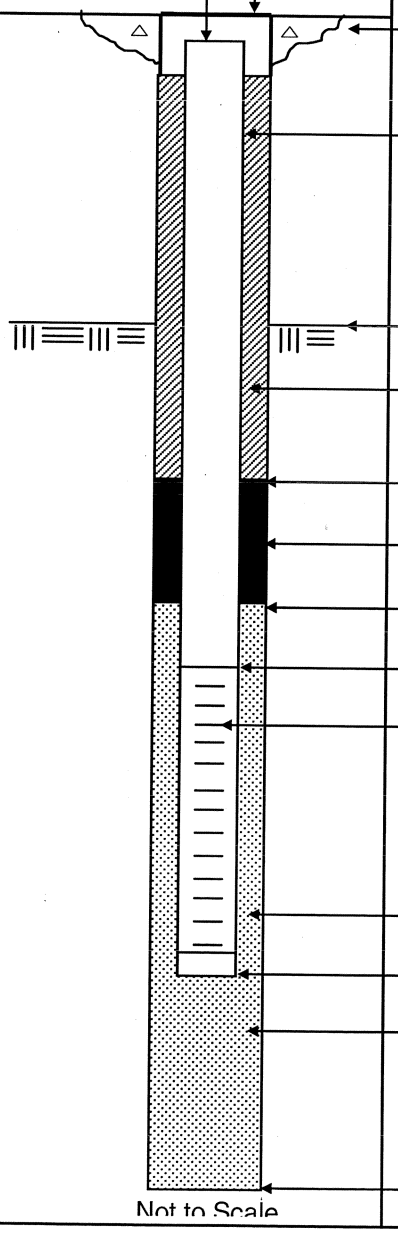
WELL No.: Pen-43-10S

MONITORING WELL SHEET

PROJECT:	Site 43	DRILLING Co.:	ProSonic	BORING No.:	
PROJECT No.:	2421	DRILLER:	Jeff Commings	DATE COMPLETED:	02/24/05
SITE:	Site 43	DRILLING METHOD:	Roto-Sonic	NORTHING:	
GEOLOGIST:	Larry Smith	DEV. METHOD:	Pump	EASTING:	

Ground Elevation =

Datum:



Elevation / Depth of Top of Riser: /

Elevation / Height of Top of Surface Casing: /

I.D. of Surface Casing:

Type of Surface Casing: Flush Mount

Type of Surface Seal: Concrete

I.D. of Riser: 2 inch

Type of Riser: PVC

Borehole Diameter: 6 inch

Elevation / Depth Top of Rock: NA /

Type of Backfill: Type I Grount
No bentonite added per NWFWMD

Elevation / Depth of Seal: 11 ft /

Type of Seal: Bentonite

Elevation / Depth of Top of Filter Pack: 13 ft /

Elevation / Depth of Top of Screen: 15 ft /

Type of Screen: PVC

Slot Size x Length: 0.01 Slot

I.D. of Screen: 2 inch

Type of Filter Pack: 20 x 30 qtz

Elevation / Depth of Bottom of Screen: 25 ft /

Elevation / Depth of Bottom of Filter Pack: 25 ft /

Type of Backfill Below Well:
NA

Elevation / Total Depth of Borehole: 25 ft /

Tetra Tech NUS, Inc.

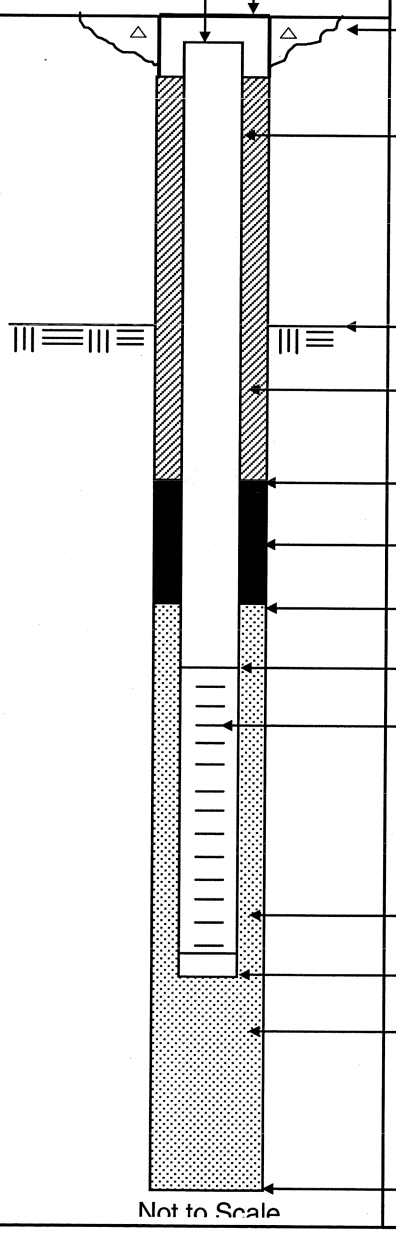
WELL No.: Pen-43-11S

MONITORING WELL SHEET

PROJECT:	Site 43	DRILLING Co.:	ProSonic	BORING No.:	
PROJECT No.:	2421	DRILLER:	Jeff Commings	DATE COMPLETED:	02/24/05
SITE:	Site 43	DRILLING METHOD:	Roto-Sonic	NORTHING:	
GEOLOGIST:	Larry Smith	DEV. METHOD:	Pump	EASTING:	

Ground Elevation =

Datum:



Elevation / Depth of Top of Riser:		/
Elevation / Height of Top of Surface Casing:		/
I.D. of Surface Casing:		
Type of Surface Casing:	Flush Mount	
Type of Surface Seal:	Concrete	
I.D. of Riser:	2 inch	
Type of Riser:	PVC	
Borehole Diameter:	6 inch	
Elevation / Depth Top of Rock:		NA /
Type of Backfill:	Type I Grount No bentonite added per NWFWMD	
Elevation / Depth of Seal:		11 ft /
Type of Seal:	Bentonite	
Elevation / Depth of Top of Filter Pack:		13 ft /
Elevation / Depth of Top of Screen:		15 ft /
Type of Screen:	PVC	
Slot Size x Length:	0.01 Slot	
I.D. of Screen:	2 inch	
Type of Filter Pack:	20 x 30 qtz	
Elevation / Depth of Bottom of Screen:		25 ft /
Elevation / Depth of Bottom of Filter Pack:		25 ft /
Type of Backfill Below Well:	NA	
Elevation / Total Depth of Borehole:		25 ft /

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Site 43
PROJECT NUMBER: 2421
DRILLING COMPANY: Prosonic
DRILLING RIG: Roto-sonic

BORING NUMB Pen-43-05D
DATE: 23-Feb-05
GEOLOGIST: Larry Smith
DRILLER: Jeff Commings

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						lt tan	Turf, Hand auger to 12 ft bls	SM					
						brn	Med - to fn silty SAND						
						black	high metal content						
						lt tan/	Med - to fn silty SAND						
	10					brn							
							Med - to fn clayey SAND						
							as above lt tan						
							grading to lt grey						
	20												
									Moist				
									Wet				
						PVC Riser							
	30												
						Grout	grading to drk brn						
	40					**Bentonite**							
							grading to lt grey						
						Sand Pack							
						Screen							
	50					Total Depth 50 feet Bls							

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes X No Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Site 43
PROJECT NUMBER: 2421
DRILLING COMPANY: Prosonic
DRILLING RIG: Roto-sonic

BORING NUME Pen-43-06D
DATE: 23-Feb-05
GEOLOGIST: Larry Smith
DRILLER: Jeff Commings

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						lt tan	Turf, Hand auger to 12 ft bls	SM					
						brn	Med - to fn silty SAND						
						black	high metal content						
						lt tan/	Med - to fn silty SAND						
	10					brn							
							Med - to fn clayey SAND						
							as above lt tan						
							grading to lt grey						
	20												
									Moist				
									Wet				
						PVC Riser							
	30												
						Grout	grading to drk brn						
	40					Bentonite							
							grading to lt grey						
						Sand Pack							
						Screen							
	50					Total Depth 50 feet Bls							

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes X No Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Site 43
PROJECT NUMBER: 2421
DRILLING COMPANY: Prosonic
DRILLING RIG: Roto-sonic

BORING NUME Pen-43-06S
DATE: 23-Feb-05
GEOLOGIST: Larry Smith
DRILLER: Jeff Commings

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						lt tan	Turf, Hand auger to 12 ft bls	SM					
						brn	Med - to fn silty SAND						
						black	high metal content						
						lt tan/	Med - to fn silty SAND						
	10						**PVC Riser**						
						Grout	Med - to fn clayey SAND						
						Bentonite	as above lt tan		Moist				
							grading to lt grey		Wet				
	20												
							Sand Pack						
							Screen						
					Total Depth 25 ft bls								
	30												
	40												
	50												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes X No Well I.D. #:

BORING LOG

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Site 43
PROJECT NUMBER: 2421
DRILLING COMPANY: Prosonic
DRILLING RIG: Roto-sonic

BORING NUME Pen-43-07S
DATE: 23-Feb-05
GEOLOGIST: Larry Smith
DRILLER: Jeff Commings

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						lt tan	Turf, Hand auger to 12 ft bls	SM					
						brn	Med - to fn silty SAND						
						black	high metal content						
						lt tan/	Med - to fn silty SAND						
	10					**PVC Riser**							
					Grout		Med - to fn clayey SAND						
					Bentonite		as above lt tan		Moist				
							grading to lt grey		Wet				
	20												
						Sand Pack							
						Screen							
					Total Depth 25 ft bls								
	30												
	40												
	50												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes X No Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Site 43
PROJECT NUMBER: 2421
DRILLING COMPANY: Prosonic
DRILLING RIG: Roto-sonic

BORING NUME Pen-43-08S
DATE: 23-Feb-05
GEOLOGIST: Larry Smith
DRILLER: Jeff Commings

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						lt tan	Turf, Hand auger to 12 ft bls	SM					
						brn	Med - to fn silty SAND						
						black	high metal content						
						lt tan/	Med - to fn silty SAND						
	10					**PVC Riser**							
						Grout	Med - to fn clayey SAND						
						Bentonite	as above lt tan		Moist				
							grading to lt grey		Wet				
	20												
						Sand Pack							
						Screen							
					Total Depth 25 ft bls								
	30												
	40												
	50												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes X No Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Site 43
PROJECT NUMBER: 2421
DRILLING COMPANY: Prosonic
DRILLING RIG: Roto-sonic

BORING NUME Pen-43-09S
DATE: 23-Feb-05
GEOLOGIST: Larry Smith
DRILLER: Jeff Commings

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						lt tan	Turf, Hand auger to 12 ft bls	SM					
						brn	Med - to fn silty SAND						
						black	high metal content						
						lt tan/	Med - to fn silty SAND						
	10				PVC Riser								
					Grout		Med - to fn clayey SAND						
					Bentonite		as above lt tan		Moist				
							grading to lt grey		Wet				
	20												
					Sand Pack								
					Screen								
					Total Depth 25 ft bls								
	30												
	40												
	50												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes X No Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Site 43
PROJECT NUMBER: 2421
DRILLING COMPANY: Prosonic
DRILLING RIG: Roto-sonic

BORING NUME Pen-43-10S
DATE: 23-Feb-05
GEOLOGIST: Larry Smith
DRILLER: Jeff Commings

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						lt tan	Turf, Hand auger to 12 ft bls	SM					
						brn	Med - to fn silty SAND						
						black	high metal content						
						lt tan/	Med - to fn silty SAND						
	10				PVC Riser								
					Grout		Med - to fn clayey SAND						
					Bentonite		as above lt tan		Moist				
							grading to lt grey		Wet				
	20												
					Sand Pack								
					Screen								
					Total Depth 25 ft bls								
	30												
	40												
	50												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes X No Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Site 43
PROJECT NUMBER: 2421
DRILLING COMPANY: Prosonic
DRILLING RIG: Roto-sonic

BORING NUME Pen-43-11S
DATE: 23-Feb-05
GEOLOGIST: Larry Smith
DRILLER: Jeff Commings

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
						lt tan	Turf, Hand auger to 12 ft bls	SM					
						brn	Med - to fn silty SAND						
						black	high metal content						
						lt tan/	Med - to fn silty SAND						
	10					**PVC Riser**							
						Grout	Med - to fn clayey SAND						
						Bentonite	as above lt tan		Moist				
							grading to lt grey		Wet				
	20												
						Sand Pack							
						Screen							
					Total Depth 25 ft bls								
	30												
	40												
	50												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes X No Well I.D. #:

APPENDIX C

SUPPORTING DOCUMENTS

STATE AND FEDERAL THREATENED, ENDANGERED, AND OTHER SPECIES OF CONCERN LIKELY TO OCCUR IN ESCAMBIA COUNTY FLORIDA

Compiled by U.S. Fish and Wildlife Service, May, 2004

Common Name	Scientific Name	Status State	Status FWS	Natural Communities
FISH:			E	
Gulf sturgeon	*Acipenser oxyrinchus desotoi*	SSC	T CH	ESTUARINE: various MARINE: various habitats RIVERINE: alluvial and blackwater streams
Crystal darter	*Ammocrypta asprella*	T	ce	RIVERINE: alluvial stream
Harlequin darter	*Etheostoma histrio*	SSC		RIVERINE: alluvial stream
Saltmarsh topminnow	*Fundulus jenkinsi*	SSC		ESTUARINE: estuarine tidal marsh
Bluenose shiner	*Pteronotropis welaka*	SSC		RIVERINE: blackwater, alluvial, and spring-run streams
AMPHIBIANS & REPTILES:				
American alligator	*Alligator mississippiensis*	SSC	T(s/a)	ESTUARINE: marshes, various habitats LACUSTRINE: marshes, swamps, various habitats PALUSTRINE: swamps, floodplains, marshes, various habitats RIVERINE: open water, shorelines, various habitats
Flatwoods salamander	*Ambystoma cingulatum*	SSC	T	PALUSTRINE: wet flatwoods, dome swamp, basin swamp, ruderal TERRESTRIAL: mesic flatwoods (reproduces in ephemeral wetlands within this community)
Loggerhead turtle	*Caretta caretta*	T	T	TERRESTRIAL: sandy beaches; nesting
Green turtle	*Chelonia mydas mydas*	E	E	TERRESTRIAL: sandy beaches; nesting
Leatherback turtle	*Dermochelys coriacea*	E	E	TERRESTRIAL: sandy beaches; nesting
Eastern indigo snake	*Drymarchon corais couperi*	T	T	ESTUARINE: tidal swamp PALUSTRINE: hydric hammock, wet flatwoods TERRESTRIAL: mesic flatwoods, upland pine forest, sandhills, scrub, scrubby flatwoods, rockland hammock, ruderal
Hawksbill turtle	*Eretmochelys imbricata imbricata*	E	E	MARINE: open water; no nesting
Gopher tortoise	*Gopherus polyphemus*	SSC	ce	TERRESTRIAL: sandhills, scrub, scrubby flatwoods, xeric hammocks, coastal strand, ruderal
Pine barrens treefrog	*Hyla andersonii*	SSC		PALUSTRINE: seepage slope, baygall RIVERINE: seepage stream
Kemp's Ridley turtle	*Lepidochelys kempi*	E	E	TERRESTRIAL: sandy beaches; nesting
Alligator snapping turtle	*Macroclemys temminckii*	SSC	ce	ESTUARINE: tidal marsh LACUSTRINE: river floodplain lake, swamp lake RIVERINE: alluvial stream, blackwater stream
Gulf salt marsh snake	*Nerodia clarkii clarkii*		ce	ESTUARINE: tidal marsh, tidal swamp MARINE: tidal marsh, tidal swamp
Florida pine snake	*Pituophis melanoleucus mugitus*	SSC	ce	LACUSTRINE: ruderal, sandhill upland lake TERRESTRIAL: sandhill, scrubby flatwoods, xeric hammock, ruderal
BIRDS:				
Bachman's sparrow	*Aimophila aestivalis*		ce	TERRESTRIAL: various, ruderal
Southeastern snowy plover	*Charadrius alexandrinus tenuirostris*	T	ce	ESTUARINE: exposed unconsolidated substrate MARINE: exposed unconsolidated substrate TERRESTRIAL: dunes, sandy beaches, and inlet areas
Piping plover	*Charadrius melodus*	T	T CH	ESTUARINE: exposed unconsolidated substrate MARINE: exposed unconsolidated substrate TERRESTRIAL: dunes, sandy beaches, and inlet areas. Mostly wintering and migrants.
Stoddard's yellow-throated warbler	*Dendroica dominica stoddardi*		ce	TERRESTRIAL: wooded habitats with spanish moss, various
Little blue heron	*Egretta caerulea*	SSC		ESTUARINE: marshes, shoreline PALUSTRINE: floodplains, swamps RIVERINE: shoreline

E=endangered, T=threatened, P=proposed, C=candidate,s/a=Similarity of appearance, SSC=Species of Special Concern,ce=Consideration encouraged,CH=Critical habitat

STATE AND FEDERAL THREATENED, ENDANGERED, AND OTHER SPECIES OF CONCERN LIKELY TO OCCUR IN ESCAMBIA COUNTY FLORIDA
Compiled by U.S. Fish and Wildlife Service, October, 2003

Common Name	Scientific Name	Status State	Status FWS	Natural Communities
Snowy egret	*Egretta thula*	SSC		ESTUARINE: marshes, tidal swamps, shoreline LACUSTRINE: lake edges PALUSTRINE: swamp, floodplain, ruderal RIVERINE: shoreline
Tricolored heron	*Egretta tricolor*	SSC		ESTUARINE: marshes, tidal swamps, shoreline LACUSTRINE: lake edges PALUSTRINE: swamp, floodplain, ruderal RIVERINE: shoreline
Arctic peregrine falcon	*Falco peregrinus tundrius*	E	ce	ESTUARINE: winters along coasts LACUSTRINE: various PALUSTRINE: various TERRESTRIAL: various, ruderal
Southeastern kestrel	*Falco sparverius paulus*	T	ce	ESTUARINE: various habitats PALUSTRINE: various habitats TERRESTRIAL: open pine forests, clearings, ruderal, various
American oystercatcher	*Haematopus palliatus*	SSC		ESTUARINE: exposed unconsolidated substrate, exposed mollusk reef MARINE: exposed unconsolidated substrate, exposed mollusk reef TERRESTRIAL: beaches, ruderal areas
Bald eagle	*Haliaeetus leucocephalus*	T	T	ESTUARINE: marsh edges, tidal swamp, open water LACUSTRINE: swamp lakes, edges PALUSTRINE: swamp, floodplain RIVERINE: shoreline, open water TERRESTRIAL: pine and hardwood forests, clearings
Wood stork	*Mycteria americana*	E	E	ESTUARINE: marshes LACUSTRINE: floodplain lakes, marshes (feeding), various PALUSTRINE: marshes, swamps, various
Brown pelican	*Pelecanus occidentalis*	SSC		ESTUARINE: islands for nesting, open water MARINE: open water
Red-cockaded woodpecker	*Picoides borealis*	T	E	TERRESTRIAL: mature pine forests
Black Skimmer	*Rynchops niger*	SSC		ESTUARINE: various LACUSTRINE: various RIVERINE: various TERRESTRIAL: ocean beaches, beach dune, ruderal. Nests common on rooftops.
Least tern	*Sterna antillarum*	T		ESTUARINE: various LACUSTRINE: various RIVERINE: various TERRESTRIAL: beach dune, ruderal. Nests common on rooftops.
MAMMALS:				
Santa Rosa beach mouse	*Peromyscus polionotus leucocephalus*		ce	TERRESTRIAL: beach dune, coastal scrub
Perdido Key beach mouse	*Peromyscus polionotus trissyllepsis*	E	E CH	TERRESTRIAL: beach dune, coastal scrub. Sites: Perdido Key State Rec. Area (CH), Gulf Islands National Seashore (CH).
Southeastern big-eared bat	*Plecotus rafinesquii*		ce	PALUSTRINE: various, floodplains TERRESTRIAL: pine and hardwood forests, ruderal, various
Eastern chipmunk	*Tamias striatus*	SSC		TERRESTRIAL: slope forest, upland hardwood forest, upland pine forest
West Indian manatee	*Trichechus manatus latirostris*	E	E	ESTUARINE: submerged vegetation, open water MARINE: open water, submerged vegetation RIVERINE: alluvial stream, blackwater stream, spring-run stream
Florida black bear	*Ursus americanus floridanus*	T	ce	PALUSTRINE: titi swamps, floodplains TERRESTRIAL: pine and hardwood forests
INVERTEBRATES:				

E=endangered, T=threatened, P=proposed, C=candidate,s/a=Similarity of appearance, SSC=Species of Special Concern,ce=Consideration encouraged,CH=Critical habitat

STATE AND FEDERAL THREATENED, ENDANGERED, AND OTHER SPECIES OF CONCERN LIKELY TO OCCUR IN ESCAMBIA COUNTY FLORIDA
Compiled by U.S. Fish and Wildlife Service, October, 2003

Common Name	Scientific Name	Status State	Status FWS	Natural Communities
Narrow pigtoe	*Fusconaia escambia*		C (E)	Riverine: small to medium-sized creeks and rivers with slow to moderate current over gravel, and gravel mixed with sand or some silt. Endemic to the Escambia and Yellow River drainages of Alabama and Florida
Round ebonyshell	*Fusconaia rotulata*		C (E)	Riverine: Endemic and restricted to the main channel of the Conecuh River AL, and Escambia River, FL
Fuzzy pigtoe	*Pleurobema strodeanum*		C (E)	Riverine: small to medium-sized creeks and rivers with slow to moderate currents in sand and sand with some silt. Endemic to the Escambia, Yellow, and Choctawhatchee River drainages of Alabama and Florida.
Choctaw bean	*Villosa choctawensis*		C (E)	Riverine: Small to large creeks and rivers with moderate current over sand to silty-sand substrates. Endemic to the Escambia, Yellow, and Choctawhatchee River drainages of Alabama and Florida.
Downy rainbow (mussel)	*Villosa villosa*		ce	RIVERINE: small streams to large rivers in sand or muddy sand substrates (Panhandle watersheds: Apalachicola, Chipola, Escambia, Choctawhatchee, Ochlockonee, Suwannee)
PLANTS:				
Sweet shrub	*Calycanthus floridus*	E		TERRESTRIAL: upland hardwood forest, slope forest, bluffs PALUSTRINE: bottomland forest, stream banks, floodplains
Baltzell's sedge	*Carex baltzellii*	T	ce	TERRESTRIAL: slope forest, moist sandy loam; moist sandy loam
Godfrey's golden aster	*Chrysopsis godfreyi*		ce	TERRESTRIAL: beach dunes, coastal grassland
Cruise's golden-aster	*Chrysopsis gossypina cruiseana*	E	ce	TERRESTRIAL: coastal dunes, coastal strand, coastal grassland; openings and blowouts
Spoon-leaved sundew	*Drosera intermedia*	T		LACUSTRINE: sinkhole lake edges PALUSTRINE: seepage slope, wet flatwoods, depression marsh RIVERINE: seepage stream banks, drainage ditches
Trailing arbutus	*Epigaea repens*	E		TERRESTRIAL: bluff, slope forest, mixed hardwood forest
Heartleaf	*Hexastylis arifolia*	T		RIVERINE: seepage stream bank TERRESTRIAL: slope forest
Florida anise	*Illicium floridanum*	T		PALUSTRINE: floodplain forest, baygall RIVERINE: seepage stream bank TERRESTRIAL: slope forest, seepage slope
Mountain laurel	*Kalmia latifolia*	T		RIVERINE: seepage stream bank TERRESTRIAL: slope forest, seepage stream banks
Bog-button	*Lachnocaulon digynum*		ce	PALUSTRINE: seepage slope, wet flatwoods, bog TERRESTRIAL: seepage slopes, wet flatwoods; exposed sands
Southern red lily	*Lilium catesbaei*	T		PALUSTRINE: wet prairie, wet flatwoods, seepage slope TERRESTRIAL: mesic flatwoods, seepage slope; usually with grasses
Panhandle lily	*Lilium iridollae*	E	ce	PALUSTRINE: baygall, dome swamp edges, mucky soil, seepage slope, edges of titi bogs, RIVERINE: blackwater stream banks

E=endangered, T=threatened, P=proposed, C=candidate,s/a=Similarity of appearance, SSC=Species of Special Concern,ce=Consideration encouraged,CH=Critical habitat

STATE AND FEDERAL THREATENED, ENDANGERED, AND OTHER SPECIES OF CONCERN LIKELY TO OCCUR IN ESCAMBIA COUNTY FLORIDA

Compiled by U.S. Fish and Wildlife Service, October, 2003

Common Name	Scientific Name	Status State	Status FWS	Natural Communities
Gulf coast lupine	*Lupinus westianus*	T	ce	TERRESTRIAL: beach dune, scrub, disturbed areas, roadsides, blowouts in dunes
Hummingbird flower	*Macranthera flammea*	E		PALUSTRINE: seepage slope, dome swamp edges, floodplain swamps RIVERINE: seepage stream banks TERRESTRIAL: seepage slopes
Piedmont water-milfoil	*Myriophyllum laxum*		ce	LACUSTRINE: sandhill upland lake, submersed PALUSTRINE: floodplain and dome swamp RIVERINE: blackwater stream, roadside ditches
Naked-stemmed panic grass	*Panicum nudicaule*		ce	PALUSTRINE: seepage slope, bog, wet flatwoods, dome swamp
Chapman's butterwort	*Pinguicula planifolia*	T	ce	PALUSTRINE: wet flatwoods, seepage slopes, bog, dome swamp, ditches; in water
Primrose-flower butterwort	*Pinguicula primulifolia*	E		PALUSTRINE: bogs, pond margins, margins of spring runs
Yellow fringed orchid	*Platanthera ciliaris*	T		PALUSTRINE: bogs, wet flatwoods TERRESTRIAL: Bluff
Yellow fringeless orchid	*Platanthera integra*	E	ce	PALUSTRINE: wet prairie, seepage slope TERRESTRIAL: mesic flatwoods
Large-leaved jointweed	*Polygonella macrophylla*	T	ce	TERRESTRIAL: scrub, sand pine/oak scrub ridges
Florida pondweed	*Potamogeton floridanus*		ce	RIVERINE: blackwater stream
Orange azalea	*Rhododendron austrinum*	E		PALUSTRINE: bottomland forest RIVERINE: seepage stream bank TERRESTRIAL: slope forest, upland mixed forest
White-top pitcher plant	*Sarracenia leucophylla*	E	ce	PALUSTRINE: wet prairie, seepage slope, baygall edges, ditches
Parrot pitcher plant	*Sarracenia psittacina*	T		PALUSTRINE: wet flatwoods, wet prairie, seepage slope
Decumbant pitcher plant	*Sarracenia purpurea*	T		PALUSTRINE: Bogs
Red-flowered pitcher plant	*Sarracenia rubra*	T		PALUSTRINE: bog, wet prairie, seepage slope, wet flatwoods RIVERINE: seepage stream banks
Silky camellia	*Stewartia malacodendron*	E		PALUSTRINE: baygall PALUSTRINE: slope forest, upland mixed forest, TERRESTRIAL: slope forest, upland mixed forest; acid soils
Drummond's yellow-eyed grass	*Xyris drummondii*		ce	PALUSTRINE: wet flatwoods, bog, seepage slopes, ditches
Harper's yellow-eyed grass	*Xyris scabrifolia*	T	ce	PALUSTRINE: seepage slope, wet prairie, bogs

E=endangered, T=threatened, P=proposed, C=candidate,s/a=Similarity of appearance, SSC=Species of Special Concern,ce=Consideration encouraged,CH=Critical habitat

6.0 GEOLOGIC AND HYDROLOGIC RESULTS

6.1 Site Hydrogeological Setting

The subsurface stratigraphy across the OU6 area is consistent with findings in previous NAS Pensacola studies. All borings were limited to the uppermost portion of the surficial zone of the Sand-and-Gravel Aquifer (see Appendix A). The upper 3 to 5 feet generally consists of fine-tomedium grained quartz sand, varying in color, mixed with clayey silt, organics, limonite, and fragments of rock, gravel, oyster shell, asphaltic slag, etc., depending upon the location in the site area. Beginning at the water table (3 to 5 feet bls), native fine- to medium-grained quartz sands are encountered. No borings were advanced through the low permeability zone of the Sand-and-Gravel Aquifer within the site area, or into deeper stratigraphic horizons during the field investigation. However, borings into the low permeability zone in the site vicinity during previous field investigations indicate that the clay of the low permeability zone of the Sand-and-Gravel Aquifer is encountered about 50 feet bls in the vicinity of Site 34, and about 36 feet bls east of Site 29. The estimated depth of the clay unit is predicted to be between these intervals from the northwestem to the southeastern extremes of Chevalier Field. Table 6-1 displays the results of lithologic examination of the surficial zone of the Sand-and-Gravel Aquifer underneath the OU6 area.

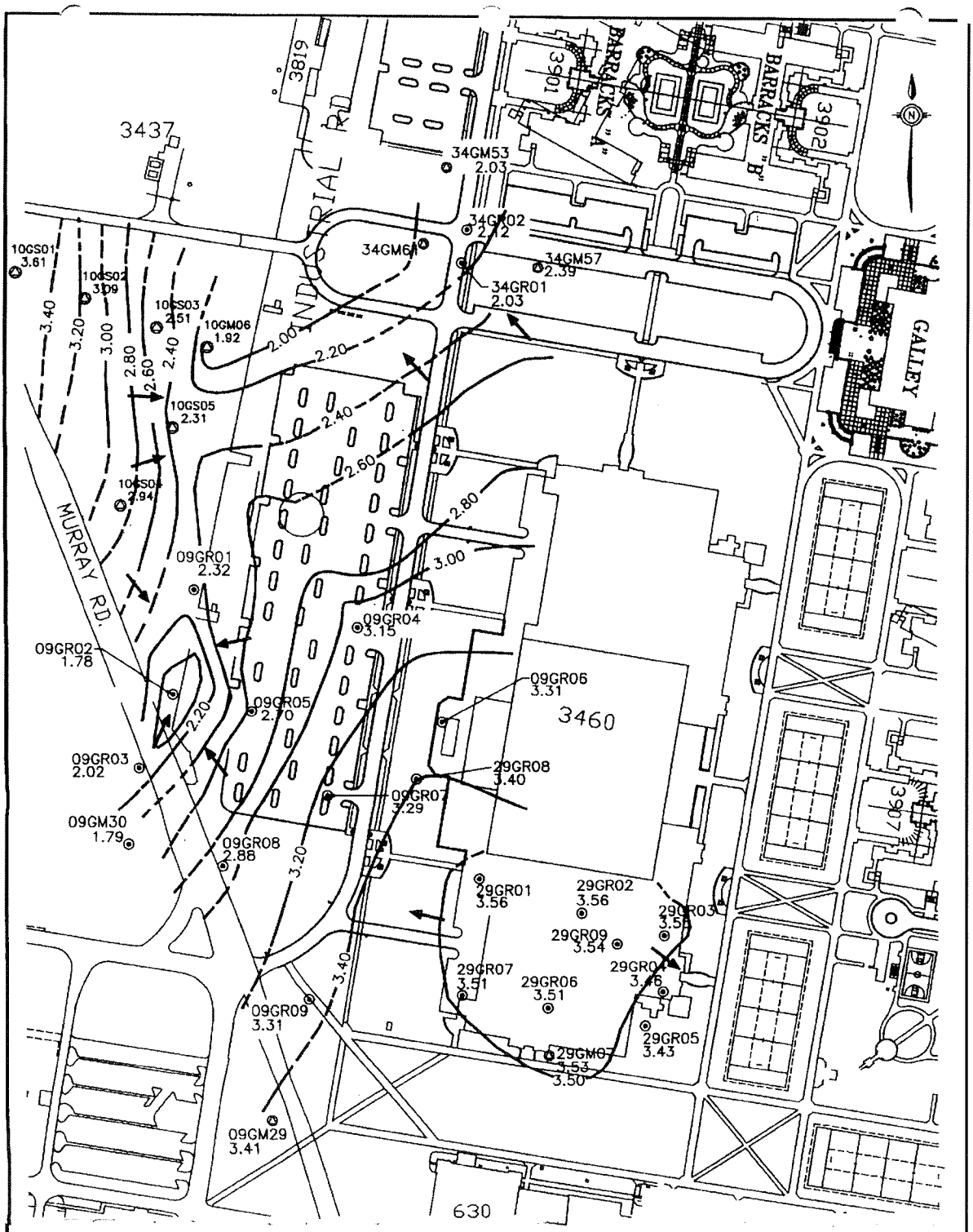
6.2 Water Level Elevations and Piezometric Results

Water level measurements were collected from all new monitoring wells for OU6 and several previously installed wells to define the piezometric surface of the site area. Groundwater elevation varies from roughly 3.5 feet msl in the Southeastern portion of the site area (Site 29), to 2 feet msl along the western and northwestern portions of the site area (westernmost part of Site 9/northwestern part of Site 34). This highest-to-lowest groundwater elevation drop occurs across an approximate 800- to 1,000-foot horizontal distance, depending on the reference point within the site area. Groundwater elevations generally indicate a west-to-northwest flow in the uppermost part of the surficial zone of the Sand-and-Gravel Aquifer. Groundwater generally flows

toward the concrete tile-lined drainage ditch that traverses the western edge of the site area, although, there is an element of flow southeast from Site 29. This finding is verified by earlier studies, which state that horizontal movement of groundwater in the surficial sand generally mimics topography (G&M, 1984). Figure 6-1 displays the shallow surficial piezometric surface for the OU6 area.

Table 6-1
Generalized Soil Boring Sample Interval Lithology
OU6

Site Number	Sample Interval	Lithology
Site 9	0-1 ft.	White-to-tan-to-dark brown, reddish, gray, fine-to-medi grained quartz sand, mixed with sandy loam, loamy soil, clayey silt, organics, rock fragments, gravel, oyster shell. debris, and asphaltic slag.
	1-3 ft.	White-to-tan-to-dark brown, red-to-orange, gray mottled, fine-to-medium grained quartz sand, mixed with limonite, gravel, rock fragments, and clay fragments.
	3-5 ft.	White-to-tan-to-dark brown, fine-to-medium grained quartz sand.
	Screened Interval (well locations)	Tan-to-brown, light-to-dark gray, silty, fine-to-medium grained quartz sand.
Site 29	0-1 ft.	Light tan-to-brown, red-to-orange, fine-to-medium-grain quartz sand, mixed with some organics and pea gravel.
	1-3 ft.	White-to-orange-to-medium brown, fine-to-medium-grain quartz sand, mixed with a grayish tint, a brown silty interval, limonite, and organics.
	3-5 ft.	White-to-tan-to brown, orange, gray, silty clayey, fine-to-medium grain quartz sand, occasionally mixed with gravel and burned material.
	Screened Interval (well locations)	White-to-tan-to-gray, fine-to-medium grained quartz sand.
Site 34	0-1 ft.	Light tan-to-brown, red-to-orange, fine-to-medium grained quartz sand, mixed with silt, clay, limonite, and organics.
	1-3 ft.	White-to-tan-to-brown, red-to-orange, grayish, fine-to-medium-grained quartz sand, mixed with silty clay sand and concrete pieces.
	3-5 ft.	White-to-tan-to brown, silty, clayey, brown mottled, fine-to-medium grained quartz sand.
	5-7 ft.	White-to-tan-to-brown, grayish, red-to-orange, brown mottled, fine-to-medium grained quartz sand, with silty clay streaks.
	7-9 ft.	Tan-to-brown, grayish, red-to-orange, fine-to-medium grained quartz sand.
	Screened Interval (well locations)	White-to-tan-to-dark brown, orange, silty, clayey, fine-to-medium grained quartz sand.



200 SCALE 200 FEET

LEGEND

- ⊙ – TEMPORARY MONITORING WELL
- ⊙ – PERMANENT MONITORING WELL
- ← – DIRECTION OF GROUNDWATER FLOW

REMEDIAL INVESTIGATION
OU6
NAS PENSACOLA

FIGURE 6–1
SHALLOW SURFICIAL
PIEZOMETRIC SURFACE

DWG DATE: 06/25/97 DWG NAME: 70SSPOUI

The horizontal hydraulic gradient varies slightly across the site area, with the gradient becoming less steep at the northern extreme (Site 34 area). An exception is a very low gradient across the interior and immediately west of Site 29. The horizontal hydraulic gradient across most of the rest of the site area (east to west) averages about 0.002. This includes the gradient extending west across Site 9 from Site 29 (southern portion of the site area). Included also is the gradient to the northwest, extending from the northern portion of the Site 9 area. The horizontal hydraulic gradient lessens from the center of Site 9/north Site 29 area, to the north across Site 34, becoming approximately 0.001. Table 6-2 presents horizontal hydraulic gradients for selected well pairs in the OU6 area. These well pairs were selected with the intervening distance azimuth perpendicular to isopleths to determine the horizontal hydraulic gradient along the predominant flow directions. The table generally depicts how the horizontal hydraulic gradient lessens as groundwater flow shifts west to northwest across the site area.

Average transmissivity and hydraulic conductivity data were calculated for the shallow and intermediate portions of the surficial aquifer during the field investigation conducted for NAS Pensacola's OU10 and Site 13. Given the close proximity of these sites and the lithologic similarity, this information is extrapolative for use on Chevalier Field. The geometric mean of the hydraulic conductivity for the shallow zone at OU10 was calculated at 44.0 ft./day (E/A&H, 1996b).

Table 6-2
Horizontal Hydraulic Gradients
OU6

Well Pair	Distance Between Wells (feet)	Difference Between Water Levels (feet)	Hydraulic Gradient	Groundwater Horizontal Velocity (feet/day)
29GR07/09GGM30	738	1.72	0.00233	0.342
29GR01/09GR03	713	1.54	0.00214	0.314
09GR06/09GR01	571	0.99	0.00173	0.254
09GR04/10GGM06	547	0.85	0.00154	0.226

Using this value, the average darcian groundwater velocity for the upper level of the surficial zone beneath the site area was calculated using the following formula:

$$V = Ki/n_e$$

Where:

V	=	horizontal groundwater velocity
K	=	hydraulic conductivity
i	=	horizontal hydraulic gradient
n_e	=	effective porosity

An effective porosity of 0.30 was estimated for unconsolidated *sand* (Heath, 1989). Table 6-2 also lists the horizontal flow velocities of groundwater at various points in the site area. Toward the Southern end of Site 9, groundwater flows west at a calculated velocity of 0.342 ft./day, whereas in the Site 34 area, groundwater flows northwest at a calculated velocity of 0.226 ft./day.

APPENDIX D

DATA VALIDATION REPORTS

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**G. WALKER**	**DATE:**	**MAY 27, 2005**
FROM:	**BERNARD F SPADA III**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- VOC/EDB**
CTO 355, NAS PENSACOLA
SDG 3555

SAMPLES: 15/Aqueous

PEN43GW02S02	PEN43GW05D01	PEN43GW05S02
PEN43GW05S02D	PEN43GW06D01	PEN43GW06S01
PEN43GW09S01	PEN43GW10S01	PEN43GW11S01
PEN43GW12S01	PEN43GW13S01	PEN43MW07S01
PEN43MW08S01	PEN43RB0324	PEN43TB0324

OVERVIEW

The sample set for CTO 355, NAS Pensacola, SDG 3555 consists of twelve (12) environmental aqueous samples, one (1) rinse blank, one (1) trip blank, and one (1) field duplicate. All samples were analyzed for volatile organic compounds (VOC) plus ethylene dibromide (EDB). The field duplicate pair included in this SDG is PEN43GW05S02 and PEN43GW05S02D.

The samples were collected by Tetra Tech NUS on March 24, 2005 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Method 8260B and EPA Method 504.1 analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- Data completeness
- * Holding times
- * GC/MS Tuning
- Initial and continuing calibration
- * Blank results
- Surrogate spike recoveries
- * Internal standard recoveries
- Blank Spike/Blank Spike Duplicate Results
- Matrix Spike/Matrix Spike Duplicate Results
- * Field Duplicate Precision
- * Compound Quantitation
- * Compound Identification
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are included in Appendix B.

Volatile

The initial calibration performed on March 18, 2005 was below the 0.05 relative response factor (RRF) quality control criterion for acetone. Positive and non-detected results for acetone were qualified as estimated (J) and rejected (UR) respectively, in all samples.

The continuing calibration performed on March 28 at 08:55 was below the 0.05 RRF quality control criterion for acetone. Positive and non-detected results for acetone were qualified as estimated (J) and rejected (UR) respectively in samples PEN43GW05D01, PEN43GW05S02, PEN43GW05S02D, PEN43GW06D01, PEN43GW06S01, PEN43GW11S01, PEN43GW12S01, PEN43MW08S01, PEN43RB0324, and PEN43TB0324.

The continuing calibration performed on March 28 at 08:55 exceeded the 25% difference quality control criterion for dichlorodifluoromethane. Non-detected results for dichlorodifluoromethane were qualified as estimated (UJ) in samples PEN43GW05D01, PEN43GW05S02, PEN43GW05S02D, PEN43GW06D01, PEN43GW06S01, PEN43GW11S01, PEN43GW12S01, PEN43MW08S01, PEN43RB0324, and PEN43TB0324.

The continuing calibration performed on March 29 at 08:47 was below the 0.05 RRF quality control criterion for acetone. Positive and non-detected results for acetone were qualified as estimated (J) and rejected (UR) respectively in samples PEN43GW02S02, PEN43MW07S01, PEN43GW09S01, PEN43GW10S01, and PEN43GW13S01.

The continuing calibration performed on March 29 at 08:47 exceeded the 25% difference quality control criterion for dichlorodifluoromethane. Non-detected results for dichlorodifluoromethane were qualified as estimated (UJ) in samples PEN43GW02S02, PEN43MW07S01, PEN43GW09S01, PEN43GW10S01, and PEN43GW13S01.

The percent recovery of bromoform exceeded the quality control criterion in the LCS (WG15502-LCS). No action was taken on this basis because all results for bromoform were non-detected.

The percent recovery of bromoform exceeded the quality control criterion in the LCS (WG15527-LCS). No action was taken on this basis because all results for bromoform were non-detected.

The percent recovery of cyclohexane was reported as 0% in the MS/MSD. No action was taken on this basis because cyclohexane is not contained in the laboratories spike mix. This item is noted as a completeness issue.

EDB

The continuing calibration performed on March 31 at 10:07 exceeded the 15% difference quality control criterion for ethylene dibromide on the RTX-CLPII column. No action was taken on this basis because the SPB-608 column was compliant.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Qualifications were made based on calibration non-compliances. The COC incorrectly detailed sample PEN43GW02S02 as PEN43GW02S01. This item is noted for completeness.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the NFESC guidelines. The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC guidelines and the Quality Assurance Project Plan (QAPP)."

Bernard F Spada III

Tetra Tech NUS
Bernard F. Spada III
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: OV

nsample	PEN43GW02S02
samp_date	3/24/2005
lab_id	WV1298-12
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	2	UR	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

nsample	PEN43GW02S02
samp_date	3/24/2005
lab_id	WV1298-12
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

nsample	PEN43GW05D01
samp_date	3/24/2005
lab_id	WV1298-3
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	2	UR	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: OV

nsample	PEN43GW05D01
samp_date	3/24/2005
lab_id	WV1298-3
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.8	J	P
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

nsample	PEN43GW05S02
samp_date	3/24/2005
lab_id	WV1298-4
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	2	UR	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

nsample	PEN43GW05S02
samp_date	3/24/2005
lab_id	WV1298-4
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.4	J	P
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: OV

nsample	PEN43GW05S02D
samp_date	3/24/2005
lab_id	WV1298-5
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	PEN43GW05S02

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	2	J	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

nsample	PEN43GW05S02D
samp_date	3/24/2005
lab_id	WV1298-5
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	PEN43GW05S02

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

nsample	PEN43GW06D01
samp_date	3/24/2005
lab_id	WV1298-7
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	2	UR	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: OV

nsample	PEN43GW06D01
samp_date	3/24/2005
lab_id	WV1298-7
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

nsample	PEN43GW06S01
samp_date	3/24/2005
lab_id	WV1298-9
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	2	UR	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

nsample	PEN43GW06S01
samp_date	3/24/2005
lab_id	WV1298-9
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: OV

nsample	PEN43GW09S01	nsample	PEN43GW09S01	nsample	PEN43GW10S01
samp_date	3/24/2005	samp_date	3/24/2005	samp_date	3/24/2005
lab_id	WV1298-11	lab_id	WV1298-11	lab_id	WV1298-10
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.005	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	3	J	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	5	J	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: OV

nsample	PEN43GW10S01
samp_date	3/24/2005
lab_id	WV1298-10
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

nsample	PEN43GW11S01
samp_date	3/24/2005
lab_id	WV1298-6
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	2	UR	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	1	J	P
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

nsample	PEN43GW11S01
samp_date	3/24/2005
lab_id	WV1298-6
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: OV

nsample	PEN43GW12S01	nsample	PEN43GW12S01	nsample	PEN43GW13S01
samp_date	3/24/2005	samp_date	3/24/2005	samp_date	3/24/2005
lab_id	WV1298-8	lab_id	WV1298-8	lab_id	WV1298-13
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	3	J	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	6		
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	2	UR	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: OV

nsample	PEN43GW13S01
samp_date	3/24/2005
lab_id	WV1298-13
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

nsample	PEN43MW07S01
samp_date	3/24/2005
lab_id	WV1298-15
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	2	UR	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

nsample	PEN43MW07S01
samp_date	3/24/2005
lab_id	WV1298-15
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: OV

nsample	PEN43MW08S01	nsample	PEN43MW08S01	nsample	PEN43RB0324
samp_date	3/24/2005	samp_date	3/24/2005	samp_date	3/24/2005
lab_id	WV1298-14	lab_id	WV1298-14	lab_id	WV1298-2
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.005	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	3	J	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.2	U	
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	20		
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	77	J	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: OV

nsample	PEN43RB0324
samp_date	3/24/2005
lab_id	WV1298-2
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	U	
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.3	J	P
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

nsample	PEN43TB0324
samp_date	3/24/2005
lab_id	WV1298-1
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.2	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.3	J	P
1,1-DICHLOROETHANE	0.4	U	
1,1-DICHLOROETHENE	0.4	U	
1,2,4-TRICHLOROBENZENE	0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.3	U	
1,2-DIBROMOETHANE	0.0051	U	
1,2-DICHLOROBENZENE	0.2	U	
1,2-DICHLOROETHANE	0.3	U	
1,2-DICHLOROPROPANE	0.3	U	
1,3-DICHLOROBENZENE	0.3	U	
1,4-DICHLOROBENZENE	0.4	U	
2-BUTANONE	3	U	
2-HEXANONE	2	U	
4-METHYL-2-PENTANONE	3	U	
ACETONE	2	UR	C
BENZENE	0.3	U	
BROMODICHLOROMETHANE	0.2	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.6	U	
CARBON DISULFIDE	0.3	U	
CARBON TETRACHLORIDE	0.3	U	
CHLOROBENZENE	0.2	U	
CHLORODIBROMOMETHANE	0.4	U	
CHLOROETHANE	0.3	U	
CHLOROFORM	0.4	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.3	U	
CIS-1,3-DICHLOROPROPENE	0.3	U	
CYCLOHEXANE	0.2	U	

nsample	PEN43TB0324
samp_date	3/24/2005
lab_id	WV1298-1
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.2	U	
ISOPROPYLBENZENE	0.3	U	
M+P-XYLENES	0.5	U	
METHYL ACETATE	0.4	U	
METHYL CYCLOHEXANE	0.2	U	
METHYL TERT-BUTYL ETHER	0.8	U	
METHYLENE CHLORIDE	2	J	P
O-XYLENE	0.3	U	
STYRENE	0.6	U	
TETRACHLOROETHENE	0.4	U	
TOLUENE	0.2	U	
TOTAL 1,2-DICHLOROETHENE	0.6	U	
TOTAL XYLENES	0.8	U	
TRANS-1,2-DICHLOROETHENE	0.3	U	
TRANS-1,3-DICHLOROPROPENE	0.4	U	
TRICHLOROETHENE	0.3	U	
TRICHLOROFLUOROMETHANE	0.3	U	
VINYL CHLORIDE	0.3	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 29-MAR-2005 12:49
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-12
Client ID: PEN43GW02S02
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	U	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 29-MAR-2005 12:49
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-12
Client ID: PEN43GW02S02
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		93%				
17060-07-0	1,2-Dichloroethane-D4		102%				
2037-26-5	Toluene-D8		95%				
460-00-4	P-Bromofluorobenzene		102%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 13:31
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-3
Client ID: PEN43GW05D01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	U	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	I	0.8	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 13:31
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-3
Client ID: PEN43GW05D01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		92%				
17060-07-0	1,2-Dichloroethane-D4		97%				
2037-26-5	Toluene-D8		94%				
460-00-4	P-Bromofluorobenzene		99%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 14:09
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-4
Client ID: PEN43GW05S02
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	U	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	I	0.4	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 14:09
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-4
Client ID: PEN43GW05S02
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		90%				
17060-07-0	1,2-Dichloroethane-D4		99%				
2037-26-5	Toluene-D8		96%				
460-00-4	P-Bromofluorobenzene		100%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 14:47
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-5
Client ID: PEN43GW05S02D
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	I	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 14:47
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-5
Client ID: PEN43GW05S02D
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		95%				
17060-07-0	1,2-Dichloroethane-D4		99%				
2037-26-5	Toluene-D8		94%				
460-00-4	P-Bromofluorobenzene		100%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 16:03
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-7
Client ID: PEN43GW06D01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	U	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 16:03
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-7
Client ID: PEN43GW06D01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		89%				
17060-07-0	1,2-Dichloroethane-D4		100%				
2037-26-5	Toluene-D8		94%				
460-00-4	P-Bromofluorobenzene		99%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 17:20
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-9
Client ID: PEN43GW06S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	U	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 17:20
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-9
Client ID: PEN43GW06S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		91%				
17060-07-0	1,2-Dichloroethane-D4		100%				
2037-26-5	Toluene-D8		94%				
460-00-4	P-Bromofluorobenzene		99%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 29-MAR-2005 12:11
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-11
Client ID: PEN43GW09S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	I	3	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 29-MAR-2005 12:11
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-11
Client ID: PEN43GW09S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		89%				
17060-07-0	1,2-Dichloroethane-D4		100%				
2037-26-5	Toluene-D8		93%				
460-00-4	P-Bromofluorobenzene		96%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 29-MAR-2005 11:33
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-10
Client ID: PEN43GW10S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone		5	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 29-MAR-2005 11:33
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-10
Client ID: PEN43GW10S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		94%				
17060-07-0	1,2-Dichloroethane-D4		100%				
2037-26-5	Toluene-D8		96%				
460-00-4	P-Bromofluorobenzene		98%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 15:25
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-6
Client ID: PEN43GW11S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	U	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	I	1	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 15:25
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-6
Client ID: PEN43GW11S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		93%				
17060-07-0	1,2-Dichloroethane-D4		100%				
2037-26-5	Toluene-D8		95%				
460-00-4	P-Bromofluorobenzene		96%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 16:41
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-8
Client ID: PEN43GW12S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	I	3	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform		6	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 16:41
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-8
Client ID: PEN43GW12S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		91%				
17060-07-0	1,2-Dichloroethane-D4		100%				
2037-26-5	Toluene-D8		94%				
460-00-4	P-Bromofluorobenzene		95%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 29-MAR-2005 13:27
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-13
Client ID: PEN43GW13S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	U	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 29-MAR-2005 13:27
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-13
Client ID: PEN43GW13S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		97%				
17060-07-0	1,2-Dichloroethane-D4		99%				
2037-26-5	Toluene-D8		92%				
460-00-4	P-Bromofluorobenzene		99%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 29-MAR-2005 14:05
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-15
Client ID: PEN43MW07S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	U	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 29-MAR-2005 14:05
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-15
Client ID: PEN43MW07S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		95%				
17060-07-0	1,2-Dichloroethane-D4		100%				
2037-26-5	Toluene-D8		92%				
460-00-4	P-Bromofluorobenzene		96%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 17:58
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-14
Client ID: PEN43MW08S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	I	3	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 17:58
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-14
Client ID: PEN43MW08S01
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		94%				
17060-07-0	1,2-Dichloroethane-D4		103%				
2037-26-5	Toluene-D8		94%				
460-00-4	P-Bromofluorobenzene		100%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 12:15
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-2
Client ID: PEN43RB0324
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone		77	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone		20	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	I	0.3	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 12:15
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-2
Client ID: PEN43RB0324
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		93%				
17060-07-0	1,2-Dichloroethane-D4		98%				
2037-26-5	Toluene-D8		97%				
460-00-4	P-Bromofluorobenzene		102%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 11:36
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-1
Client ID: PEN43TB0324
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	I	0.3	1.0	5	5	0.2
75-09-2	Methylene Chloride	I	2	1.0	5	5	2
67-64-1	Acetone	U	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 11:36
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-1
Client ID: PEN43TB0324
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		90%				
17060-07-0	1,2-Dichloroethane-D4		99%				
2037-26-5	Toluene-D8		92%				
460-00-4	P-Bromofluorobenzene		93%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 19:46
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-12
Client ID: PEN43GW02S02
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		92%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 17:01
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-3
Client ID: PEN43GW05D01
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		79%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 17:19
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-4
Client ID: PEN43GW05S02
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		80%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 17:38
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-5
Client ID: PEN43GW05S02D
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		84%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 18:14
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-7
Client ID: PEN43GW06D01
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		96%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 18:51
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-9
Client ID: PEN43GW06S01
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		108%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 19:27
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-11
Client ID: PEN43GW09S01
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0050	1.0	0.020	0.020	0.0050
877-09-8	Tetrachloro-M-Xylene		89%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 19:09
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-10
Client ID: PEN43GW10S01
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		89%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 17:56
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-6
Client ID: PEN43GW11S01
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		94%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 18:32
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-8
Client ID: PEN43GW12S01
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		105%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 20:04
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-13
Client ID: PEN43GW13S01
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		117%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 20:40
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-15
Client ID: PEN43MW07S01
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		97%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 20:22
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-14
Client ID: PEN43MW08S01
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0050	1.0	0.020	0.020	0.0050
877-09-8	Tetrachloro-M-Xylene		95%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 16:43
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-2
Client ID: PEN43RB0324
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		89%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 16:25
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-1
Client ID: PEN43TB0324
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0051	1.0	0.020	0.020	0.0051
877-09-8	Tetrachloro-M-Xylene		79%				

APPENDIX C

SUPPORT DOCUMENTATION

HOLDTIME

SDG 3555

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
	UG/L	PEN43GW12S01	WV1298-008	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW02S02	WV1298-012	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43RB0324	WV1298-002	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43MW08S01	WV1298-014	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW13S01	WV1298-013	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW11S01	WV1298-006	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW10S01	WV1298-010	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW09S01	WV1298-011	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW06S01	WV1298-009	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW06D01	WV1298-007	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW05S02D	WV1298-005	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW05S02	WV1298-004	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW05D01	WV1298-003	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43MW07S01	WV1298-015	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
HG	UG/L	PEN43GW10S01	WV1298-010	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	PEN43GW11S01	WV1298-006	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43RB0324	WV1298-002	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43MW08S01	WV1298-014	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43MW07S01	WV1298-015	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW13S01	WV1298-013	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW05D01	WV1298-003	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW12S01	WV1298-008	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW09S01	WV1298-011	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW02S02	WV1298-012	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW05S02	WV1298-004	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW05S02D	WV1298-005	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW06D01	WV1298-007	NM	3/24/2005	4/1/2005	3/30/2005	8	-2	6
HG	UG/L	PEN43GW06S01	WV1298-009	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
M	UG/L	PEN43GW05D01	WV1298-003	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW09S01	WV1298-011	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
M	UG/L	PEN43GW06D01	WV1298-007	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW09S01	WV1298-011	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW06S01	WV1298-009	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	PEN43GW10S01	WV1298-010	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW06S01	WV1298-009	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW09S01	WV1298-011	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW06D01	WV1298-007	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW05S02D	WV1298-005	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW05S02D	WV1298-005	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW05S02	WV1298-004	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW02S02	WV1298-012	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
M	UG/L	PEN43GW02S02	WV1298-012	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW10S01	WV1298-010	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW05D01	WV1298-003	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW05S02	WV1298-004	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43MW08S01	WV1298-014	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW02S02	WV1298-012	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43RB0324	WV1298-002	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW10S01	WV1298-010	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
M	UG/L	PEN43RB0324	WV1298-002	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43MW08S01	WV1298-014	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	PEN43MW07S01	WV1298-015	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
M	UG/L	PEN43MW07S01	WV1298-015	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW12S01	WV1298-008	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW11S01	WV1298-006	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43MW08S01	WV1298-014	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
M	UG/L	PEN43GW11S01	WV1298-006	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43MW07S01	WV1298-015	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW12S01	WV1298-008	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW13S01	WV1298-013	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW13S01	WV1298-013	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW13S01	WV1298-013	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
EDB	%	PEN43GW12S01	WV1298-8	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW05S02D	WV1298-5	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43RB0324	WV1298-2	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43MW08S01	WV1298-14	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43MW07S01	WV1298-15	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW13S01	WV1298-13	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43TB0324	WV1298-1	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EDB	%	PEN43GW10S01	WV1298-10	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW09S01	WV1298-11	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW06D01	WV1298-7	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW05S02	WV1298-4	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW05D01	WV1298-3	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW11S01	WV1298-6	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW02S02	WV1298-12	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW06S01	WV1298-9	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW02S02	WV1298-12	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW09S01	WV1298-11	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW06S01	WV1298-9	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW06D01	WV1298-7	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW05S02D	WV1298-5	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW05D01	WV1298-3	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW13S01	WV1298-13	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW05S02	WV1298-4	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW12S01	WV1298-8	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43MW07S01	WV1298-15	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EDB	UG/L	PEN43MW08S01	WV1298-14	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43RB0324	WV1298-2	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43TB0324	WV1298-1	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW11S01	WV1298-6	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW10S01	WV1298-10	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
OV	%	PEN43GW06D01	WV1298-7	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW02S02	WV1298-12	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	%	PEN43GW05D01	WV1298-3	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW05S02D	WV1298-5	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW06S01	WV1298-9	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW09S01	WV1298-11	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	%	PEN43GW10S01	WV1298-10	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	%	PEN43GW12S01	WV1298-8	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW13S01	WV1298-13	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	%	PEN43MW07S01	WV1298-15	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	%	PEN43MW08S01	WV1298-14	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43RB0324	WV1298-2	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43TB0324	WV1298-1	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	%	PEN43GW11S01	WV1298-6	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW05S02	WV1298-4	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW05S02	WV1298-4	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43RB0324	WV1298-2	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43MW08S01	WV1298-14	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43MW07S01	WV1298-15	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	UG/L	PEN43GW13S01	WV1298-13	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	UG/L	PEN43GW12S01	WV1298-8	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW11S01	WV1298-6	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW10S01	WV1298-10	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	UG/L	PEN43GW09S01	WV1298-11	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	UG/L	PEN43GW06S01	WV1298-9	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW05S02D	WV1298-5	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW05D01	WV1298-3	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43TB0324	WV1298-1	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW02S02	WV1298-12	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	UG/L	PEN43GW06D01	WV1298-7	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CTO 355 NAS PENSACOLA
SDG: CTO355-5

Sample Receipt

The following samples were received on March 25, 2005 and were logged in under Katahdin Analytical Services work order number WV1298 for a hardcopy due date of April 20, 2005.

KATAHDIN Sample No.	TTNUS Sample Identification
WV1298-1	PEN43TB0324
WV1298-2	PEN43RB0324
WV1298-3	PEN43GW05D01
WV1298-4	PEN43GW05S02
WV1298-5	PEN43GW05S02D
WV1298-6	PEN43GW11S01
WV1298-7	PEN43GW06D01
WV1298-8	PEN43GW12S01
WV1298-9	PEN43GW06S01
WV1298-10	PEN43GW10S01
WV1298-11	PEN43GW09S01
WV1298-12	PEN43GW02S02
WV1298-13	PEN43GW13S01
WV1298-14	PEN43MW08S01
WV1298-15	PEN43MW07S01

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Andrea J. Colby**. This narrative is an integral part of the Report of Analysis.

Organics Laboratory

The samples of SDG CTO355-5 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, and III 1996, Office of Solid Waste and Emergency Response,

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U.S. EPA, for the specific methods listed below or on the Report of Analysis. Sample WV1298-14 was used for a matrix spike (MS) and matrix spike duplicate sample (MSD), as per client's request. Some manual integrations may have been performed due to split peaks and/or corrected baselines. All have been flagged with a "M" (software-generated) on the pertinent quantitation reports.

8260B Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The acceptance limits for the MS/MSD are for a short list of the spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory contaminants acetone and methylene chloride) in the LCS are outside of the QC limits.

504 Analysis

The opening and closing CV's (files 3VC1270, 3VC2270, 3VC1276, 3VC2276, 3VC1378, 3VC2278) had high responses for the surrogate TCX on both channels, which resulted in %D's that were outside of the method acceptance limit. Since a high response would indicate a high bias and the surrogate recoveries of all of the associated QC samples were within the acceptance limits, the samples were not reanalyzed.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG CTO355-5 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Aqueous Waste", SW-846, November 1986, Third Edition.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP) and Inductively-Coupled Plasma Mass Spectrometric Analysis (ICP-MS)

The aqueous-matrix samples of SDG CTO355-5 were digested for ICP and ICP-MS analysis on 03/28/05 (QC Batch VC28ICW2) in accordance with USEPA Method 3010A. Katahdin Sample No. WV1298-14 was prepared with duplicate matrix-spiked aliquots.

ICP analyses of SDG CTO355-5 sample digestates were performed using a Thermo Jarrell Ash (TJA) Trace ICP spectrometer and a TJA ICAP 61E ICP spectrometer in accordance with USEPA Method 6010B. ICP-MS analyses of SDG CTO355-5 sample digestates for thallium were performed using an Agilent 7500 ICP-MS spectrometer in accordance with USEPA Method 6020. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following comments or exceptions:

Some of the results for analytical run QC samples (ICV, ICB, CCV, CCB, ICSA, and ICSAB) included in the accompanying data package may have exceeded acceptance limits for some elements. Please note that all client samples and batch QC samples associated with out-of-control results for run QC samples were subsequently reanalyzed for the analytes in question.

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Analysis of Mercury by Cold Vapor Atomic Absorption (CVAA)

The aqueous-matrix samples of SDG CTO355-5 were digested for mercury analysis on 03/29/05 (QC Batch VC29HGW0) in accordance with USEPA Method 7470A. Katahdin Sample No. WV1298-14 was prepared with duplicate matrix-spiked aliquots.

Mercury analyses of SDG CTO355-5 sample digestates were performed using a Cetac M6100 automated mercury analyzer. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The recoveries of all analytes in the matrix-spiked aliquots of Katahdin Sample No. WV1298-14 are within the laboratory's acceptance limits (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix-spike duplicate analysis of Katahdin Sample No. WV1298-14 is within the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for all analytes.

The serial dilution analysis of Katahdin Sample No. WV1298-14 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the IDL) for all analytes.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
041405

Leslie Dimond
Quality Assurance Officer

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: CTO355-5 **SOW No.** SW846

Client Field ID	Lab Sample ID
PEN43GW02S02	WV1298-012
PEN43GW05D01	WV1298-003
PEN43GW05S02	WV1298-004
PEN43GW05S02D	WV1298-005
PEN43GW06D01	WV1298-007
PEN43GW06S01	WV1298-009
PEN43GW09S01	WV1298-011
PEN43GW10S01	WV1298-010
PEN43GW11S01	WV1298-006
PEN43GW12S01	WV1298-008
PEN43GW13S01	WV1298-013
PEN43MW07S01	WV1298-015
PEN43MW08S01	WV1298-014
PEN43MW08S01	WV1298-014P
PEN43MW08S01	WV1298-014S
PEN43RB0324	WV1298-002

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Edward A. Morgan Name: Edward A. Morgan

Date: April 13, 2005 Title: Senior Chemist

WV1298

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2614 | PAGE ___ OF ___

PROJECT NO: N4821	FACILITY: PEW 43 R1	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER Fedex 8512 8418 9351		CITY, STATE Westbrook me

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P
PRESERVATIVE USED: HCL HCL HNO3

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 8260B TCL VOC	504.1 EDB	6010B TAL metals	COMMENTS
3/24	0730	PEW43TB0324	QA	—	—	QA	G	3	← 3	—		
	0740	PEW43RB0324	QA	—	—	QA	G	6	3	2	1 ✓	
	0939	PEW43GW05D01	mw5D	45	50	GW	G	6	3	2	1 ✓	
	1005	PEW43GW05S02	mw5S	10	20	GW	G	6	3	2	1 ✓	
	1005	PEW43GW05S02D	mw5S	10	20	GW	G	6	3	2	1 ✓	
	1050	PEW43GW11S01	mw11S	15	25	GW	G	6	3	2	1 ✓	
	1132	PEW43GW06D01	mw6D	45	50	GW	G	6	3	2	1 ✓	
	1205	PEW43GW12S01	mw12S	15	25	GW	G	6	3	2	1 ✓	
	1250	PEW43GW06S01	mw6S	15	25	GW	G	6	3	2	1 ✓	
	1310	PEW43GW10S01	mw10S	15	25	GW	G	6	3	2	1 ✓	
	1410	PEW43GW09S01	mw09S	15	25	GW	G	6	3	2	1 ✓	
	1435	PEW43GW02S0~~X~~2	mw02S	15	25	GW	G	6	3	2	1 ✓	
	1537	PEW43GW13S01	MW13S	15	25	GW	G	6	3	2	1 ✓	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	3/24/05	1745	1. RECEIVED BY	3/25/05	0845
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS 001

000000

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2609 | PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
N 4821	PEN 43 RI	G. Walker	850 385 9899	Katahdin Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]		B. H Olson	850 385 9899	340 Co Rd #5
		CARRIER/WAYBILL NUMBER		CITY, STATE
		FEDEX 8512 8418 9351		Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P
PRESERVATIVE USED: HCL HCL HNO3

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TLVOC	504.1 EDB	6010B metals					COMMENTS
3/24	1510	PEN43MW08S01	MW08	15	25	GW	G	6	3	2	1 ✓					
	1510	PEN43MW08SMS	MW08	15	25	GW	G	6	3	2	1					
	1510	PEN43MW08SMSD	MW08	15	25	GW	G	6	3	2	1					
↓	1630	PEN43MW07S01	MW07S	15	25	GW	G	6	3	2	1 ✓					

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	3/24/05	1745	1. RECEIVED BY [signature]	3/25/05	0845
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

000007

KATAHDIN ANALYTICAL SERVICES, INC.
SAMPLE RECEIPT CONDITION REPORT

Tel. (207) 874-2400
Fax (207) 775-4029

LAB (WORK ORDER) # WV 1298

PAGE: 1 OF 1

COOLER: 1 OF 1

CLIENT: Tetra Tech

PROJECT:

COC#
SDG#
DATE / TIME RECEIVED: 3/25/05 0845
DELIVERED BY: FedEx
RECEIVED BY:
LIMS ENTRY BY:
LIMS REVIEW BY / PM:

	YES	NO	EXCEPTIONS	COMMENTS	RESOLUTION
1. CUSTODY SEALS PRESENT / INTACT?	☑	☐	☐		
2. CHAIN OF CUSTODY PRESENT IN THIS COOLER?	☑	☐	☐		
3. CHAIN OF CUSTODY SIGNED BY CLIENT?	☑	☐	☐		
4. CHAIN OF CUSTODY MATCHES SAMPLES?	☐	☒ *	☐		
5. TEMPERATURE BLANKS PRESENT?	☐	☒	☐	TEMP BLANK TEMP (°C)=	
6. SAMPLES RECEIVED AT 4°C +/-2? ICE / ICE PACKS PRESENT Y or N?	☑	☐	☐	COOLER TEMP (°C)= 2.7 NA (RECORD COOLER TEMP ONLY IF TEMP BLANK IS NOT PRESENT)	
7. VOLATILES FREE OF HEADSPACE?	☑	☐	☐		
8. TRIP BLANK PRESENT IN THIS COOLER	☑	☐	☐		
9. PROPER SAMPLE CONTAINERS AND VOLUME?	☑	☐	☐		
10. SAMPLES WITHIN HOLD TIME UPON RECEIPT?	☑	☐	☐		
11. SAMPLES PROPERLY PRESERVED[1]?	☑	☐	☐		
12. CORRECTIVE ACTION REPORT FILED?	☐	☑	N/A		

13. ANALYTICAL PROGRAMS (CIRCLE ONE) COMMERCIAL CLP HAZWRAP NFESC ACOE AFCEE OTHER (STATE OF ORIGIN):

LOG - IN NOTES[1]: * - sample "PEN436W02S01" on COC doesn't match label on sample containers "PEN436W02S02".
— Use 02 on 18 pm Bill Olsen 3/25/05.
Run 8260 + 504 on Trip Blank per Bill Olsen 3/25/05.

[1] Use this space (and additional sheets if necessary) to document samples that are received broken or compromised, C-O-C discrepancies, radiation checks, residual chlorine check, results of pH check if required. If samples required pH adjustment, record volume and type of preservative added.

000005

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Lab File ID: ZB041 BFB Injection Date: 03/18/05

Instrument ID: GCMS-Z BFB Injection Time: 0957

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.4
75	30.0 - 60.0% of mass 95	42.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	133.3
175	5.0 - 9.0% of mass 174	10.6 (8.0)1
176	95.0 - 101.0% of mass 174	132.4 (99.3)1
177	5.0 - 9.0% of mass 176	8.2 (6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD100Z18A	Z5647	03/18/05	1414
02		VSTD050Z18B	Z5648	03/18/05	1452
03		VSTD020Z18B	Z5649	03/18/05	1531
04		VSTD005Z18B	Z5650	03/18/05	1609
05		VSTD001Z18C	Z5651	03/18/05	1647
06		VSTD200Z18B	Z5653	03/18/05	1803
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GCMS-Z Calibration Date(s): 03/18/05 03/18/05

Column: RTX-VMS ID: 0.18 (mm) Calibration Time(s): 1024 1841

LAB FILE ID: RF1: Z5651 RF5: Z5650 RF20: Z5649
RF50: Z5648 RF100: Z5647 RF200: Z5653

COMPOUND	RF1	RF5	RF20	RF50	RF100	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	0.253	0.290	0.264	0.302	0.311	0.282	AVRG		0.28380197		7.856	15.000
Chloromethane	0.513	0.502	0.569	0.580	0.587	0.513	AVRG		0.54403151		7.128	15.000
Vinyl chloride	0.494	0.429	0.430	0.466	0.465	0.410	AVRG		0.44911999		6.924	15.000
Bromomethane	2126	6188	38625	102810	185160	391000	LINR	-8.44e-003	4.26953651		0.99910	0.99000
Chloroethane	0.268	0.272	0.282	0.294	0.258	0.240	AVRG		0.26892070		6.980	15.000
Trichlorofluoromethane	0.677	0.561	0.542	0.633	0.619	0.613	AVRG		0.60762554		8.118	15.000
1,1-Dichloroethene	0.510	0.408	0.400	0.423	0.447	0.441	AVRG		0.43839291		9.044	15.000
Carbon Disulfide	1.317	1.169	1.205	1.176	1.342	1.226	AVRG		1.23924930		5.911	15.000
Freon-113	0.325	0.292	0.286	0.268	0.290	0.269	AVRG		0.28848741		7.200	15.000
Methylene Chloride	7770	20972	79842	206330	375510	805610	LINR	-1.67e-002	2.08765614		0.99970	0.99000
Acetone	0.041	0.037	0.042	0.041	0.030	0.032	AVRG		3.72e-002		13.456	15.000
trans-1,2-Dichloroethene	0.468	0.409	0.450	0.451	0.438	0.444	AVRG		0.44353774		4.401	15.000
Methyl tert-butyl ether	1.194	1.109	1.104	1.187	1.065	1.070	AVRG		1.12143684		5.040	15.000
1,1-Dichloroethane	0.646	0.635	0.712	0.725	0.645	0.672	AVRG		0.67267754		5.621	15.000
cis-1,2-Dichloroethene	0.549	0.556	0.440	0.510	0.490	0.428	AVRG		0.49559723		10.794	15.000
1,2-Dichloroethylene (tot							AVRG					0.000
Chloroform	0.939	0.877	0.842	0.794	0.810	0.823	AVRG		0.84723723		6.275	15.000
Carbon Tetrachloride	0.357	0.360	0.350	0.396	0.362	0.374	AVRG		0.36643550		4.439	15.000
1,1,1-Trichloroethane	0.722	0.719	0.640	0.718	0.658	0.699	AVRG		0.69274937		5.102	15.000
2-Butanone	0.044	0.056	0.058	0.058	0.044	0.053	AVRG		5.235e-002		12.802	15.000
Benzene	1.301	1.225	1.186	1.225	1.172	1.158	AVRG		1.21128435		4.286	15.000
Cyclohexane	0.450	0.447	0.444	0.466	0.454	0.493	AVRG		0.45884959		3.961	15.000
1,2-Dichloroethane	0.426	0.470	0.433	0.458	0.436	0.431	AVRG		0.44250570		3.963	15.000
Trichloroethene	0.460	0.387	0.347	0.368	0.348	0.339	AVRG		0.37491057		12.053	15.000
1,2-Dichloropropane	0.277	0.265	0.256	0.283	0.269	0.256	AVRG		0.26743859		4.081	15.000
Bromodichloromethane	0.457	0.417	0.423	0.468	0.438	0.434	AVRG		0.43946440		4.455	15.000
cis-1,3-dichloropropene	0.378	0.418	0.428	0.457	0.508	0.456	AVRG		0.44083637		9.892	15.000
Toluene	0.830	0.772	0.801	0.846	0.906	0.795	AVRG		0.82493466		5.787	15.000
4-methyl-2-pentanone	0.244	0.307	0.292	0.312	0.271	0.282	AVRG		0.28478965		8.849	15.000
Tetrachloroethene	4421	20571	111000	250860	358320	730720	2ORDR	-3.11e-002	2.37317792	0.54710474	0.99268	0.99000
trans-1,3-Dichloropropene	0.352	0.373	0.359	0.399	0.436	0.424	AVRG		0.39048010		8.908	15.000
1,1,2-Trichloroethane	0.277	0.270	0.257	0.266	0.269	0.252	AVRG		0.26518762		3.351	15.000
Dibromochloromethane	0.387	0.416	0.407	0.425	0.416	0.442	AVRG		0.41552159		4.382	15.000
1,2-Dibromoethane	0.290	0.305	0.291	0.304	0.332	0.330	AVRG		0.30855804		5.888	15.000
2-Hexanone	0.172	0.236	0.245	0.248	0.192	0.230	AVRG		0.22063164		14.175	15.000
Chlorobenzene	1.203	1.081	1.065	1.087	1.050	1.009	AVRG		1.08252075		6.017	15.000
Ethylbenzene	1.758	1.651	1.736	1.801	1.689	1.696	AVRG		1.72185355		3.124	15.000
Xylenes (total)							AVRG					0.000
m+p-Xylenes	0.626	0.682	0.674	0.707	0.660	0.631	AVRG		0.66342541		4.656	15.000
o-Xylene	0.523	0.602	0.637	0.656	0.639	0.644	AVRG		0.61688890		7.997	15.000
Styrene	0.891	1.008	1.117	1.159	1.127	1.106	AVRG		1.06808834		9.400	15.000
Bromoform	0.258	0.289	0.321	0.331	0.313	0.333	AVRG		0.30769425		9.397	15.000
Isopropylbenzene	2.246	2.345	2.495	2.720	2.819	3.306	AVRG		2.65508589		14.525	15.000
1,1,2,2-Tetrachloroethane	0.876	0.922	0.832	0.861	0.842	1.074	AVRG		0.90112585		10.012	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GCMS-Z Calibration Date(s): 03/18/05 03/18/05

Column: RTX-VMS ID: 0.18 (mm) Calibration Time(s): 1024 1841

LAB FILE ID: RF1: Z5651 RF5: Z5650 RF20: Z5649
RF50: Z5648 RF100: Z5647 RF200: Z5653

COMPOUND	RF1	RF5	RF20	RF50	RF100	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
1,3-Dichlorobenzene	1.500	1.520	1.531	1.567	1.594	1.614	AVRG		1.55449332		2.871	15.000
1,4-Dichlorobenzene	1.644	1.538	1.533	1.621	1.595	1.543	AVRG		1.57900561		3.015	15.000
1,2-Dichlorobenzene	1.387	1.442	1.389	1.478	1.519	1.674	AVRG		1.48171976		7.222	15.000
1,2-Dibromo-3-Chloropropa	0.287	0.299	0.305	0.322	0.292	0.350	AVRG		0.30939007		7.548	15.000
1,2,4-Trichlorobenzene	1.046	0.941	0.976	1.008	0.995	1.134	AVRG		1.01664145		6.594	15.000
Methyl Acetate	0.413	0.384	0.347	0.385	0.328	0.346	AVRG		0.36741686		8.735	15.000
Methylcyclohexane	0.581	0.593	0.547	0.639	0.603	0.618	AVRG		0.59680470		5.265	15.000
Dibromofluoromethane	0.551	0.537	0.499	0.518	0.477	0.493	AVRG		0.51254939		5.447	15.000
1,2-Dichloroethane-D4	0.661	0.588	0.555	0.549	0.541	0.540	AVRG		0.57223754		8.190	15.000
Toluene-D8	1.375	1.164	1.184	1.232	1.324	1.142	AVRG		1.23687082		7.570	15.000
P-Bromofluorobenzene	0.479	0.448	0.476	0.503	0.525	0.433	AVRG		0.47721454		7.120	15.000

Average %RSD test result.

Calculate Average %RSD: 7.529341221
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM VI VOA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES, Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CT0355-5

	CLIENT SAMPLE ID	LAB SAMPLE ID	SMC1 DBF#	SMC2 DCA#	SMC3 TOL#	SMC4 BFB#	TOT OUT
01	WG15502-LCS	WG15502-1	85	90	95	104	0
02	WG15502-BLANK	WG15502-2	92	98	92	96	0
03	PEN43TB0324	WV1298-1	90	99	92	93	0
04	PEN43RB0324	WV1298-2	93	98	97	102	0
05	PEN43GW05D01	WV1298-3	92	97	94	99	0
06	PEN43GW05S02	WV1298-4	90	99	96	100	0
07	PEN43GW05S02D	WV1298-5	95	99	94	100	0
08	PEN43GW11S01	WV1298-6	93	100	95	96	0
09	PEN43GW06D01	WV1298-7	89	100	94	99	0
10	PEN43GW12S01	WV1298-8	91	100	94	95	0
11	PEN43GW06S01	WV1298-9	91	100	94	99	0
12	PEN43MW08S01	WV1298-14	94	103	94	100	0
13	PEN43MW08S01MSD	WG15502-4	86	90	94	102	0
14	WG15527-LCS	WG15527-1	86	92	91	97	0
15	WG15527-BLANK	WG15527-2	92	99	92	96	0
16	PEN43GW10S01	WV1298-10	94	100	96	98	0
17	PEN43GW09S01	WV1298-11	89	100	93	96	0
18	PEN43GW02S02	WV1298-12	93	102	95	102	0
19	PEN43GW13S01	WV1298-13	97	99	92	99	0
20	PEN43MW07S01	WV1298-15	95	100	92	96	0
21	PEN43MW08S01MS	WG15527-3	86	91	92	101	0
22							
23							
24							
25							
26							
27							
28							

		QC LIMITS
SMC1 (DBF)	= Dibromofluoromethane	(76-118)
SMC2 (DCA)	= 1,2-Dichloroethane-D4	(76-119)
SMC3 (TOL)	= Toluene-D8	(68-122)
SMC4 (BFB)	= P-Bromofluorobenzene	(56-119)

Column to be used to flag recovery values

J Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Lab File ID: ZB047 BFB Injection Date: 03/28/05

Instrument ID: GCMS-Z BFB Injection Time: 0741

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.0
75	30.0 - 60.0% of mass 95	40.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	96.9
175	5.0 - 9.0% of mass 174	6.6 (6.8)1
176	95.0 - 101.0% of mass 174	96.5 (99.6)1
177	5.0 - 9.0% of mass 176	6.9 (7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050Z28B	Z5760	03/28/05	0855
02	WG15502-LCS	WG15502-1	Z5761	03/28/05	0935
03	WG15502-BLANK	WG15502-2	Z5763	03/28/05	1054
04	PEN43TB0324	WV1298-1	Z5764	03/28/05	1136
05	PEN43RB0324	WV1298-2	Z5765	03/28/05	1215
06	PEN43GW05D01	WV1298-3	Z5767	03/28/05	1331
07	PEN43GW05S02	WV1298-4	Z5768	03/28/05	1409
08	PEN43GW05S02D	WV1298-5	Z5769	03/28/05	1447
09	PEN43GW11S01	WV1298-6	Z5770	03/28/05	1525
10	PEN43GW06D01	WV1298-7	Z5771	03/28/05	1603
11	PEN43GW12S01	WV1298-8	Z5772	03/28/05	1641
12	PEN43GW06S01	WV1298-9	Z5773	03/28/05	1720
13	PEN43MW08S01	WV1298-14	Z5774	03/28/05	1758
14	PEN43MW08S01MSD	WG15502-4	Z5776	03/28/05	1914
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GCMS-Z Calibration Date: 03/28/05 Time: 0855

Lab File ID: Z5760 Init. Calib. Date(s): 03/18/05 03/18/05

Init. Calib. Times: 1024 1841

GC Column: RTX-VMS ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dichlorodifluoromethane	0.2840000	0.3888900	0.3888900	0.01	36.93		AVRG	
Chloromethane	0.5440000	0.4817400	0.4817400	0.1	-11.44		AVRG	
Vinyl chloride	0.4490000	0.4065200	0.4065200	0.01	-9.46	20.00	AVRG	
Bromomethane	47.453000	50.000000	0.2242600	0.01	-5.09		LINR	
Chloroethane	0.2690000	0.2669700	0.2669700	0.01	-0.75		AVRG	
Trichlorofluoromethane	0.6080000	0.7094400	0.7094400	0.01	16.68		AVRG	
1,1-Dichloroethene	0.4380000	0.4258400	0.4258400	0.1	-2.78	20.00	AVRG	
Carbon Disulfide	1.2390000	1.3838000	1.3838000	0.01	11.69		AVRG	
Freon-113	0.2880000	0.3249300	0.3249300	0.01	12.82		AVRG	
Methylene Chloride	53.048000	50.000000	0.5162100	0.01	6.10		LINR	
Acetone	3.7e-002	4.14e-002	4.14e-002	0.01	11.89		AVRG	
trans-1,2-Dichloroethene	0.4430000	0.4790200	0.4790200	0.01	8.13		AVRG	
Methyl tert-butyl ether	1.1220000	1.2283000	1.2283000	0.01	9.47		AVRG	
1,1-Dichloroethane	0.6720000	0.7019500	0.7019500	0.3	4.46		AVRG	
cis-1,2-Dichloroethene	0.4960000	0.5095600	0.5095600	0.01	2.73		AVRG	
1,2-Dichloroethylene (total)	0.0000000	0.9885800	0.9885800	0.01	0.00		AVRG	<-
Chloroform	0.8480000	0.8285800	0.8285800	0.01	-2.29	20.00	AVRG	
Carbon Tetrachloride	0.3660000	0.4166500	0.4166500	0.01	13.84		AVRG	
1,1,1-Trichloroethane	0.6930000	0.6994800	0.6994800	0.01	0.94		AVRG	
2-Butanone	5.2e-002	5.16e-002	5.16e-002	0.01	-0.77		AVRG	
Benzene	1.2110000	1.1082000	1.1082000	0.01	-8.49		AVRG	
Cyclohexane	0.4590000	0.4366500	0.4366500	0.01	-4.87		AVRG	
1,2-Dichloroethane	0.4420000	0.4677200	0.4677200	0.01	5.82		AVRG	
Trichloroethene	0.3750000	0.3496900	0.3496900	0.01	-6.75		AVRG	
1,2-Dichloropropane	0.2680000	0.2351200	0.2351200	0.01	-12.27	20.00	AVRG	
Bromodichloromethane	0.4400000	0.4513400	0.4513400	0.01	2.58		AVRG	
cis-1,3-dichloropropene	0.4410000	0.4090500	0.4090500	0.01	-7.24		AVRG	
Toluene	0.8250000	0.8024000	0.8024000	0.01	-2.74	20.00	AVRG	
4-methyl-2-pentanone	0.2850000	0.3001900	0.3001900	0.01	5.33		AVRG	

FORM VII PEST

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GCMS-Z Calibration Date: 03/28/05 Time: 0855

Lab File ID: Z5760 Init. Calib. Date(s): 03/18/05 03/18/05

Init. Calib. Times: 1024 1841

GC Column: RTX-VMS ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Tetrachloroethene	43.140000	50.000000	0.3486400	0.01	-13.72		2RDR	
trans-1,3-Dichloropropene	0.3900000	0.3877200	0.3877200	0.01	-0.58		AVRG	
1,1,2-Trichloroethane	0.2650000	0.2564400	0.2564400	0.01	-3.23		AVRG	
Dibromochloromethane	0.4160000	0.4331000	0.4331000	0.01	4.11		AVRG	
1,2-Dibromoethane	0.3090000	0.2977600	0.2977600	0.01	-3.64		AVRG	
2-Hexanone	0.2200000	0.2343300	0.2343300	0.01	6.51		AVRG	
Chlorobenzene	1.0820000	1.0334000	1.0334000	0.3	-4.49		AVRG	
Ethylbenzene	1.7220000	1.7262000	1.7262000	0.01	0.24	20.00	AVRG	
Xylenes (total)	0.0000000	0.6366600	0.6366600	0.01	0.00		AVRG	<-
m+p-Xylenes	0.6630000	0.6406200	0.6406200	0.01	-3.38		AVRG	
o-Xylene	0.6170000	0.6287400	0.6287400	0.01	1.90		AVRG	
Styrene	1.0680000	1.0762000	1.0762000	0.01	0.77		AVRG	
Bromoform	0.3080000	0.3535100	0.3535100	0.1	14.78		AVRG	
Isopropylbenzene	2.6550000	2.4504000	2.4504000	0.01	-7.71		AVRG	
1,1,2,2-Tetrachloroethane	0.9010000	0.8215800	0.8215800	0.3	-8.81		AVRG	
1,3-Dichlorobenzene	1.5540000	1.4751000	1.4751000	0.01	-5.08		AVRG	
1,4-Dichlorobenzene	1.5790000	1.5313000	1.5313000	0.01	-3.02		AVRG	
1,2-Dichlorobenzene	1.4820000	1.4730000	1.4730000	0.01	-0.61		AVRG	
1,2-Dibromo-3-Chloropropane	0.3090000	0.3185800	0.3185800	0.01	3.10		AVRG	
1,2,4-Trichlorobenzene	1.0170000	1.0273000	1.0273000	0.01	1.01		AVRG	
Methyl Acetate	0.3670000	0.3114700	0.3114700	0.01	-15.13		AVRG	
Methylcyclohexane	0.5970000	0.5487200	0.5487200	0.01	-8.09		AVRG	
Dibromofluoromethane	0.5120000	0.4253600	0.4253600	0.01	-16.92		AVRG	
1,2-Dichloroethane-D4	0.5720000	0.5234500	0.5234500	0.01	-8.49		AVRG	
Toluene-D8	1.2370000	1.1991000	1.1991000	0.01	-3.06		AVRG	
P-Bromofluorobenzene	0.4770000	0.4900600	0.4900600	0.01	2.74		AVRG	

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 28-MAR-2005 10:54
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15502-2
Client ID: WG15502-Blank
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	U	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 28-MAR-2005 10:54
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15502-2
Client ID: WG15502-Blank
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		92%				
17060-07-0	1,2-Dichloroethane-D4		98%				
2037-26-5	Toluene-D8		92%				
460-00-4	P-Bromofluorobenzene		96%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 03/28/05
Report Date: 03/31/2005
Matrix: WATER

Lab ID: WG15502-1
Client ID: WG15502-LCS
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Dichlorodifluoromethane	50	NA	59	119	0-183
Chloromethane	50	NA	42	84	35-145
Vinyl chloride	50	NA	44	87	43-136
Bromomethane	50	NA	47	94	57-139
Chloroethane	50	NA	44	88	48-132
Trichlorofluoromethane	50	NA	54	107	52-126
1,1-Dichloroethene	50	NA	52	105	88-123
Carbon Disulfide	50	NA	45	91	63-105
Freon-113	50	NA	58	116	80-125
Methylene Chloride	50	NA	54	107	79-122
Acetone	50	NA	60	119	65-156
trans-1,2-Dichloroethene	50	NA	54	109	83-121
Methyl tert-butyl ether	100	NA	112	112	68-127
1,1-Dichloroethane	50	NA	53	106	80-118
cis-1,2-Dichloroethene	50	NA	49	98	85-113
1,2-Dichloroethylene (total)	100	NA	103	103	85-116
Chloroform	50	NA	48	96	81-112
Carbon Tetrachloride	50	NA	56	113	79-119
1,1,1-Trichloroethane	50	NA	50	100	79-113
2-Butanone	50	NA	65	130	97-179
Benzene	50	NA	46	92	83-117
Cyclohexane		NA			60-140
1,2-Dichloroethane	50	NA	52	105	76-108
Trichloroethene	50	NA	46	92	85-118
1,2-Dichloropropane	50	NA	44	88	82-110
Bromodichloromethane	50	NA	47	94	78- 98
cis-1,3-dichloropropene	50	NA	46	91	85-114
Toluene	50	NA	49	98	84-121
4-methyl-2-pentanone	50	NA	51	101	67-124
Tetrachloroethene	50	NA	44	89	73-112
trans-1,3-Dichloropropene	50	NA	52	103	91-120
1,1,2-Trichloroethane	50	NA	46	92	79-117
Dibromochloromethane	50	NA	51	101	87-112
1,2-Dibromoethane	50	NA	46	93	83-110
2-Hexanone	50	NA	52	103	77-122
Chlorobenzene	50	NA	46	93	84-117
Ethylbenzene	50	NA	50	99	81-115
Xylenes (total)	150	NA	154	103	85-120
m+p-Xylenes	100	NA	102	102	87-119
o-Xylene	50	NA	52	105	78-125
Styrene	50	NA	51	102	82-107
Bromoform	50	NA	56	* 113	75-111
Isopropylbenzene	50	NA	50	100	75-132
1,1,2,2-Tetrachloroethane	50	NA	42	85	81-116
1,3-Dichlorobenzene	50	NA	48	96	84-113

FORM III VOA-1
Z5761.D

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 03/28/05
Report Date: 03/31/2005
Matrix: WATER

Lab ID: WG15502-1
Client ID: WG15502-LCS
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
1,4-Dichlorobenzene	50	NA	47	93	83-110
1,2-Dichlorobenzene	50	NA	47	93	84-114
1,2-Dibromo-3-Chloropropane	50	NA	48	95	72-112
1,2,4-Trichlorobenzene	50	NA	46	92	59-123
Methyl Acetate	50	NA	49	98	58-112
Methylcyclohexane	50	NA	47	94	78-112

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Lab File ID: ZB048 BFB Injection Date: 03/29/05

Instrument ID: GCMS-Z BFB Injection Time: 0815

GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.7
75	30.0 - 60.0% of mass 95	36.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	91.4
175	5.0 - 9.0% of mass 174	7.8 (8.6)1
176	95.0 - 101.0% of mass 174	91.7 (100.3)1
177	5.0 - 9.0% of mass 176	5.8 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD050Z29A	Z5780	03/29/05	0847
02	WG15527-LCS	WG15527-1	Z5781	03/29/05	0934
03	WG15527-BLANK	WG15527-2	Z5783	03/29/05	1054
04	PEN43GW10S01	WV1298-10	Z5784	03/29/05	1133
05	PEN43GW09S01	WV1298-11	Z5785	03/29/05	1211
06	PEN43GW02S02	WV1298-12	Z5786	03/29/05	1249
07	PEN43GW13S01	WV1298-13	Z5787	03/29/05	1327
08	PEN43MW07S01	WV1298-15	Z5788	03/29/05	1405
09	PEN43MW08S01MS	WG15527-3	Z5789	03/29/05	1442
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GCMS-Z Calibration Date: 03/29/05 Time: 0847

Lab File ID: Z5780 Init. Calib. Date(s): 03/18/05 03/18/05

Init. Calib. Times: 1024 1841

GC Column: RTX-VMS ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dichlorodifluoromethane	0.2840000	0.3705100	0.3705100	0.01	30.46		AVRG	
Chloromethane	0.5440000	0.4113300	0.4113300	0.1	-24.39		AVRG	
Vinyl chloride	0.4490000	0.3709500	0.3709500	0.01	-17.38	20.00	AVRG	
Bromomethane	48.310000	50.000000	0.2282800	0.01	-3.38		LINR	
Chloroethane	0.2690000	0.2427000	0.2427000	0.01	-9.78		AVRG	
Trichlorofluoromethane	0.6080000	0.6910400	0.6910400	0.01	13.66		AVRG	
1,1-Dichloroethene	0.4380000	0.4174500	0.4174500	0.1	-4.69	20.00	AVRG	
Carbon Disulfide	1.2390000	1.3361000	1.3361000	0.01	7.84		AVRG	
Freon-113	0.2880000	0.3108100	0.3108100	0.01	7.92		AVRG	
Methylene Chloride	54.017000	50.000000	0.5255000	0.01	8.03		LINR	
Acetone	3.7e-002	3.84e-002	3.84e-002	0.01	3.78		AVRG	
trans-1,2-Dichloroethene	0.4430000	0.4804700	0.4804700	0.01	8.46		AVRG	
Methyl tert-butyl ether	1.1220000	1.2650000	1.2650000	0.01	12.74		AVRG	
1,1-Dichloroethane	0.6720000	0.7170200	0.7170200	0.3	6.70		AVRG	
cis-1,2-Dichloroethene	0.4960000	0.5001200	0.5001200	0.01	0.83		AVRG	
1,2-Dichloroethylene (total)	0.0000000	0.9806000	0.9806000	0.01	0.00		AVRG	<-
Chloroform	0.8480000	0.8578900	0.8578900	0.01	1.17	20.00	AVRG	
Carbon Tetrachloride	0.3660000	0.4495400	0.4495400	0.01	22.82		AVRG	
1,1,1-Trichloroethane	0.6930000	0.7197100	0.7197100	0.01	3.85		AVRG	
2-Butanone	5.2e-002	5.26e-002	5.26e-002	0.01	1.15		AVRG	
Benzene	1.2110000	1.1636000	1.1636000	0.01	-3.91		AVRG	
Cyclohexane	0.4590000	0.4029000	0.4029000	0.01	-12.22		AVRG	
1,2-Dichloroethane	0.4420000	0.5383700	0.5383700	0.01	21.80		AVRG	
Trichloroethene	0.3750000	0.3670900	0.3670900	0.01	-2.11		AVRG	
1,2-Dichloropropane	0.2680000	0.2417900	0.2417900	0.01	-9.78	20.00	AVRG	
Bromodichloromethane	0.4400000	0.4848200	0.4848200	0.01	10.19		AVRG	
cis-1,3-dichloropropene	0.4410000	0.4152500	0.4152500	0.01	-5.84		AVRG	
Toluene	0.8250000	0.8085200	0.8085200	0.01	-2.00	20.00	AVRG	
4-methyl-2-pentanone	0.2850000	0.3180000	0.3180000	0.01	11.58		AVRG	

FORM VII PEST

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GCMS-Z Calibration Date: 03/29/05 Time: 0847

Lab File ID: Z5780 Init. Calib. Date(s): 03/18/05 03/18/05

Init. Calib. Times: 1024 1841

GC Column: RTX-VMS ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Tetrachloroethene	44.845000	50.000000	0.3609900	0.01	-10.31		2RDR	
trans-1,3-Dichloropropene	0.3900000	0.4226700	0.4226700	0.01	8.38		AVRG	
1,1,2-Trichloroethane	0.2650000	0.2691400	0.2691400	0.01	1.56		AVRG	
Dibromochloromethane	0.4160000	0.4553200	0.4553200	0.01	9.45		AVRG	
1,2-Dibromoethane	0.3090000	0.3086200	0.3086200	0.01	-0.12		AVRG	
2-Hexanone	0.2200000	0.2489600	0.2489600	0.01	13.16		AVRG	
Chlorobenzene	1.0820000	1.0710000	1.0710000	0.3	-1.02		AVRG	
Ethylbenzene	1.7220000	1.7760000	1.7760000	0.01	3.14	20.00	AVRG	
Xylenes (total)	0.0000000	0.6686000	0.6686000	0.01	0.00		AVRG	<-
m+p-Xylenes	0.6630000	0.6752800	0.6752800	0.01	1.85		AVRG	
o-Xylene	0.6170000	0.6552500	0.6552500	0.01	6.20		AVRG	
Styrene	1.0680000	1.1238000	1.1238000	0.01	5.22		AVRG	
Bromoform	0.3080000	0.3818200	0.3818200	0.1	23.97		AVRG	
Isopropylbenzene	2.6550000	2.4354000	2.4354000	0.01	-8.27		AVRG	
1,1,2,2-Tetrachloroethane	0.9010000	0.8083000	0.8083000	0.3	-10.29		AVRG	
1,3-Dichlorobenzene	1.5540000	1.5343000	1.5343000	0.01	-1.27		AVRG	
1,4-Dichlorobenzene	1.5790000	1.5693000	1.5693000	0.01	-0.61		AVRG	
1,2-Dichlorobenzene	1.4820000	1.4050000	1.4050000	0.01	-5.20		AVRG	
1,2-Dibromo-3-Chloropropane	0.3090000	0.3273500	0.3273500	0.01	5.94		AVRG	
1,2,4-Trichlorobenzene	1.0170000	0.9987400	0.9987400	0.01	-1.80		AVRG	
Methyl Acetate	0.3670000	0.3213500	0.3213500	0.01	-12.44		AVRG	
Methylcyclohexane	0.5970000	0.5189500	0.5189500	0.01	-13.07		AVRG	
Dibromofluoromethane	0.5120000	0.4294400	0.4294400	0.01	-16.12		AVRG	
1,2-Dichloroethane-D4	0.5720000	0.5229800	0.5229800	0.01	-8.57		AVRG	
Toluene-D8	1.2370000	1.1698000	1.1698000	0.01	-5.43		AVRG	
P-Bromofluorobenzene	0.4770000	0.4991300	0.4991300	0.01	4.64		AVRG	

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 29-MAR-2005 10:54
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15527-2
Client ID: WG15527-Blank
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone	U	2	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone	U	3	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	U	0.2	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 29-MAR-2005 10:54
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15527-2
Client ID: WG15527-Blank
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
79-34-5	1,1,2,2-Tetrachloroethane	U	0.5	1.0	5	5	0.5
541-73-1	1,3-Dichlorobenzene	U	0.3	1.0	5	5	0.3
106-46-7	1,4-Dichlorobenzene	U	0.4	1.0	5	5	0.4
95-50-1	1,2-Dichlorobenzene	U	0.2	1.0	5	5	0.2
96-12-8	1,2-Dibromo-3-Chloropropane	U	0.3	1.0	5	5	0.3
120-82-1	1,2,4-Trichlorobenzene	U	0.3	1.0	5	5	0.3
79-20-9	Methyl Acetate	U	0.4	1.0	5	5	0.4
108-87-2	Methylcyclohexane	U	0.2	1.0	5	5	0.2
1868-53-7	Dibromofluoromethane		92%				
17060-07-0	1,2-Dichloroethane-D4		99%				
2037-26-5	Toluene-D8		92%				
460-00-4	P-Bromofluorobenzene		96%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 03/29/05
Report Date: 03/31/2005
Matrix: WATER

Lab ID: WG15527-1
Client ID: WG15527-LCS
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Dichlorodifluoromethane	50	NA	53		107	0-183
Chloromethane	50	NA	37		75	35-145
Vinyl chloride	50	NA	39		77	43-136
Bromomethane	50	NA	45		89	57-139
Chloroethane	50	NA	43		85	48-132
Trichlorofluoromethane	50	NA	49		98	52-126
1,1-Dichloroethene	50	NA	49		97	88-123
Carbon Disulfide	50	NA	42		85	63-105
Freon-113	50	NA	51		101	80-125
Methylene Chloride	50	NA	52		105	79-122
Acetone	50	NA	64		129	65-156
trans-1,2-Dichloroethene	50	NA	52		103	83-121
Methyl tert-butyl ether	100	NA	107		107	68-127
1,1-Dichloroethane	50	NA	51		102	80-118
cis-1,2-Dichloroethene	50	NA	48		95	85-113
1,2-Dichloroethylene (total)	100	NA	99		99	85-116
Chloroform	50	NA	48		95	81-112
Carbon Tetrachloride	50	NA	52		104	79-119
1,1,1-Trichloroethane	50	NA	49		98	79-113
2-Butanone	50	NA	66		131	97-179
Benzene	50	NA	42		85	83-117
Cyclohexane		NA				60-140
1,2-Dichloroethane	50	NA	51		102	76-108
Trichloroethene	50	NA	44		88	85-118
1,2-Dichloropropane	50	NA	40	*	80	82-110
Bromodichloromethane	50	NA	47		94	78- 98
cis-1,3-dichloropropene	50	NA	45		90	85-114
Toluene	50	NA	46		92	84-121
4-methyl-2-pentanone	50	NA	53		106	67-124
Tetrachloroethene	50	NA	44		87	73-112
trans-1,3-Dichloropropene	50	NA	52		103	91-120
1,1,2-Trichloroethane	50	NA	45		90	79-117
Dibromochloromethane	50	NA	54		107	87-112
1,2-Dibromoethane	50	NA	48		96	83-110
2-Hexanone	50	NA	57		115	77-122
Chlorobenzene	50	NA	48		95	84-117
Ethylbenzene	50	NA	50		100	81-115
Xylenes (total)	150	NA	153		102	85-120
m+p-Xylenes	100	NA	100		100	87-119
o-Xylene	50	NA	52		104	78-125
Styrene	50	NA	53		105	82-107
Bromoform	50	NA	64	*	127	75-111
Isopropylbenzene	50	NA	52		104	75-132
1,1,2,2-Tetrachloroethane	50	NA	49		98	81-116
1,3-Dichlorobenzene	50	NA	49		97	84-113

FORM III VOA-1
Z5781.D

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date:
Analysis Date: 03/29/05
Report Date: 03/31/2005
Matrix: WATER

Lab ID: WG15527-1
Client ID: WG15527-LCS
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15527
Units: ug/l

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
1,4-Dichlorobenzene	50	NA	49	98	83-110
1,2-Dichlorobenzene	50	NA	52	104	84-114
1,2-Dibromo-3-Chloropropane	50	NA	54	107	72-112
1,2,4-Trichlorobenzene	50	NA	52	105	59-123
Methyl Acetate	50	NA	54	108	58-112
Methylcyclohexane	50	NA	42	84	78-112

KATAHDIN ANALYTICAL SERVICES
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 03/28/05
Report Date: 03/31/2005
Matrix: WATER

Lab ID: WG15527-3 & WG15502-4
Client ID: PEN43MW08S01MS & PEN43MW08S01MSD
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

COMPOUND	MS SPIKE	MSD SPIKE	SAMPLE CONC.	MS CONC.	MSD CONC.	MS %REC.	MSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Dichlorodifluoromethane	50	50	0.00	61	60	123	120	2	20	60-140
Chloromethane	50	50	0.00	36	42	72	83	14	20	60-140
Vinyl chloride	50	50	0.00	41	45	81	89	10	20	60-140
Bromomethane	50	50	0.00	50	52	100	104	4	20	60-140
Chloroethane	50	50	0.00	44	46	89	92	3	20	60-140
Trichlorofluoromethane	50	50	0.00	58	53	116	106	8	20	60-140
1,1-Dichloroethene	50	50	0.00	53	55	106	110	4	20	44-167
Carbon Disulfide	50	50	0.00	44	46	88	92	4	20	60-140
Freon-113	50	50	0.00	57	57	115	114	0.5	20	60-140
Methylene Chloride	50	50	0.00	51	52	102	104	2	20	60-140
Acetone	50	50	2.6	38	42	70	78	10	20	60-140
trans-1,2-Dichloroethene	50	50	0.00	53	55	106	110	4	20	60-140
Methyl tert-butyl ether	100	100	0.00	95	98	95	98	4	20	60-140
1,1-Dichloroethane	50	50	0.00	54	55	109	109	0.4	20	60-140
cis-1,2-Dichloroethene	50	50	0.00	48	50	95	99	4	20	60-140
1,2-Dichloroethylene (total)	100	100	0.00	101	105	101	105	4	20	60-140
Chloroform	50	50	0.00	49	48	97	97	0.6	20	60-140
Carbon Tetrachloride	50	50	0.00	60	59	120	118	2	20	60-140
1,1,1-Trichloroethane	50	50	0.00	55	52	110	104	5	20	60-140
2-Butanone	50	50	0.00	55	52	110	104	6	20	60-140
Benzene	50	50	0.00	45	45	91	91	0.0	20	64-140
Cyclohexane	50	50	0.00	0.0	0.0	* 0	* 0		20	60-140
1,2-Dichloroethane	50	50	0.00	52	50	105	101	4	20	60-140
Trichloroethene	50	50	0.00	47	48	95	96	0.8	20	62-134
1,2-Dichloropropane	50	50	0.00	42	44	85	87	3	20	60-140
Bromodichloromethane	50	50	0.00	50	48	100	96	4	20	60-140
cis-1,3-dichloropropene	50	50	0.00	43	42	86	84	1	20	60-140
Toluene	50	50	0.00	49	50	98	100	2	20	65-142
4-methyl-2-pentanone	50	50	0.00	36	38	71	75	5	20	60-140
Tetrachloroethene	50	50	0.00	44	44	89	87	2	20	60-140
trans-1,3-Dichloropropene	50	50	0.00	49	48	98	96	2	20	60-140
1,1,2-Trichloroethane	50	50	0.00	41	42	82	84	3	20	60-140
Dibromochloromethane	50	50	0.00	49	48	99	96	2	20	60-140
1,2-Dibromoethane	50	50	0.00	42	43	84	86	2	20	60-140
2-Hexanone	50	50	0.00	35	38	70	75	7	20	60-140
Chlorobenzene	50	50	0.00	48	49	95	99	4	20	68-140
Ethylbenzene	50	50	0.00	51	52	102	104	2	20	60-140
Xylenes (total)	150	150	0.00	151	154	101	103	2	20	60-140
m+p-Xylenes	100	100	0.00	100	102	100	102	2	20	60-140
o-Xylene	50	50	0.00	51	52	102	104	2	20	60-140
Styrene	50	50	0.00	49	52	98	104	6	20	60-140
Bromoform	50	50	0.00	51	49	101	98	3	20	60-140
Isopropylbenzene	50	50	0.00	51	52	102	103	0.8	20	60-140
1,1,2,2-Tetrachloroethane	50	50	0.00	37	37	73	75	2	20	60-140
1,3-Dichlorobenzene	50	50	0.00	49	46	98	93	5	20	60-140

FORM III VOA-1

Z5789.D & Z5776.D

KATAHDIN ANALYTICAL SERVICES
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 03/28/05
Report Date: 03/31/2005
Matrix: WATER

Lab ID: WG15527-3 & WG15502-4
Client ID: PEN43MW08S01MS & PEN43MW08S01MSD
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

COMPOUND	MS SPIKE	MSD SPIKE	SAMPLE CONC.	MS CONC.	MSD CONC.	MS %REC.	MSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
1,4-Dichlorobenzene	50	50	0.00	48	48	96	97	1	20	60-140
1,2-Dichlorobenzene	50	50	0.00	48	45	96	91	6	20	60-140
1,2-Dibromo-3-Chloropropane	50	50	0.00	44	43	89	87	2	20	60-140
1,2,4-Trichlorobenzene	50	50	0.00	47	46	95	93	2	20	60-140
Methyl Acetate	50	50	0.00	36	36	71	72	2	20	60-140
Methylcyclohexane	50	50	0.00	47	48	95	95	0.6	20	60-140

FORM III VOA-1

Z5789.D & Z5776.D

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

GC Column: SPB 608 ID: 0.53 (mm) Init. Calib. Date(s): 03/30/05 03/30/05

Instrument ID: GC03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 12.04

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	RT #
01	ICAL	0.02 PPM	03/30/05	1228	12.05	
02	ICAL	0.05 PPM	03/30/05	1246	12.04	
03	ICAL	0.1 PPM	03/30/05	1304	12.04	
04	ICAL	0.25 PPM	03/30/05	1322	12.04	
05	ICAL	0.5 PPM	03/30/05	1341	12.04	
06	ICAL	1.0 PPM	03/30/05	1359	12.03	
07	ICAL	2.5 PPM	03/30/05	1417	12.03	
08	WG15563-BLAN	WG15563-1	03/30/05	1530	12.03	
09	WG15563-LCS	WG15563-2	03/30/05	1548	12.03	
10	WG15563-LCSD	WG15563-3	03/30/05	1606	12.04	
11	PEN43TB0324	WV1298-1	03/30/05	1625	12.04	
12	PEN43RB0324	WV1298-2	03/30/05	1643	12.03	
13	PEN43GW05D01	WV1298-3	03/30/05	1701	12.04	
14	PEN43GW05S02	WV1298-4	03/30/05	1719	12.04	
15	PEN43GW05S02	WV1298-5	03/30/05	1738	12.04	
16	PEN43GW11S01	WV1298-6	03/30/05	1756	12.04	
17	PEN43GW06D01	WV1298-7	03/30/05	1814	12.04	
18	PEN43GW12S01	WV1298-8	03/30/05	1832	12.04	
19	PEN43GW06S01	WV1298-9	03/30/05	1851	12.03	
20	PEN43GW10S01	WV1298-10	03/30/05	1909	12.04	

QC LIMITS
TCX = Tetrachloro-M-Xylene (+/- 0.24 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

GC Column: SPB 608 ID: 0.53 (mm) Init. Calib. Date(s): 03/30/05 03/30/05

Instrument ID: GC03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 12.04

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	RT #
01	PEN43GW09S01	WV1298-11	03/30/05	1927	12.04	
02	PEN43GW02S02	WV1298-12	03/30/05	1946	12.03	
03	PEN43GW13S01	WV1298-13	03/30/05	2004	12.03	
04	PEN43MW08S01	WV1298-14	03/30/05	2022	12.03	
05	PEN43MW07S01	WV1298-15	03/30/05	2040	12.03	
06	CV	0.5 CV	03/30/05	2153	12.04	
07	CV	0.5 PPM CV	03/31/05	1007	12.05	
08	WG15609-BLAN	WG15609-1	03/31/05	1100	12.07	
09	WG15609-LCS	WG15609-2	03/31/05	1118	12.04	
10	WG15609-LCSD	WG15609-3	03/31/05	1136	12.04	
11	PEN43MW08S01	WG15609-5	03/31/05	1213	12.03	
12	CV	0.5 PPM CV	03/31/05	1231	12.03	
13	PEN43MW08S01	WG15609-6	03/31/05	1303	12.05	
14	CV	0.5 PPM CV	03/31/05	1322	12.04	
15						
16						
17						
18						
19						
20						

QC LIMITS
TCX = Tetrachloro-M-Xylene (+/- 0.24 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

GC Column: RTX-CLP II ID: 0.53 (mm) Init. Calib. Date(s): 03/30/05 03/30/05

Instrument ID: GC03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 11.39

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	RT #
01	ICAL	0.02 PPM	03/30/05	1228	11.39	
02	ICAL	0.05 PPM	03/30/05	1246	11.39	
03	ICAL	0.1 PPM	03/30/05	1304	11.37	
04	ICAL	0.25 PPM	03/30/05	1322	11.37	
05	ICAL	0.5 PPM	03/30/05	1341	11.37	
06	ICAL	1.0 PPM	03/30/05	1359	11.36	
07	ICAL	2.5 PPM	03/30/05	1417	11.36	
08	WG15563-BLAN	WG15563-1	03/30/05	1530	11.36	
09	WG15563-LCS	WG15563-2	03/30/05	1548	11.36	
10	WG15563-LCSD	WG15563-3	03/30/05	1606	11.36	
11	PEN43TB0324	WV1298-1	03/30/05	1625	11.37	
12	PEN43RB0324	WV1298-2	03/30/05	1643	11.36	
13	PEN43GW05D01	WV1298-3	03/30/05	1701	11.37	
14	PEN43GW05S02	WV1298-4	03/30/05	1719	11.39	
15	PEN43GW05S02	WV1298-5	03/30/05	1738	11.37	
16	PEN43GW11S01	WV1298-6	03/30/05	1756	11.37	
17	PEN43GW06D01	WV1298-7	03/30/05	1814	11.37	
18	PEN43GW12S01	WV1298-8	03/30/05	1832	11.37	
19	PEN43GW06S01	WV1298-9	03/30/05	1851	11.36	
20	PEN43GW10S01	WV1298-10	03/30/05	1909	11.36	

QC LIMITS
TCX = Tetrachloro-M-Xylene (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

GC Column: RTX-CLP II ID: 0.53 (mm) Init. Calib. Date(s): 03/30/05 03/30/05

Instrument ID: GC03

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 11.39

	CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	RT #
01	PEN43GW09S01	WV1298-11	03/30/05	1927	11.37	
02	PEN43GW02S02	WV1298-12	03/30/05	1946	11.36	
03	PEN43GW13S01	WV1298-13	03/30/05	2004	11.36	
04	PEN43MW08S01	WV1298-14	03/30/05	2022	11.36	
05	PEN43MW07S01	WV1298-15	03/30/05	2040	11.36	
06	CV	0.5 CV	03/30/05	2153	11.37	
07	CV	0.5 PPM CV	03/31/05	1007	11.37	
08	WG15609-BLAN	WG15609-1	03/31/05	1100	11.39	
09	WG15609-LCS	WG15609-2	03/31/05	1118	11.37	
10	WG15609-LCSD	WG15609-3	03/31/05	1136	11.36	
11	PEN43MW08S01	WG15609-5	03/31/05	1213	11.36	
12	CV	0.5 PPM CV	03/31/05	1231	11.36	
13	PEN43MW08S01	WG15609-6	03/31/05	1303	11.39	
14	CV	0.5 PPM CV	03/31/05	1322	11.37	
15						
16						
17						
18						
19						
20						

QC LIMITS
TCX = Tetrachloro-M-Xylene (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date(s): 03/30/05 03/30/05

Column: SPB 608 ID: 0.53 (mm) Calibration Time(s): 1228 1417

LAB FILE ID: RF0.02: 3VC1235 RF0.05: 3VC1236 RF0.1: 3VC1237
RF0.25: 3VC1238 RF0.5: 3VC1239 RF1: 3VC1240

COMPOUND	RF0.02	RF0.05	RF0.1	RF0.25	RF0.5	RF1	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
1,2-Dibromoethane	207	620	1013	2552	4652	9457	2ORDR	-1.74e-003	9.872e-005	9.007e-010	0.99984	0.99000
Tetrachloro-M-Xylene	1248	2702	3966	5631	7671	15880	2ORDR	5.637e-002	1.611e-004	-3.09e-010	0.99942	0.99000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date(s): 03/30/05 03/30/05

Column: SPB 608 ID: 0.53 (mm) Calibration Time(s): 1228 1417

RF2.5: 3VC1241

COMPOUND	RF2.5	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
1,2-Dibromoethane	21219	2ORDR	-1.74e-003	9.872e-005	9.007e-010	0.99984	0.99000
Tetrachloro-M-Xylene	32689	2ORDR	5.637e-002	1.611e-004	-3.09e-010	0.99942	0.99000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date(s): 03/30/05 03/30/05

Column: RTX-CLP II ID: 0.53 (mm) Calibration Time(s): 1228 1417

LAB FILE ID: RF0.02: 3VC2235 RF0.05: 3VC2236 RF0.1: 3VC2237
RF0.25: 3VC2238 RF0.5: 3VC2239 RF1: 3VC2240

COMPOUND	RF0.02	RF0.05	RF0.1	RF0.25	RF0.5	RF1	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
1,2-Dibromoethane	281	567	986	2280	4224	8037	2ORDR	-8.2e-003	1.102e-004	1.947e-009	0.99996	0.99000
Tetrachloro-M-Xylene	1245	2514	3854	5283	7081	14155	2ORDR	4.922e-002	1.69e-004	4.841e-010	0.99953	0.99000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date(s): 03/30/05 03/30/05

Column: RTX-CLP II ID: 0.53 (mm) Calibration Time(s): 1228 1417

RF2.5: 3VC2241

COMPOUND	RF2.5	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
1,2-Dibromoethane	17406	2ORDR	-8.2e-003	1.102e-004	1.947e-009	0.99996	0.99000
Tetrachloro-M-Xylene	27129	2ORDR	4.922e-002	1.69e-004	4.841e-010	0.99953	0.99000

FORM VI VOA

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date: 03/30/05 Time: 2153

Lab File ID: 3VC1266 Init. Calib. Date(s): 03/30/05 03/30/05

Init. Calib. Times: 1228 1417

GC Column: SPB 608 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.5000 or AMOUNT	CCAL RRF0.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,2-Dibromoethane	0.4716500	0.5000000	9204.0000	0.01	-5.67	30.00	2RDR
Tetrachloro-M-Xylene	1.4347000	1.2500000	6960.8000	0.01	14.78	30.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date: 03/30/05 Time: 2153

Lab File ID: 3VC2266 Init. Calib. Date(s): 03/30/05 03/30/05

Init. Calib. Times: 1228 1417

GC Column: RTX-CLP II ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.5000 or AMOUNT	CCAL RRF0.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
1,2-Dibromoethane	0.4555500	0.5000000	7870.0000	0.01	-8.89	30.00	2RDR
Tetrachloro-M-Xylene	1.3305000	1.2500000	5938.4000	0.01	6.44	30.00	2RDR

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date: 03/31/05 Time: 1007

Lab File ID: 3VC1270 Init. Calib. Date(s): 03/30/05 03/30/05

Init. Calib. Times: 1228 1417

GC Column: SPB 608 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.5000 or AMOUNT	CCAL RRF0.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
1,2-Dibromoethane	0.5245100	0.5000000	10188.000	0.01	4.90	30.00	2RDR	
Tetrachloro-M-Xylene	1.9643000	1.2500000	9700.0000	0.01	57.14	30.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date: 03/31/05 Time: 1007

Lab File ID: 3VC2270 Init. Calib. Date(s): 03/30/05 03/30/05

Init. Calib. Times: 1228 1417

GC Column: RTX-CLP II ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.5000 or AMOUNT	CCAL RRF0.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
1,2-Dibromoethane	0.5974000	0.5000000	10092.000	0.01	19.48	30.00	2RDR	
Tetrachloro-M-Xylene	1.9008000	1.2500000	8504.8000	0.01	52.06	30.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date: 03/31/05 Time: 1231

Lab File ID: 3VC1276 Init. Calib. Date(s): 03/30/05 03/30/05

Init. Calib. Times: 1228 1417

GC Column: SPB 608 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.5000 or AMOUNT	CCAL RRF0.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
1,2-Dibromoethane	0.5137300	0.5000000	9988.0000	0.01	2.75	30.00	2RDR	
Tetrachloro-M-Xylene	1.6438000	1.2500000	8037.6000	0.01	31.50	30.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date: 03/31/05 Time: 1231

Lab File ID: 3VC2276 Init. Calib. Date(s): 03/30/05 03/30/05

Init. Calib. Times: 1228 1417

GC Column: RTX-CLP II ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.5000 or AMOUNT	CCAL RRF0.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
1,2-Dibromoethane	0.5703400	0.5000000	9674.0000	0.01	14.07	30.00	2RDR	
Tetrachloro-M-Xylene	1.8488000	1.2500000	8272.8000	0.01	47.90	30.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date: 03/31/05 Time: 1322

Lab File ID: 3VC1278 Init. Calib. Date(s): 03/30/05 03/30/05

Init. Calib. Times: 1228 1417

GC Column: SPB 608 ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.5000 or AMOUNT	CCAL RRF0.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
1,2-Dibromoethane	0.4837500	0.5000000	9430.0000	0.01	-3.25	30.00	2RDR	
Tetrachloro-M-Xylene	1.7578000	1.2500000	8627.2000	0.01	40.62	30.00	2RDR	<-

FORM VII PEST

FORM 7B
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GC03 Calibration Date: 03/31/05 Time: 1322

Lab File ID: 3VC2278 Init. Calib. Date(s): 03/30/05 03/30/05

Init. Calib. Times: 1228 1417

GC Column: RTX-CLP II ID: 0.53 (mm)

COMPOUND	RRF or AMOUNT	RRF0.5000 or AMOUNT	CCAL RRF0.5000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
1,2-Dibromoethane	0.5592600	0.5000000	9502.0000	0.01	11.85	30.00	2RDR	
Tetrachloro-M-Xylene	1.8683000	1.2500000	8360.0000	0.01	49.46	30.00	2RDR	<-

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/30/05
Analysis Date: 30-MAR-2005 15:30
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15563-1
Client ID: WG15563-Blank
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0054	1.0	0.020	0.020	0.0054
877-09-8	Tetrachloro-M-Xylene		105%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/31/05
Analysis Date: 31-MAR-2005 11:00
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15609-1
Client ID: WG15609-Blank
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15609
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
106-93-4	1,2-Dibromoethane	U	0.0054	1.0	0.020	0.020	0.0054
877-09-8	Tetrachloro-M-Xylene		108%				

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-5

GC Column(1): SPB 608 ID: 0.53 (mm) GC Column(2): RTX-CLP IIID: 0.53 (mm)

	CLIENT SAMPLE ID	LAB SAMPLE ID	TCX1 REC#	TCX2 REC#	S2 1 REC#	S2 2 REC#	S3 1 REC#	S3 2 REC#	TOT OUT
01	WG15563-BLANK	WG15563-1	105	100					0
02	WG15563-LCS	WG15563-2	107	105					0
03	WG15563-LCSD	WG15563-3	107	104					0
04	PEN43TB0324	WV1298-1	77	79					0
05	PEN43RB0324	WV1298-2	89	88					0
06	PEN43GW05D01	WV1298-3	79	77					0
07	PEN43GW05S02	WV1298-4	80	77					0
08	PEN43GW05S02D	WV1298-5	84	84					0
09	PEN43GW11S01	WV1298-6	94	89					0
10	PEN43GW06D01	WV1298-7	96	94					0
11	PEN43GW12S01	WV1298-8	105	104					0
12	PEN43GW06S01	WV1298-9	101	108					0
13	PEN43GW10S01	WV1298-10	89	88					0
14	PEN43GW09S01	WV1298-11	89	86					0
15	PEN43GW02S02	WV1298-12	92	92					0
16	PEN43GW13S01	WV1298-13	114	117					0
17	PEN43MW08S01	WV1298-14	94	95					0
18	PEN43MW07S01	WV1298-15	97	96					0
19	WG15609-BLANK	WG15609-1	102	108					0
20	WG15609-LCS	WG15609-2	106	109					0
21	WG15609-LCSD	WG15609-3	111	112					0
22	PEN43MW08S01MSD	WG15609-5	106	109					0
23	PEN43MW08S01MS	WG15609-6	98	99					0
24									
25									
26									
27									
28									

ADVISORY
QC LIMITS
S1 (TCX) = Tetrachloro-M-Xylene (57-128)

Column to be used to flag recovery values
J Values outside of QC limits
D Surrogate diluted out

FORM II PEST-1

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/30/05
Analysis Date: 03/30/05
Report Date: 04/06/2005
Matrix: WATER

Lab ID: WG15563-2 & WG15563-3
Client ID: WG15563-LCS & WG15563-LCSD
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15563
Units: ug/L

COMPOUND	LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS CONC.	LCSD CONC.	LCS %REC.	LCSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
1,2-Dibromoethane	0.25	0.25	NA	0.26	0.26	104	105	1	30	70-130

FORM III PEST-1

3VC1246.d & 3VC1247.d

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/31/05
Analysis Date: 03/31/05
Report Date: 04/06/2005
Matrix: WATER

Lab ID: WG15609-2 & WG15609-3
Client ID: WG15609-LCS & WG15609-LCSD
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15609
Units: ug/L

COMPOUND	LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS CONC.	LCSD CONC.	LCS %REC.	LCSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
1,2-Dibromoethane	0.25	0.25	NA	0.27	0.28	110	110	0.4	30	70-130

FORM III PEST-1

3VC1272.d & 3VC1273.d

KATAHDIN ANALYTICAL SERVICES
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date: 03/31/05
Analysis Date: 03/31/05
Report Date: 04/06/2005
Matrix: WATER

Lab ID: WG15609-6 & WG15609-5
Client ID: PEN43MW08S01MS & PEN43MW08S01MSD
SDG: CTO355-5
Extracted by: JLP
Extraction Method: 504.1
Analyst: JLP
Analysis Method: EPA 504.1
Lab Prep Batch: WG15609
Units: ug/L

COMPOUND	MS SPIKE	MSD SPIKE	SAMPLE CONC.	MS CONC.	MSD CONC.	MS %REC.	MSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
1,2-Dibromoethane	0.24	0.24	0.00	0.21	0.27	90	112	22	30	70-130

FORM III PEST-1

3VC1277.d & 3VC1275.d

VOLATILE ORGANIC COMPOUNDS IN WATER
CALCULATION VERIFICATION

Program:	SOUTHDIV	**Sample No.:**	PEN43RB0324
Method:	8260B	**Sample Matrix:**	Aqueous
Site Name:	NAS Pensacola		
		Analyte Name:	Acetone
Site Location:			
		Spl Delivery Grp:	3555
Project No.	N4821		
		Laboratory:	Katahdin

Equation:

$$Concentration\,(\mu g / L) = \frac{(A_x)(I_s)(Df)}{(A_{is})(RRF)(V_0)}$$

where:

Ax = Area of characteristic ion (EICP) for compound to be measured.
Ais = Area of characteristic ion (EICP) for the specific internal standard (See Tables 3 and 4).
Is = Amount of internal standard added in nanograms (ng).
Vo = Weight of sample in grams (g).
RRF = Relative response factor from ambient temperature purge of calibration standard.
Df = Dilution Factor
= Ratio of number of milliliters (mL) of water purged (i.e., Vo above) to number of mL of the original water sample used for purging.
For example, if 2.0 mL of sample is diluted to 5 mL with reagent water and purged, Df = 5 mL/2.0 m L = 2.5. If no dilution is performed, Df = 1.
%S = Percent solids as a whole number ie (88.2 for 88.2%)

Sample Data:

A_x =	17483
I_s =	250
Df =	1
A_{is} =	306006
RRF =	0.0372
V_0 =	5

Green = inputs
Blue = outputs
Pink = error

	Concentration	Units
Lab Result:	77	ug/kg
TtNUS Result:	76.79148747	ug/kg

Comments:

Calculations by: Bernard F Spada III **Date:** 9-May-05
Reviewed by: **Date:**

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/24/05
Received Date: 03/25/05
Extraction Date:
Analysis Date: 28-MAR-2005 12:15
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV1298-2
Client ID: PEN43RB0324
SDG: CTO355-5
Extracted by:
Extraction Method: SW846 5030
Analyst: KM
Analysis Method: SW846 8260B
Lab Prep Batch: WG15502
Units: ug/l

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
75-71-8	Dichlorodifluoromethane	U	0.5	1.0	5	5	0.5
74-87-3	Chloromethane	U	0.3	1.0	5	5	0.3
75-01-4	Vinyl chloride	U	0.3	1.0	5	5	0.3
74-83-9	Bromomethane	U	0.6	1.0	5	5	0.6
75-00-3	Chloroethane	U	0.3	1.0	5	5	0.3
75-69-4	Trichlorofluoromethane	U	0.3	1.0	5	5	0.3
75-35-4	1,1-Dichloroethene	U	0.4	1.0	5	5	0.4
75-15-0	Carbon Disulfide	U	0.3	1.0	5	5	0.3
76-13-1	Freon-113	U	0.2	1.0	5	5	0.2
75-09-2	Methylene Chloride	U	2	1.0	5	5	2
67-64-1	Acetone		77	1.0	5	5	2
156-60-5	trans-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
1634-04-4	Methyl tert-butyl ether	U	0.8	1.0	5	5	0.8
75-34-3	1,1-Dichloroethane	U	0.4	1.0	5	5	0.4
156-59-2	cis-1,2-Dichloroethene	U	0.3	1.0	5	5	0.3
540-59-0	1,2-Dichloroethylene (total)	U	0.6	1.0	10	10	0.6
67-66-3	Chloroform	U	0.4	1.0	5	5	0.4
56-23-5	Carbon Tetrachloride	U	0.3	1.0	5	5	0.3
71-55-6	1,1,1-Trichloroethane	U	0.2	1.0	5	5	0.2
78-93-3	2-Butanone		20	1.0	5	5	3
71-43-2	Benzene	U	0.3	1.0	5	5	0.3
1735-17-7	Cyclohexane	U	0.2	1.0	5	5	0.2
107-06-2	1,2-Dichloroethane	U	0.3	1.0	5	5	0.3
79-01-6	Trichloroethene	U	0.3	1.0	5	5	0.3
78-87-5	1,2-Dichloropropane	U	0.3	1.0	5	5	0.3
75-27-4	Bromodichloromethane	U	0.2	1.0	5	5	0.2
10061-01-5	cis-1,3-dichloropropene	U	0.3	1.0	5	5	0.3
108-88-3	Toluene	I	0.3	1.0	5	5	0.2
108-10-1	4-methyl-2-pentanone	U	3	1.0	5	5	3
127-18-4	Tetrachloroethene	U	0.4	1.0	5	5	0.4
10061-02-6	trans-1,3-Dichloropropene	U	0.4	1.0	5	5	0.4
79-00-5	1,1,2-Trichloroethane	U	0.3	1.0	5	5	0.3
124-48-1	Dibromochloromethane	U	0.4	1.0	5	5	0.4
106-93-4	1,2-Dibromoethane	U	0.4	1.0	5	5	0.4
591-78-6	2-Hexanone	U	2	1.0	5	5	2
108-90-7	Chlorobenzene	U	0.2	1.0	5	5	0.2
100-41-4	Ethylbenzene	U	0.2	1.0	5	5	0.2
1330-20-7	Xylenes (total)	U	0.8	1.0	15	15	0.8
	m+p-Xylenes	U	0.5	1.0	10	10	0.5
95-47-6	o-Xylene	U	0.3	1.0	5	5	0.3
100-42-5	Styrene	U	0.6	1.0	5	5	0.6
75-25-2	Bromoform	U	0.5	1.0	5	5	0.5
98-82-8	Isopropylbenzene	U	0.3	1.0	5	5	0.3

Data File: \\Target_server\GG\chem\gcms-z.i\Z032805.b\Z5765.D
Report Date: 31-Mar-2005 13:42

Katahdin Analytical Services

Data file : \\Target_server\GG\chem\gcms-z.i\Z032805.b\Z5765.D
Lab Smp Id: WV1298-2 Client Smp ID: PEN43RB0324
Inj Date : 28-MAR-2005 12:15 MS Autotune Date: 11-FEB-2005 11:23
Operator : KM Inst ID: gcms-z.i
Smp Info : WV1298-2
Misc Info : SW846 8260B
Comment :
Method : \\Target_server\GG\chem\gcms-z.i\Z032805.b\z826a44.m
Meth Date : 29-Mar-2005 12:27 kmcculloug Quant Type: ISTD
Cal Date : 18-MAR-2005 14:14 Cal File: Z5647.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SW8260OLM.sub
Target Version: 4.12
Processing Host: TARGET05

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
15 Acetone	58	4.682	4.675	(0.508)	17483	76.7933	76.8
40 2-Butanone	72	8.594	8.586	(0.933)	6261	19.5411	19.5
57 Toluene	92	11.402	11.407	(1.152)	2342	0.34216	0.34(a)
$ 37 Dibromofluoromethane	113	8.292	8.295	(0.900)	145576	46.4081	46.4
$ 45 1,2-Dichloroethane-D4	65	9.220	9.213	(1.001)	172141	49.1528	49.2
$ 55 Toluene-D8	98	11.344	11.349	(1.147)	498951	48.6177	48.6
$ 76 P-Bromofluorobenzene	95	14.002	14.006	(1.415)	201808	50.9666	51.0
* 42 Pentafluorobenzene	168	9.209	9.213	(1.000)	306006	50.0000	
* 49 1,4-Difluorobenzene	114	9.893	9.898	(1.000)	414867	50.0000	
* 66 Chlorobenzene-D5	117	13.039	13.043	(1.000)	371178	50.0000	
* 91 1,4-Dichlorobenzene-D4	152	14.745	14.749	(1.000)	219038	50.0000	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-5

Instrument ID: GCMS-Z Calibration Date(s): 03/18/05 03/18/05

Column: RTX-VMS ID: 0.18 (mm) Calibration Time(s): 1024 1841

LAB FILE ID: RF1: Z5651 RF5: Z5650 RF20: Z5649
RF50: Z5648 RF100: Z5647 RF200: Z5653

COMPOUND	RF1	RF5	RF20	RF50	RF100	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	0.253	0.290	0.264	0.302	0.311	0.282	AVRG		0.28380197		7.856	15.000
Chloromethane	0.513	0.502	0.569	0.580	0.587	0.513	AVRG		0.54403151		7.128	15.000
Vinyl chloride	0.494	0.429	0.430	0.466	0.465	0.410	AVRG		0.44911999		6.924	15.000
Bromomethane	2126	6188	38625	102810	185160	391000	LINR	-8.44e-003	4.26953651		0.99910	0.99000
Chloroethane	0.268	0.272	0.282	0.294	0.258	0.240	AVRG		0.26892070		6.980	15.000
Trichlorofluoromethane	0.677	0.561	0.542	0.633	0.619	0.613	AVRG		0.60762554		8.118	15.000
1,1-Dichloroethene	0.510	0.408	0.400	0.423	0.447	0.441	AVRG		0.43839291		9.044	15.000
Carbon Disulfide	1.317	1.169	1.205	1.176	1.342	1.226	AVRG		1.23924930		5.911	15.000
Freon-113	0.325	0.292	0.286	0.268	0.290	0.269	AVRG		0.28848741		7.200	15.000
Methylene Chloride	7770	20972	79842	206330	375510	805610	LINR	-1.67e-002	2.08765614		0.99970	0.99000
Acetone	0.041	0.037	0.042	0.041	0.030	0.032	AVRG		3.72e-002		13.456	15.000
trans-1,2-Dichloroethene	0.468	0.409	0.450	0.451	0.438	0.444	AVRG		0.44353774		4.401	15.000
Methyl tert-butyl ether	1.194	1.109	1.104	1.187	1.065	1.070	AVRG		1.12143684		5.040	15.000
1,1-Dichloroethane	0.646	0.635	0.712	0.725	0.645	0.672	AVRG		0.67267754		5.621	15.000
cis-1,2-Dichloroethene	0.549	0.556	0.440	0.510	0.490	0.428	AVRG		0.49559723		10.794	15.000
1,2-Dichloroethylene (tot							AVRG					0.000
Chloroform	0.939	0.877	0.842	0.794	0.810	0.823	AVRG		0.84723723		6.275	15.000
Carbon Tetrachloride	0.357	0.360	0.350	0.396	0.362	0.374	AVRG		0.36643550		4.439	15.000
1,1,1-Trichloroethane	0.722	0.719	0.640	0.718	0.658	0.699	AVRG		0.69274937		5.102	15.000
2-Butanone	0.044	0.056	0.058	0.058	0.044	0.053	AVRG		5.235e-002		12.802	15.000
Benzene	1.301	1.225	1.186	1.225	1.172	1.158	AVRG		1.21128435		4.286	15.000
Cyclohexane	0.450	0.447	0.444	0.466	0.454	0.493	AVRG		0.45884959		3.961	15.000
1,2-Dichloroethane	0.426	0.470	0.433	0.458	0.436	0.431	AVRG		0.44250570		3.963	15.000
Trichloroethene	0.460	0.387	0.347	0.368	0.348	0.339	AVRG		0.37491057		12.053	15.000
1,2-Dichloropropane	0.277	0.265	0.256	0.283	0.269	0.256	AVRG		0.26743859		4.081	15.000
Bromodichloromethane	0.457	0.417	0.423	0.468	0.438	0.434	AVRG		0.43946440		4.455	15.000
cis-1,3-dichloropropene	0.378	0.418	0.428	0.457	0.508	0.456	AVRG		0.44083637		9.892	15.000
Toluene	0.830	0.772	0.801	0.846	0.906	0.795	AVRG		0.82493466		5.787	15.000
4-methyl-2-pentanone	0.244	0.307	0.292	0.312	0.271	0.282	AVRG		0.28478965		8.849	15.000
Tetrachloroethene	4421	20571	111000	250860	358320	730720	2ORDR	-3.11e-002	2.37317792	0.54710474	0.99268	0.99000
trans-1,3-Dichloropropene	0.352	0.373	0.359	0.399	0.436	0.424	AVRG		0.39048010		8.908	15.000
1,1,2-Trichloroethane	0.277	0.270	0.257	0.266	0.269	0.252	AVRG		0.26518762		3.351	15.000
Dibromochloromethane	0.387	0.416	0.407	0.425	0.416	0.442	AVRG		0.41552159		4.382	15.000
1,2-Dibromoethane	0.290	0.305	0.291	0.304	0.332	0.330	AVRG		0.30855804		5.888	15.000
2-Hexanone	0.172	0.236	0.245	0.248	0.192	0.230	AVRG		0.22063164		14.175	15.000
Chlorobenzene	1.203	1.081	1.065	1.087	1.050	1.009	AVRG		1.08252075		6.017	15.000
Ethylbenzene	1.758	1.651	1.736	1.801	1.689	1.696	AVRG		1.72185355		3.124	15.000
Xylenes (total)							AVRG					0.000
m+p-Xylenes	0.626	0.682	0.674	0.707	0.660	0.631	AVRG		0.66342541		4.656	15.000
o-Xylene	0.523	0.602	0.637	0.656	0.639	0.644	AVRG		0.61688890		7.997	15.000
Styrene	0.891	1.008	1.117	1.159	1.127	1.106	AVRG		1.06808834		9.400	15.000
Bromoform	0.258	0.289	0.321	0.331	0.313	0.333	AVRG		0.30769425		9.397	15.000
Isopropylbenzene	2.246	2.345	2.495	2.720	2.819	3.306	AVRG		2.65508589		14.525	15.000
1,1,2,2-Tetrachloroethane	0.876	0.922	0.832	0.861	0.842	1.074	AVRG		0.90112585		10.012	15.000

FORM VI VOA

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**G. WALKER**	**DATE:**	**APRIL 14, 2005**
FROM:	**ETHAN G. LEE**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – SELECT METALS**
NAS PENSACOLA – CTO 355
SAMPLE DELIVERY GROUP (SDG) – 3554

SAMPLES: 5/SOIL/

PEN43SS2401	PEN43SS2501	PEN43SS2601
PEN43SS3301	PEN43SS3401	

Overview

The sample set for NAS Pensacola, CTO 355, SDG 3554, consists of five (5) soil environmental samples.

Samples PEN43SS2401, PEN43SS2501, and PEN43SS2601 were analyzed for arsenic, barium, copper, and lead. Samples PEN43SS3301 and PEN43SS3401 were analyzed for copper and lead. The samples were collected by Tetra Tech NUS on March 6, 2005 and analyzed by Katahdin Analytical Services. Metals analyses were conducted using SW-846 method 6010B.

Metals analyses were conducted using Inductively Coupled Plasma (ICP) methodologies.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Recoveries
* • Laboratory Method/Preparation Blank Analyses
* • ICP Interference Analyses
* • Matrix Spike Analyses
* • Laboratory Duplicate Precision
* • Laboratory Control Sample Analyses
* • ICP Serial Dilution Analyses
* • Detection Limits
* • Analyte Quantitation

* - All quality control criteria were met for this parameter.

Laboratory Blank Analyses

The following contaminant was detected in the laboratory method/preparation blanks at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
Barium	0.60 ug/L	0.30 mg/kg

An action level of 5X the maximum concentration was used to evaluate the sample data for laboratory blank contamination. Sample aliquot, percent solids, and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No qualification action was required because all results were above the action level.

Notes

The continuing calibration verification (CCV) standards run on 3/29/05 at 23:29 and on 3/30/05 at 00:54, 02:04, and 02:39 had percent recoveries (%Rs) >110% for arsenic. No qualification action was required because no samples that were associated with these standards were analyzed for arsenic.

The contract required detection limit (CRDL) standards run on 3/29/05 at 12:47, 17:30, and 21:43 and on 3/30/05 at 02:18 had %Rs >110% for lead. No qualification action was required because all results for lead were >2X the CRDL.

Dilutions were performed for arsenic, copper, and lead in sample PEN43SS2401 and for lead in sample PEN43SS2501 due to matrix interference.

Executive Summary

Laboratory Performance: No quality control issues were noted for this SDG.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", July 2002 and the NFESC document entitled "Navy IRCDQM" (September 1999).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Tetra Tech NUS
Ethan G. Lee
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 4821

SDG: 3554 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SS2401
samp_date	3/6/2005
lab_id	WV0975-003
qc_type	NM
units	MG/KG
Pct_Solids	83.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
ARSENIC	7.6		
BARIUM	346		
COPPER	889		
LEAD	1990		

nsample	PEN43SS2501
samp_date	3/6/2005
lab_id	WV0975-004
qc_type	NM
units	MG/KG
Pct_Solids	82.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
ARSENIC	4.8		
BARIUM	243		
COPPER	381		
LEAD	1490		

nsample	PEN43SS2601
samp_date	3/6/2005
lab_id	WV0975-005
qc_type	NM
units	MG/KG
Pct_Solids	77.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
ARSENIC	2		
BARIUM	25.3		
COPPER	60.5		
LEAD	290		

PROJ_NO: 4821

SDG: 3554 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SS3301	nsample	PEN43SS3401
samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0975-001	lab_id	WV0975-002
qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG
Pct_Solids	90.5	Pct_Solids	88.4
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
COPPER	17		
LEAD	68.7		

Parameter	Result	Val Qual	Qual Code
COPPER	261		
LEAD	500		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS2401

Matrix: SOIL **SDG Name:** CTO355-4

Percent Solids: 83.7 **Lab Sample ID:** WV0975-003

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	7.6			P	2	1.5	0.54
7440-39-3	BARIUM, TOTAL	346			P	1	0.48	0.05
7440-50-8	COPPER, TOTAL	889			P	2	4.8	0.48
7439-92-1	LEAD, TOTAL	1990			P	10	4.8	1.98

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS2501

Matrix: SOIL **SDG Name:** CTO355-4

Percent Solids: 82.0 **Lab Sample ID:** WV0975-004

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	4.8			P	1	0.72	0.25
7440-39-3	BARIUM, TOTAL	243			P	1	0.45	0.04
7440-50-8	COPPER, TOTAL	381			P	1	2.2	0.23
7439-92-1	LEAD, TOTAL	1490			P	5	2.2	0.93

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS2601

Matrix: SOIL **SDG Name:** CTO355-4

Percent Solids: 77.0 **Lab Sample ID:** WV0975-005

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	2.0			P	1	0.63	0.22
7440-39-3	BARIUM, TOTAL	25.3			P	1	0.40	0.04
7440-50-8	COPPER, TOTAL	60.5			P	1	2.0	0.20
7439-92-1	LEAD, TOTAL	290			P	1	0.40	0.16

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS3301

Matrix: SOIL **SDG Name:** CTO355-4

Percent Solids: 90.5 **Lab Sample ID:** WV0975-001

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-50-8	COPPER, TOTAL	17.0			P	1	2.3	0.23
7439-92-1	LEAD, TOTAL	68.7			P	1	0.46	0.19

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS3401

Matrix: SOIL **SDG Name:** CTO355-4

Percent Solids: 88.4 **Lab Sample ID:** WV0975-002

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-50-8	COPPER, TOTAL	261			P	1	2.1	0.21
7439-92-1	LEAD, TOTAL	500			P	1	0.42	0.17

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

FORM I - IN

Report of Analytical Results

Client: Amy Thomson
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: WV0975-3
Report Date: 21-MAR-05
Client PO: MSA-0402-N4113-05 WR100
Project: CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Description	Matrix	Date Sampled	Date Received
PEN43SS2401	SL	06-MAR-05	08-MAR-05

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	84. %	.1	CLP SOW 788	WG15041	10-MAR-05 11:30:00	CLP SOW 788	09-MAR-05	JF	

Report of Analytical Results

Client: Amy Thomson
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: WV0975-8
Report Date: 21-MAR-05
Client PO: MSA-0402-N4113-05 WR100
Project: CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Description	Matrix	Date Sampled	Date Received
PEN43SS2401	SL	06-MAR-05	08-MAR-05

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	84. %	.1	CLP SOW 788	WG15163	10-MAR-05 11:30:00	CLP SOW 788	09-MAR-05	JF	

Report of Analytical Results

Client: Amy Thomson
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: WV0975-4
Report Date: 21-MAR-05
Client PO: MSA-0402-N4113-05 WR100
Project: CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Description	Matrix	Date Sampled	Date Received
PEN43SS2501	SL	06-MAR-05	08-MAR-05

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	82. %	.1	CLP SOW 788	WG15041	10-MAR-05 11:31:00	CLP SOW 788	09-MAR-05	JF	

Report of Analytical Results

Client: Amy Thomson
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: WV0975-9
Report Date: 21-MAR-05
Client PO: MSA-0402-N4113-05 WR100
Project: CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Description	Matrix	Date Sampled	Date Received
PEN43SS2501	SL	06-MAR-05	08-MAR-05

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	82. %	.1	CLP SOW 788	WG15163	10-MAR-05 11:31:00	CLP SOW 788	09-MAR-05	JF	

Report of Analytical Results

Client: Amy Thomson
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: WV0975-5
Report Date: 21-MAR-05
Client PO: MSA-0402-N4113-05 WR100
Project: CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Description	Matrix	Date Sampled	Date Received
PEN43SS2601	SL	06-MAR-05	08-MAR-05

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	77. %	.1	CLP SOW 788	WG15041	10-MAR-05 11:32:00	CLP SOW 788	09-MAR-05	JF	

Report of Analytical Results

Client: Amy Thomson
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: WV0975-10
Report Date: 21-MAR-05
Client PO: MSA-0402-N4113-05 WR100
Project: CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Description	Matrix	Date Sampled	Date Received
PEN43SS2601	SL	06-MAR-05	08-MAR-05

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	77. %	.1	CLP SOW 788	WG15163	10-MAR-05 11:32:00	CLP SOW 788	09-MAR-05	JF	

Report of Analytical Results

Client: Amy Thomson
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: WV0975-1
Report Date: 21-MAR-05
Client PO: MSA-0402-N4113-05 WR100
Project: CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Description	Matrix	Date Sampled	Date Received
PEN43SS3301	SL	06-MAR-05	08-MAR-05

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	90. %	.1	CLP SOW 788	WG15041	10-MAR-05 11:27:00	CLP SOW 788	09-MAR-05	JF	

Report of Analytical Results

Client: Amy Thomson
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: WV0975-6
Report Date: 21-MAR-05
Client PO: MSA-0402-N4113-05 WR100
Project: CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Description	Matrix	Date Sampled	Date Received
PEN43SS3301	SL	06-MAR-05	08-MAR-05

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	90. %	.1	CLP SOW 788	WG15163	10-MAR-05 11:27:00	CLP SOW 788	09-MAR-05	JF	

Report of Analytical Results

Client: Amy Thomson
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: WV0975-2
Report Date: 21-MAR-05
Client PO: MSA-0402-N4113-05 WR100
Project: CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Description	Matrix	Date Sampled	Date Received
PEN43SS3401	SL	06-MAR-05	08-MAR-05

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	88. %	.1	CLP SOW 788	WG15041	10-MAR-05 11:29:00	CLP SOW 788	09-MAR-05	JF	

Report of Analytical Results

Client: Amy Thomson
Tetra Tech NUS, Inc.
661 Andersen Drive
Pittsburgh,PA 15220

Lab Sample ID: WV0975-7
Report Date: 21-MAR-05
Client PO: MSA-0402-N4113-05 WR100
Project: CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Description	Matrix	Date Sampled	Date Received
PEN43SS3401	SL	06-MAR-05	08-MAR-05

Parameter	Result	Adj PQL	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Analyst	Footnotes
Total Solids	88. %	.1	CLP SOW 788	WG15163	10-MAR-05 11:29:00	CLP SOW 788	09-MAR-05	JF	

APPENDIX C

SUPPORT DOCUMENTATION

HOLDTIME

SDG 3554

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SS2501	WV0975-004	NM	3/6/2005	3/18/2005	3/29/2005	12	11	23
M	MG/KG	PEN43SS2401	WV0975-003	NM	3/6/2005	3/18/2005	3/22/2005	12	4	16
M	MG/KG	PEN43SS3401	WV0975-002	NM	3/6/2005	3/18/2005	3/29/2005	12	11	23
M	MG/KG	PEN43SS3401	WV0975-002	NM	3/6/2005	3/18/2005	3/22/2005	12	4	16
M	MG/KG	PEN43SS3301	WV0975-001	NM	3/6/2005	3/18/2005	3/29/2005	12	11	23
M	MG/KG	PEN43SS3301	WV0975-001	NM	3/6/2005	3/18/2005	3/22/2005	12	4	16
M	MG/KG	PEN43SS2601	WV0975-005	NM	3/6/2005	3/18/2005	3/22/2005	12	4	16
M	MG/KG	PEN43SS2501	WV0975-004	NM	3/6/2005	3/18/2005	3/22/2005	12	4	16
M	MG/KG	PEN43SS2401	WV0975-003	NM	3/6/2005	3/18/2005	3/29/2005	12	11	23
M	MG/KG	PEN43SS2401	WV0975-003	NM	3/6/2005	3/18/2005	3/28/2005	12	10	22
M	MG/KG	PEN43SS2601	WV0975-005	NM	3/6/2005	3/18/2005	3/29/2005	12	11	23
TS	%	PEN43SS3301	WV0975-1	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3401	WV0975-2	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3401	WV0975-7	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3301	WV0975-6	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SS2401	WV0975-3	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2601	WV0975-5	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2601	WV0975-10	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2501	WV0975-9	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2501	WV0975-4	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2401	WV0975-8	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
OS	%	PEN43SS2501DL	WV0975-4DL	NM	3/6/2005	3/14/2005	3/24/2005	8	10	18
OS	%	PEN43SS3401	WV0975-7	NM	3/6/2005	3/14/2005	3/25/2005	8	11	19
OS	%	PEN43SS2401DL	WV0975-3DL	NM	3/6/2005	3/14/2005	3/24/2005	8	10	18
OS	%	PEN43SS2401RA	WV0975-8RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	%	PEN43SS2501	WV0975-4	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	%	PEN43SS2501	WV0975-9	NM	3/6/2005	3/14/2005	3/25/2005	8	11	19
OS	%	PEN43SS2401	WV0975-3	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	%	PEN43SS2601RA	WV0975-10RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	%	PEN43SS3301	WV0975-1	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	%	PEN43SS3301RA	WV0975-6RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	%	PEN43SS3401	WV0975-2	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	%	PEN43SS2601	WV0975-5	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	PEN43SS2501	WV0975-4	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	UG/KG	PEN43SS3401	WV0975-7	NM	3/6/2005	3/14/2005	3/25/2005	8	11	19
OS	UG/KG	PEN43SS3401	WV0975-2	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	UG/KG	PEN43SS3301RA	WV0975-6RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	UG/KG	PEN43SS3301	WV0975-1	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	UG/KG	PEN43SS2601RA	WV0975-10RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	UG/KG	PEN43SS2601	WV0975-5	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	UG/KG	PEN43SS2401	WV0975-3	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	UG/KG	PEN43SS2501	WV0975-9	NM	3/6/2005	3/14/2005	3/25/2005	8	11	19
OS	UG/KG	PEN43SS2401RA	WV0975-8RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	UG/KG	PEN43SS2401DL	WV0975-3DL	NM	3/6/2005	3/14/2005	3/24/2005	8	10	18
OS	UG/KG	PEN43SS2501DL	WV0975-4DL	NM	3/6/2005	3/14/2005	3/24/2005	8	10	18

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 2604 WU0974, WU0975 PAGE 2 OF 3

PROJECT NO: N4821	FACILITY: PENSACOLA 43	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: KATAHDIN Andrea Colby
SAMPLERS (SIGNATURE) William D. Olson		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX		CITY, STATE Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G G G
PRESERVATIVE USED: 4° 4° 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	8270 Sim TCL SVOC	6010B Cu	6010 As/Ba/Pb/Va	6010 Cu/Pb	COMMENTS
3/6	0930	PEW43SS3501	SS35	0	1	SO	G	2	1	1	—	—	
	0940	PEW43SS3601	SS36	0	1	SO	G	2	1	1	—	—	
	0950	PEW43SS3701	SS37	0	1	SO	G	2	1	1	—	—	
	1000	PEW43SS2701	SS27	0	1	SO	G	2	1	—	1	—	
	1010	PEW43SS2801	SS28	0	1	SO	G	2	1	—	1	—	
	1020	PEW43SS2901	SS29	0	1	SO	G	2	1	—	1	—	
	1025	PEW43SS3001	SS30	0	1	SO	G	2	1	—	—	1	
	1035	PEW43SS3101	SS31	0	1	SO	G	2	1	—	—	1	
	1045	PEW43SS3201	SS32	0	1	SO	G	2	1	—	—	1	
	1055	PEW43SS3301	SS33	0	1	SO	G	2	1	—	—	1	
	1100	PEW43SS3401	SS34	0	1	SO	G	2	1	—	—	1	

1. RELINQUISHED BY William D. Olson	DATE 3/7/05	TIME 1215	1. RECEIVED BY [signature]	DATE 3/8/05	TIME 0855
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R

WV0975

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2605 | PAGE 3 OF 3

PROJECT NO: N4821	FACILITY: PENSACOLA 43	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE) Nelle D. Olson		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX		CITY, STATE West Brook Me

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS 8270/8310 TCLS VOC / PAH	6010B As/Ba/Cu/Pb							COMMENTS
3/6	1115	PEW4355 2401	SS24	0	1	SO	G	2	1	1 ✓							
3/6	1125	PEW4355 2501	SS25	0	1	SO	G	2	1	1 ✓							
3/6	1135	PEW4355 2601	SS26	0	1	SO	G	2	1	1 ✓							

1. RELINQUISHED BY Nelle D. Olson	DATE 3/7/05	TIME 1215	1. RECEIVED BY [signature]	DATE 3/8/05	TIME 0830
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

000009

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Receipt

The following samples were received on March 8, 2005 and were logged in under Katahdin Analytical Services work order numbers WV0975 for a hardcopy due date of April 3, 2005.

KATAHDIN Sample No.	TTNUS Sample Identification
WV0975-1	PEN43SS3301
WV0975-2	PEN43SS3401
WV0975-3	PEN43SS2401
WV0975-4	PEN43SS2501
WV0975-5	PEN43SS2601
WV0975-6	PEN43SS3301
WV0975-7	PEN43SS3401
WV0975-8	PEN43SS2401
WV0975-9	PEN43SS2501
WV0975-10	PEN43SS2601

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Andrea J. Colby**. This narrative is an integral part of the Report of Analysis.

Organics Laboratory

The samples of SDG CTO355-4 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, and III 1996, Office of Solid Waste and Emergency Response, U.S. EPA, for the specific methods listed below or on the Report of Analysis. Some manual integrations may have been performed due to split peaks and/or corrected baselines. All have been flagged with a "M" (software-generated) on the pertinent quantitation reports.

8270C SIM Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

The initial calibration standards (files U0471 and U0473) had responses for the internal standards chrysene-d12 and/or perylene-d12, which were all low and outside the method acceptance limits of -50% to +100% of the responses of the mid-level calibration standard from the initial calibration performed on 03/21/05.

The calibration verification standard (CV) (file U0515) had a high response for the (CCC) calibration check compound fluoranthene, which resulted in a %D that was outside the method acceptance limit of 20%. The associated samples may be biased high for this analyte.

8270C SCAN Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

The initial calibration analyzed on the X instrument had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. The target analytes benzaldehyde and phenol failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the average model. Since these target analytes were not detected of above the PQL in any of the affected samples, these samples were not reanalyzed.

Samples WV0975-7 and 9 had high recoveries for one surrogate, which were outside the laboratory established acceptance limits. Since a high recovery would indicate a high bias and no target analytes were detected above the MDL, the samples were not reanalyzed.

The laboratory control sample (LCS) WG15101-2 and the laboratory control sample duplicate (LCSD) WG15101-3 had high recoveries for one surrogate, which were outside the method established limits. Since the spiked analyte recoveries were within acceptable limits, the samples were not reanalyzed.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of Katahdin SDG CTO355-4 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Waste", SW-846, November 1986, Third Edition.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Solid-matrix Katahdin Sample Nos. WV0975-(1-5) were digested for ICP analysis on 03/18/05 (QC Batch VC18ICS0) in accordance with USEPA Method 3050B. Katahdin Sample No. WV0975-1 was prepared with duplicate matrix-spiked aliquots.

ICP analyses of SDG CTO355-4 sample digestates were performed using a Thermo Jarrell Ash (TJA) Trace ICP spectrometer and a TJA ICAP 61E ICP spectrometer. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following comments or exceptions:

Some of the results for run QC samples (ICV, ICB, CCV, CCB, ICSA, and ICSAB) included in the accompanying data package may have exceeded acceptance limits for some elements. Please note that all client samples and batch QC samples associated with out-of-control results for run QC samples were subsequently reanalyzed for the analytes in question.

Matrix QC Summary

The matrix-spike recoveries for all analytes for Katahdin Sample No. WV0975-1 are within the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix spike duplicate analysis of Katahdin Sample No. WV0975-1 is within the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for all analytes.

The serial dilution analysis of Katahdin Sample No. WV0975-1 is within the laboratory's ICP serial dilution acceptance limit (<10% difference between the original sample result and the result for a 5-fold dilution of the sample, if the result for the dilution is at least ten times the instrument detection limit) for all analytes.

Wet Chemistry Analysis

The samples of SDG CTO355-4 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total solids were performed according to "U.S. EPA Contract Laboratory Program Statement of Work for Inorganic Analysis", SOW 7/88.

All analyses were performed within analytical hold time. All quality control criteria were met.

No deviations were noted by the Wet Chemistry group.

Katahdin
ANALYTICAL SERVICES

Cert. No. E87604

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
04-01-05

Leslie Dimond
Quality Assurance Officer

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: CTO355-4 **SOW No.** SW846

Client Field ID	Lab Sample ID
PEN43SS2401	WV0975-003
PEN43SS2501	WV0975-004
PEN43SS2601	WV0975-005
PEN43SS3301	WV0975-001
PEN43SS3301	WV0975-001P
PEN43SS3301	WV0975-001S
PEN43SS3401	WV0975-002

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Edward A. Morgan Name: Edward A. Morgan

Date: March 31, 2005 Title: Senior Chemist

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: ICV

File: AVC29A Mar 29, 2005 12:26

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19107.69	95.5
ARSENIC	600.0	624.95	104.2
CALCIUM	20000.0	20564.54	102.8
IRON	20000.0	20445.90	102.2
LEAD	550.0	560.28	101.9
MAGNESIUM	20000.0	21133.80	105.7

SAMPLE: CCV

File: AVC29A Mar 29, 2005 13:08

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49394.36	98.8
ARSENIC	1000.0	1031.73	103.2
CALCIUM	50000.0	51410.48	102.8
IRON	20000.0	20412.08	102.1
LEAD	1000.0	1024.68	102.5
MAGNESIUM	50000.0	51892.89	103.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 14:35

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49350.44	98.7
ARSENIC	1000.0	1053.48	105.3
CALCIUM	50000.0	51568.38	103.1
IRON	20000.0	20497.03	102.5
LEAD	1000.0	1034.44	103.4
MAGNESIUM	50000.0	51927.07	103.9

SAMPLE: CCV

File: AVC29A Mar 29, 2005 14:58

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49032.66	98.1
ARSENIC	1000.0	1032.99	103.3
CALCIUM	50000.0	50323.05	100.6
IRON	20000.0	20058.16	100.3
LEAD	1000.0	1008.07	100.8
MAGNESIUM	50000.0	50645.76	101.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 16:26

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50127.84	100.3
ARSENIC	1000.0	1065.33	106.5
CALCIUM	50000.0	51749.40	103.5
IRON	20000.0	20605.65	103.0
LEAD	1000.0	1031.14	103.1
MAGNESIUM	50000.0	51887.26	103.8

SAMPLE: CCV

File: AVC29A Mar 29, 2005 17:51

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49582.00	99.2
ARSENIC	1000.0	1067.78	106.8
CALCIUM	50000.0	51343.10	102.7
IRON	20000.0	20532.77	102.7
LEAD	1000.0	1031.31	103.1
MAGNESIUM	50000.0	51435.95	102.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 19:15

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49530.15	99.1
ARSENIC	1000.0	1089.26	108.9
CALCIUM	50000.0	51539.16	103.1
IRON	20000.0	20636.52	103.2
LEAD	1000.0	1042.34	104.2
MAGNESIUM	50000.0	51664.58	103.3

SAMPLE: CCV

File: AVC29A Mar 29, 2005 20:40

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49662.82	99.3
ARSENIC	1000.0	1087.99	108.8
CALCIUM	50000.0	51625.40	103.3
IRON	20000.0	20607.18	103.0
LEAD	1000.0	1039.44	103.9
MAGNESIUM	50000.0	51659.52	103.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 22:04

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50498.02	101.0
ARSENIC	1000.0	1092.69	109.3
CALCIUM	50000.0	52570.93	105.1
IRON	20000.0	21035.96	105.2
LEAD	1000.0	1057.34	105.7
MAGNESIUM	50000.0	52575.08	105.2

SAMPLE: CCV

File: AVC29A Mar 29, 2005 23:29

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50887.60	101.8
ARSENIC	1000.0	1116.28	111.6
CALCIUM	50000.0	53030.66	106.1
IRON	20000.0	21231.95	106.2
LEAD	1000.0	1076.92	107.7
MAGNESIUM	50000.0	53054.06	106.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 30, 2005 0:54

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	51322.41	102.6
ARSENIC	1000.0	1119.37	111.9 *
CALCIUM	50000.0	53429.43	106.9
IRON	20000.0	21431.89	107.2
LEAD	1000.0	1080.14	108.0
MAGNESIUM	50000.0	53401.00	106.8

SAMPLE: CCV

File: AVC29A Mar 30, 2005 2:04

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50752.88	101.5
ARSENIC	1000.0	1113.98	111.4 *
CALCIUM	50000.0	53173.92	106.3
IRON	20000.0	21239.60	106.2
LEAD	1000.0	1077.79	107.8
MAGNESIUM	50000.0	53109.15	106.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 30, 2005 2:39

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50966.40	101.9
ARSENIC	1000.0	1106.16	110.6 *
CALCIUM	50000.0	52960.71	105.9
IRON	20000.0	21197.98	106.0
LEAD	1000.0	1073.66	107.4
MAGNESIUM	50000.0	52834.74	105.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: ICV

File: BVC22D Mar 22, 2005 14:51

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	20591.77	103.0
BARIUM	500.0	524.09	104.8
CALCIUM	20000.0	20952.20	104.8
COPPER	500.0	493.73	98.7
IRON	20000.0	21479.00	107.4
MAGNESIUM	20000.0	20549.28	102.7

SAMPLE: CCV

File: BVC22D Mar 22, 2005 15:25

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50079.38	100.2
BARIUM	1000.0	1010.39	101.0
CALCIUM	50000.0	51018.46	102.0
COPPER	1000.0	999.83	100.0
IRON	20000.0	20553.75	102.8
MAGNESIUM	50000.0	50033.50	100.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: BVC22D Mar 22, 2005 16:33

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50407.16	100.8
BARIUM	1000.0	1009.41	100.9
CALCIUM	50000.0	50835.95	101.7
COPPER	1000.0	1005.78	100.6
IRON	20000.0	20593.19	103.0
MAGNESIUM	50000.0	50285.58	100.6

SAMPLE: CCV

File: BVC22D Mar 22, 2005 17:41

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50267.39	100.5
BARIUM	1000.0	1006.58	100.7
CALCIUM	50000.0	50348.28	100.7
COPPER	1000.0	1002.28	100.2
IRON	20000.0	20441.33	102.2
MAGNESIUM	50000.0	50049.89	100.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: BVC22D Mar 22, 2005 18:48

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	51176.30	102.4
BARIUM	1000.0	1020.56	102.1
CALCIUM	50000.0	51083.33	102.2
COPPER	1000.0	1018.08	101.8
IRON	20000.0	20799.56	104.0
MAGNESIUM	50000.0	50991.04	102.0

SAMPLE: CCV

File: BVC22D Mar 22, 2005 19:56

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50242.20	100.5
BARIUM	1000.0	1000.92	100.1
CALCIUM	50000.0	50042.49	100.1
COPPER	1000.0	997.76	99.8
IRON	20000.0	20316.79	101.6
MAGNESIUM	50000.0	49946.17	99.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: BVC22D Mar 22, 2005 21:03

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49938.68	99.9
BARIUM	1000.0	994.73	99.5
CALCIUM	50000.0	49999.61	100.0
COPPER	1000.0	991.24	99.1
IRON	20000.0	20271.37	101.4
MAGNESIUM	50000.0	49792.04	99.6

SAMPLE: CCV

File: BVC22D Mar 22, 2005 22:11

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50390.08	100.8
BARIUM	1000.0	1001.73	100.2
CALCIUM	50000.0	50066.52	100.1
COPPER	1000.0	1000.97	100.1
IRON	20000.0	20389.74	101.9
MAGNESIUM	50000.0	50131.22	100.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: ICV

File: BVC28A Mar 28, 2005 13:29

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19774.97	98.9
CALCIUM	20000.0	19512.29	97.6
COPPER	500.0	476.57	95.3
IRON	20000.0	20337.30	101.7
MAGNESIUM	20000.0	19459.55	97.3

SAMPLE: CCV

File: BVC28A Mar 28, 2005 14:03

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49920.08	99.8
CALCIUM	50000.0	49782.82	99.6
COPPER	1000.0	971.53	97.2
IRON	20000.0	20325.79	101.6
MAGNESIUM	50000.0	49745.14	99.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: BVC28A Mar 28, 2005 14:43

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49970.51	99.9
CALCIUM	50000.0	49538.16	99.1
COPPER	1000.0	975.26	97.5
IRON	20000.0	20213.67	101.1
MAGNESIUM	50000.0	49684.63	99.4

SAMPLE: CCV

File: BVC28A Mar 28, 2005 15:29

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50078.65	100.2
CALCIUM	50000.0	49511.24	99.0
COPPER	1000.0	976.13	97.6
IRON	20000.0	20188.38	100.9
MAGNESIUM	50000.0	49736.77	99.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: BVC28A Mar 28, 2005 16:45

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50181.31	100.4
CALCIUM	50000.0	50531.05	101.1
COPPER	1000.0	975.91	97.6
IRON	20000.0	20497.97	102.5
MAGNESIUM	50000.0	50220.14	100.4

SAMPLE: CCV

File: BVC28A Mar 28, 2005 17:53

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50484.28	101.0
CALCIUM	50000.0	50484.54	101.0
COPPER	1000.0	979.40	97.9
IRON	20000.0	20450.45	102.3
MAGNESIUM	50000.0	50382.11	100.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCV

File: BVC28A Mar 28, 2005 19:01

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50830.90	101.7
CALCIUM	50000.0	50489.70	101.0
COPPER	1000.0	985.45	98.5
IRON	20000.0	20535.65	102.7
MAGNESIUM	50000.0	50596.54	101.2

SAMPLE: CCV

File: BVC28A Mar 28, 2005 19:51

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	51120.74	102.2
CALCIUM	50000.0	50744.53	101.5
COPPER	1000.0	986.55	98.7
IRON	20000.0	20646.23	103.2
MAGNESIUM	50000.0	50820.42	101.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CRI

File: AVC29A Mar 29, 2005 12:47

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	18.65	93.2
LEAD	6.0	6.92	115.3

SAMPLE: CRI

File: AVC29A Mar 29, 2005 17:30

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	21.33	106.7
LEAD	6.0	7.14	119.0

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CRI

File: AVC29A Mar 29, 2005 21:43

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	20.99	104.9
LEAD	6.0	7.02	117.0

SAMPLE: CRI

File: AVC29A Mar 30, 2005 02:18

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	19.66	98.3
LEAD	6.0	8.31	138.5

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSVC18ICS0

Matrix: SOIL **SDG Name:** CTO355-4

QC Batch ID: VC18ICS0

Concentration Units : mg/Kg

Analyte	RESULT	C
ARSENIC	0.280	U
BARIUM	0.050	U
COPPER	0.250	U
LEAD	0.210	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: ICB

File: AVC29A Mar 29, 2005 12:33

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.60	I

SAMPLE: CCB

File: AVC29A Mar 29, 2005 13:15

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	-9.10	I
IRON	-39.10	I
LEAD	2.07	U
MAGNESIUM	-22.14	I

SAMPLE: CCB

File: AVC29A Mar 29, 2005 14:42

Analyte	Result	C
ALUMINUM	54.58	I
ARSENIC	2.81	U
CALCIUM	-15.12	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCB

File: AVC29A Mar 29, 2005 15:05

Analyte	Result	C
ALUMINUM	44.85	I
ARSENIC	2.81	U
CALCIUM	-10.50	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.89	I

SAMPLE: CCB

File: AVC29A Mar 29, 2005 16:33

Analyte	Result	C
ALUMINUM	57.73	I
ARSENIC	-3.16	I
CALCIUM	-12.59	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	9.73	I

SAMPLE: CCB

File: AVC29A Mar 29, 2005 17:58

Analyte	Result	C
ALUMINUM	64.38	I
ARSENIC	2.81	U
CALCIUM	-20.41	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCB

File: AVC29A Mar 29, 2005 19:22

Analyte	Result	C
ALUMINUM	87.47	I
ARSENIC	2.81	U
CALCIUM	-24.59	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 20:47

Analyte	Result	C
ALUMINUM	81.84	I
ARSENIC	2.81	U
CALCIUM	-21.02	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 22:11

Analyte	Result	C
ALUMINUM	82.82	I
ARSENIC	2.81	U
CALCIUM	-22.76	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCB

File: AVC29A Mar 29, 2005 23:36

Analyte	Result	C
ALUMINUM	78.73	I
ARSENIC	2.81	U
CALCIUM	-23.47	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC29A Mar 30, 2005 1:01

Analyte	Result	C
ALUMINUM	88.63	I
ARSENIC	2.81	U
CALCIUM	-25.16	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.63	I

SAMPLE: CCB

File: AVC29A Mar 30, 2005 2:11

Analyte	Result	C
ALUMINUM	83.66	I
ARSENIC	2.81	U
CALCIUM	-21.59	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCB

File: AVC29A Mar 30, 2005 2:46

Analyte	Result	C
ALUMINUM	85.34	I
ARSENIC	2.81	U
CALCIUM	-21.69	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: ICB

File: BVC22D Mar 22, 2005 14:57

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U

SAMPLE: CCB

File: BVC22D Mar 22, 2005 15:31

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	17.65	I
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U

SAMPLE: CCB

File: BVC22D Mar 22, 2005 16:39

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	24.25	I
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCB

File: BVC22D Mar 22, 2005 17:46

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	23.18	I
COPPER	2.52	U
IRON	10.48	I
MAGNESIUM	33.70	U

SAMPLE: CCB

File: BVC22D Mar 22, 2005 18:54

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	19.32	I
COPPER	2.52	U
IRON	10.32	I
MAGNESIUM	33.70	U

SAMPLE: CCB

File: BVC22D Mar 22, 2005 20:01

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	36.74	I
COPPER	2.52	U
IRON	18.83	I
MAGNESIUM	40.85	I

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCB

File: BVC22D Mar 22, 2005 21:09

Analyte	Result	C
ALUMINUM	21.71	I
BARIUM	0.60	I
CALCIUM	43.36	I
COPPER	2.52	U
IRON	21.59	I
MAGNESIUM	47.12	I

SAMPLE: CCB

File: BVC22D Mar 22, 2005 22:17

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: ICB

File: BVC28A Mar 28, 2005 13:35

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 14:09

Analyte	Result	C
ALUMINUM	55.95	I
CALCIUM	53.97	
COPPER	2.52	U
IRON	29.09	I
MAGNESIUM	59.56	

SAMPLE: CCB

File: BVC28A Mar 28, 2005 14:48

Analyte	Result	C
ALUMINUM	33.07	I
CALCIUM	20.34	I
COPPER	2.52	U
IRON	16.83	I
MAGNESIUM	36.09	I

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCB

File: BVC28A Mar 28, 2005 15:35

Analyte	Result	C
ALUMINUM	22.28	I
CALCIUM	15.90	U
COPPER	2.52	U
IRON	12.65	I
MAGNESIUM	34.94	I

SAMPLE: CCB

File: BVC28A Mar 28, 2005 16:51

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	12.43	I
MAGNESIUM	33.70	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 17:59

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	15.04	I
MAGNESIUM	33.70	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Concentration Units: ug/L

SAMPLE: CCB

File: BVC28A Mar 28, 2005 19:06

Analyte	Result	C
ALUMINUM	25.84	I
CALCIUM	15.90	U
COPPER	2.52	U
IRON	24.09	I
MAGNESIUM	43.90	I

SAMPLE: CCB

File: BVC28A Mar 28, 2005 19:57

Analyte	Result	C
ALUMINUM	82.45	I
CALCIUM	73.04	
COPPER	2.52	U
IRON	40.60	I
MAGNESIUM	83.62	

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** A

Instrument Name: TJA TRACE ICP **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ARSENIC	8.0	2.81	P
LEAD	5.0	2.07	P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** B

Instrument Name: TJA 61 ICP **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
BARIUM	5.0	0.50	P
COPPER	25	2.52	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** VC18ICS0

Matrix: SOIL **SDG Name:** CTO355-4

Method: P **Prep Date:** 03/18/2005

Client ID	Lab Sample ID	Initial (g)	Final (L)
LCSOVC18ICS0	LCSOVC18ICS0	1	0.1
PBSVC18ICS0	PBSVC18ICS0	1	0.1
PEN43SS3301	WV0975-001	1.21	0.1
PEN43SS3301P	WV0975-001P	1.22	0.1
PEN43SS3301S	WV0975-001S	1.2	0.1
PEN43SS3401	WV0975-002	1.34	0.1
PEN43SS2401	WV0975-003	1.25	0.1
PEN43SS2501	WV0975-004	1.36	0.1
PEN43SS2601	WV0975-005	1.64	0.1

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Instrument ID: TJA TRACE ICP **File Name:** AVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	11:40	Al	As	Ca	Fe Pb Mg
S1		1	11:47	Al	As	Ca	Fe Pb Mg
AL IEC		1	11:57	Al	As	Ca	Fe Pb Mg
FE IEC		1	12:04	Al	As	Ca	Fe Pb Mg
MN IEC		1	12:11	Al	As	Ca	Fe Pb Mg
IEC		1	12:18	Al	As	Ca	Fe Pb Mg
ICV		1	12:26	Al	As	Ca	Fe Pb Mg
ICB		1	12:33	Al	As	Ca	Fe Pb Mg
PQL		1	12:40	Al	As	Ca	Fe Pb Mg
CRI		1	12:47	Al	As	Ca	Fe Pb Mg
ICSA		1	12:54	Al	As	Ca	Fe Pb Mg
ICSAB		1	13:01	Al	As	Ca	Fe Pb Mg
CCV		1	13:08	Al	As	Ca	Fe Pb Mg
CCB		1	13:15	Al	As	Ca	Fe Pb Mg
LCSOVC18ICS0		1	13:22		As		Pb
PBSVC18ICS0		1	13:30		As		Pb
WV0975-001	PEN43SS3301	1	13:37				Pb
ZZZZZZ		1	13:46				
WV0975-001S	PEN43SS3301S	1	13:53				Pb
WV0975-001P	PEN43SS3301P	1	14:00				Pb
WV0975-002	PEN43SS3401	1	14:07				Pb
WV0975-003	PEN43SS2401	2	14:14		As		
WV0975-003	PEN43SS2401	10	14:21				Pb
WV0975-004	PEN43SS2501	1	14:28		As		
CCV		1	14:35	Al	As	Ca	Fe Pb Mg
CCB		1	14:42	Al	As	Ca	Fe Pb Mg
ZZZZZZ		2	14:51				
CCV		1	14:58	Al	As	Ca	Fe Pb Mg
CCB		1	15:05	Al	As	Ca	Fe Pb Mg
WV0975-004	PEN43SS2501	5	15:12				Pb
WV0975-005	PEN43SS2601	1	15:19		As		Pb
ZZZZZZ		1	15:30				
ZZZZZZ		1	15:37				
ZZZZZZ		1	15:44				
ZZZZZZ		1	15:51				
ZZZZZZ		1	15:58				
ZZZZZZ		1	16:05				
ZZZZZZ		1	16:12				
ZZZZZZ		1	16:19				
CCV		1	16:26	Al	As	Ca	Fe Pb Mg
CCB		1	16:33	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	16:41				
ZZZZZZ		2	16:48				
ZZZZZZ		5	16:55				
ZZZZZZ		10	17:02				
ZZZZZZ		25	17:09				
ZZZZZZ		2	17:16				
ZZZZZZ		2	17:23				
CRI		1	17:30	Al	As	Ca	Fe Pb Mg
ICSA		1	17:37	Al	As	Ca	Fe Pb Mg

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Instrument ID: TJA TRACE ICP **File Name:** AVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ICSAB		1	17:44	Al	As	Ca	Fe Pb Mg
CCV		1	17:51	Al	As	Ca	Fe Pb Mg
CCB		1	17:58	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	18:05				
ZZZZZZ		1	18:12				
ZZZZZZ		2	18:19				
ZZZZZZ		10	18:26				
ZZZZZZ		2	18:33				
ZZZZZZ		20	18:40				
ZZZZZZ		1	18:47				
ZZZZZZ		1	18:54				
ZZZZZZ		1	19:01				
ZZZZZZ		1	19:08				
CCV		1	19:15	Al	As	Ca	Fe Pb Mg
CCB		1	19:22	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	19:29				
ZZZZZZ		1	19:36				
ZZZZZZ		1	19:44				
ZZZZZZ		1	19:51				
ZZZZZZ		1	19:58				
ZZZZZZ		1	20:05				
ZZZZZZ		1	20:12				
ZZZZZZ		1	20:19				
ZZZZZZ		1	20:26				
ZZZZZZ		3	20:33				
CCV		1	20:40	Al	As	Ca	Fe Pb Mg
CCB		1	20:47	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	20:54				
ZZZZZZ		1	21:01				
ZZZZZZ		1	21:08				
ZZZZZZ		1	21:15				
ZZZZZZ		1	21:22				
ZZZZZZ		1	21:29				
ZZZZZZ		1	21:36				
CRI		1	21:43	Al	As	Ca	Fe Pb Mg
ICSA		1	21:50	Al	As	Ca	Fe Pb Mg
ICSAB		1	21:57	Al	As	Ca	Fe Pb Mg
CCV		1	22:04	Al	As	Ca	Fe Pb Mg
CCB		1	22:11	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	22:18				
ZZZZZZ		1	22:26				
ZZZZZZ		1	22:33				
ZZZZZZ		1	22:40				
ZZZZZZ		1	22:47				
ZZZZZZ		1	22:54				
ZZZZZZ		1	23:01				
ZZZZZZ		1	23:08				
ZZZZZZ		1	23:15				
ZZZZZZ		1	23:22				
CCV		1	23:29	Al	As	Ca	Fe Pb Mg
CCB		1	23:36	Al	As	Ca	Fe Pb Mg

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Instrument ID: TJA TRACE ICP **File Name:** AVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements						
ZZZZZZ		5	23:43							
ZZZZZZ		1	23:50							
ZZZZZZ		1	23:57							
ZZZZZZ		1	0:04							
ZZZZZZ		1	0:11							
ZZZZZZ		1	0:18							
ZZZZZZ		1	0:25							
ZZZZZZ		1	0:32							
ZZZZZZ		1	0:39							
ZZZZZZ		1	0:47							
CCV		1	0:54	Al	As		Ca	Fe	Pb	Mg
CCB		1	1:01	Al	As		Ca	Fe	Pb	Mg
ZZZZZZ		1	1:08							
ZZZZZZ		1	1:15							
ZZZZZZ		10	1:22							
ZZZZZZ		1	1:29							
ZZZZZZ		1	1:36							
ZZZZZZ		1	1:43							
ZZZZZZ		1	1:50							
WV0975-001L	PEN43SS3301L	5	1:57					Pb		
CCV		1	2:04	Al	As		Ca	Fe	Pb	Mg
CCB		1	2:11	Al	As		Ca	Fe	Pb	Mg
CRI		1	2:18	Al	As		Ca	Fe	Pb	Mg
ICSA		1	2:25	Al	As		Ca	Fe	Pb	Mg
ICSAB		1	2:32	Al	As		Ca	Fe	Pb	Mg
CCV		1	2:39	Al	As		Ca	Fe	Pb	Mg
CCB		1	2:46	Al	As		Ca	Fe	Pb	Mg

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Instrument ID: TJA 61 ICP **File Name:** BVC22D

Date: 3/22/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements				
S0		1	14:24	Al	Ba	Ca	Cu Fe	Mg
S1		1	14:29	Al	Ba	Ca	Cu Fe	Mg
AL IEC		1	14:35	Al	Ba	Ca	Cu Fe	Mg
FE IEC		1	14:43	Al	Ba	Ca	Cu Fe	Mg
ICV		1	14:51	Al	Ba	Ca	Cu Fe	Mg
ICB		1	14:57	Al	Ba	Ca	Cu Fe	Mg
PQL		1	15:03	Al	Ba	Ca	Cu Fe	Mg
CRI		1	15:08	Al	Ba	Ca	Cu Fe	Mg
ICSA		1	15:14	Al	Ba	Ca	Cu Fe	Mg
ICSAB		1	15:20	Al	Ba	Ca	Cu Fe	Mg
CCV		1	15:25	Al	Ba	Ca	Cu Fe	Mg
CCB		1	15:31	Al	Ba	Ca	Cu Fe	Mg
ZZZZZZ		1	15:37					
ZZZZZZ		5	15:42					
ZZZZZZ		1	15:48					
ZZZZZZ		1	15:54					
ZZZZZZ		10	15:59					
ZZZZZZ		1	16:05					
ZZZZZZ		1	16:10					
ZZZZZZ		10	16:16					
ZZZZZZ		1	16:22					
ZZZZZZ		10	16:27					
CCV		1	16:33	Al	Ba	Ca	Cu Fe	Mg
CCB		1	16:39	Al	Ba	Ca	Cu Fe	Mg
ZZZZZZ		1	16:44					
ZZZZZZ		1	16:50					
ZZZZZZ		10	16:56					
ZZZZZZ		50	17:01					
ZZZZZZ		10	17:07					
ZZZZZZ		10	17:12					
ZZZZZZ		1	17:18					
ZZZZZZ		5	17:24					
ZZZZZZ		1	17:29					
ZZZZZZ		1	17:35					
CCV		1	17:41	Al	Ba	Ca	Cu Fe	Mg
CCB		1	17:46	Al	Ba	Ca	Cu Fe	Mg
ZZZZZZ		1	17:52					
ZZZZZZ		10	17:58					
ZZZZZZ		1	18:03					
ZZZZZZ		1	18:09					
ZZZZZZ		1	18:14					
ZZZZZZ		1	18:20					
ZZZZZZ		1	18:26					
CRI		1	18:31	Al	Ba	Ca	Cu Fe	Mg
ICSA		1	18:37	Al	Ba	Ca	Cu Fe	Mg
ICSAB		1	18:43	Al	Ba	Ca	Cu Fe	Mg
CCV		1	18:48	Al	Ba	Ca	Cu Fe	Mg
CCB		1	18:54	Al	Ba	Ca	Cu Fe	Mg
ZZZZZZ		1	18:59					
ZZZZZZ		1	19:05					

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Instrument ID: TJA 61 ICP **File Name:** BVC22D

Date: 3/22/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements				
ZZZZZZ		1	19:11					
ZZZZZZ		1	19:16					
ZZZZZZ		1	19:22					
ZZZZZZ		1	19:28					
ZZZZZZ		1	19:33					
ZZZZZZ		1	19:39					
ZZZZZZ		1	19:45					
ZZZZZZ		1	19:50					
CCV		1	19:56	Al	Ba	Ca	Cu Fe	Mg
CCB		1	20:01	Al	Ba	Ca	Cu Fe	Mg
ZZZZZZ		1	20:07					
LCSOVC18ICS0		1	20:13		Ba		Cu	
PBSVC18ICS0		1	20:18		Ba		Cu	
WV0975-001	PEN43SS3301	1	20:24				Cu	
WV0975-001L	PEN43SS3301L	5	20:30				Cu	
WV0975-001P	PEN43SS3301P	1	20:35				Cu	
WV0975-001S	PEN43SS3301S	1	20:41				Cu	
WV0975-002	PEN43SS3401	1	20:47				Cu	
WV0975-003	PEN43SS2401	1	20:52		Ba			
WV0975-004	PEN43SS2501	1	20:58		Ba		Cu	
CCV		1	21:03	Al	Ba	Ca	Cu Fe	Mg
CCB		1	21:09	Al	Ba	Ca	Cu Fe	Mg
WV0975-005	PEN43SS2601	1	21:15		Ba		Cu	
ZZZZZZ		1	21:20					
ZZZZZZ		1	21:26					
ZZZZZZ		1	21:32					
ZZZZZZ		1	21:37					
ZZZZZZ		1	21:43					
ZZZZZZ		1	21:49					
CRI		1	21:54	Al	Ba	Ca	Cu Fe	Mg
ICSA		1	22:00	Al	Ba	Ca	Cu Fe	Mg
ICSAB		1	22:05	Al	Ba	Ca	Cu Fe	Mg
CCV		1	22:11	Al	Ba	Ca	Cu Fe	Mg
CCB		1	22:17	Al	Ba	Ca	Cu Fe	Mg

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Instrument ID: TJA 61 ICP **File Name:** BVC28A

Date: 3/28/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements				
S0		1	13:01	Al	Ca	Cu	Fe	Mg
S1		1	13:07	Al	Ca	Cu	Fe	Mg
AL IEC		1	13:12	Al	Ca	Cu	Fe	Mg
FE IEC		1	13:21	Al	Ca	Cu	Fe	Mg
ICV		1	13:29	Al	Ca	Cu	Fe	Mg
ICB		1	13:35	Al	Ca	Cu	Fe	Mg
PQL		1	13:40	Al	Ca	Cu	Fe	Mg
CRI		1	13:46	Al	Ca	Cu	Fe	Mg
ICSA		1	13:52	Al	Ca	Cu	Fe	Mg
ICSAB		1	13:57	Al	Ca	Cu	Fe	Mg
CCV		1	14:03	Al	Ca	Cu	Fe	Mg
CCB		1	14:09	Al	Ca	Cu	Fe	Mg
ZZZZZZ		1	14:14					
ZZZZZZ		1	14:20					
ZZZZZZ		1	14:26					
ZZZZZZ		1	14:31					
ZZZZZZ		1	14:37					
CCV		1	14:43	Al	Ca	Cu	Fe	Mg
CCB		1	14:48	Al	Ca	Cu	Fe	Mg
CCV		1	15:29	Al	Ca	Cu	Fe	Mg
CCB		1	15:35	Al	Ca	Cu	Fe	Mg
ZZZZZZ		1	15:41					
ZZZZZZ		1	15:46					
ZZZZZZ		1	15:53					
ZZZZZZ		10	15:59					
ZZZZZZ		1	16:05					
ZZZZZZ		20	16:11					
ZZZZZZ		1	16:16					
CRI		1	16:28	Al	Ca	Cu	Fe	Mg
ICSA		1	16:34	Al	Ca	Cu	Fe	Mg
ICSAB		1	16:40	Al	Ca	Cu	Fe	Mg
CCV		1	16:45	Al	Ca	Cu	Fe	Mg
CCB		1	16:51	Al	Ca	Cu	Fe	Mg
ZZZZZZ		5	16:57					
ZZZZZZ		5	17:02					
ZZZZZZ		2	17:08					
ZZZZZZ		5	17:14					
ZZZZZZ		1	17:19					
ZZZZZZ		5	17:25					
ZZZZZZ		1	17:30					
ZZZZZZ		1	17:36					
ZZZZZZ		10	17:42					
ZZZZZZ		2	17:47					
CCV		1	17:53	Al	Ca	Cu	Fe	Mg
CCB		1	17:59	Al	Ca	Cu	Fe	Mg
ZZZZZZ		2	18:04					
ZZZZZZ		10	18:10					
ZZZZZZ		2	18:16					
WV0975-003	PEN43SS2401	2	18:21			Cu		
ZZZZZZ		5	18:27					

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-4

Instrument ID: TJA 61 ICP **File Name:** BVC28A

Date: 3/28/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements				
ZZZZZZ		2	18:32					
ZZZZZZ		10	18:38					
ZZZZZZ		2	18:44					
ZZZZZZ		2	18:49					
ZZZZZZ		2	18:55					
CCV		1	19:01	Al	Ca	Cu	Fe	Mg
CCB		1	19:06	Al	Ca	Cu	Fe	Mg
ZZZZZZ		2	19:12					
ZZZZZZ		1	19:18					
ZZZZZZ		1	19:23					
ZZZZZZ		1	19:29					
CRI		1	19:34	Al	Ca	Cu	Fe	Mg
ICSA		1	19:40	Al	Ca	Cu	Fe	Mg
ICSAB		1	19:46	Al	Ca	Cu	Fe	Mg
CCV		1	19:51	Al	Ca	Cu	Fe	Mg
CCB		1	19:57	Al	Ca	Cu	Fe	Mg

FORM XIV - IN

Elem	2203/2	1960/1	1960/2
Units			
Avge	21.089	.01696	-.00253
SDev	.031	.00013	.00099
%RSD	.14707	.76119	38.931
#1	21.111	.01705	-.00184
#2	21.067	.01686	-.00323

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	360.063	--	--	--	--	--	--
Avge	32664	--	--	--	--	--	--
SDev	57.27565	--	--	--	--	--	--
%RSD	.1753506	--	--	--	--	--	--
#1	32704	--	--	--	--	--	--
#2	32623	--	--	--	--	--	--

Method: NONAK Sample Name: WV0975-003 Operator:
Run Time: 03/29/05 14:21:26 Sample: PEN43552401
Comment:
Mode: CONC Corr. Factor: 10

83.7% solid
1.25 g / 100 mL
10x D.F.

Elem	Al	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	79.771	.08859	3.4943	-.00038	.03569	.01565	17.332
SDev	.377	.01369	.0123	.00031	.00017	.00116	.109
%RSD	.47216	15.455	.35089	82.012	.47938	7.4274	.62871
#1	80.037	.09828	3.5030	-.00059	.03581	.01647	17.409
#2	79.504	.07891	3.4857	-.00016	.03557	.01482	17.255

Elem	Cr	Co	Cu	Fe	Mg	Mn	Mo
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.19820	.01745	8.9011	289.51	6.2863	3.7662	.00139
SDev	.00064	.00727	.0497	1.62	.0300	.0265	.00850
%RSD	.32162	41.665	.55838	.55872	.47756	.70491	613.20
#1	.19865	.01231	8.9362	290.65	6.2651	3.7850	-.00462
#2	.19775	.02259	8.8659	288.37	6.3076	3.7474	.00739

Elem	Ni	Ag	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.27509	.02212	.15274	.01586	1.9203	.79613	.17301
SDev	.00164	.00016	.00084	.00757	.0179	.00505	.00549
%RSD	.59675	.71752	.54828	47.729	.93099	.63467	3.1717
#1	.27393	.02223	.15333	.01051	1.9330	.79971	.16913
#2	.27625	.02201	.15214	.02122	1.9077	.79256	.17689

Elem	Zn	Pb	Se	Sb	2068/1	2068/2	2203/1
Units	mg/L	mg/L	mg/L	mg/L			
Avge	16.673	20.849	.00086	.03323	.05804	.02084	20.925
SDev	.099	.133	.02983	.01298	.01579	.02734	.073

$20.849\ mg/L \times \frac{100\ mL}{1.25g} = \frac{1667.92}{0.837} = 1993\ mg/kg$

%RSD	.59324	.63947	3467.1	39.063	27.200	131.18	.34721
#1	16.742	20.944	-.02023	.02405	.06920	.00151	20.977
#2	16.603	20.755	.02195	.04241	.04688	.04018	20.874

Elem	2203/2	1960/1	1960/2
Units			
Avge	20.812	.01779	-.00759
SDev	.164	.01138	.03904
%RSD	.78617	63.986	514.13
#1	20.927	.00974	-.03520
#2	20.696	.02584	.02001

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	360.063	--	--	--	--	--	--
Avge	32412	--	--	--	--	--	--
SDev	185.2620	--	--	--	--	--	--
%RSD	.5715845	--	--	--	--	--	--
#1	32281	--	--	--	--	--	--
#2	32543	--	--	--	--	--	--

Method: NONAK Sample Name: WV0975-004 Operator:
Run Time: 03/29/05 14:28:27
Comment:
Mode: CONC Corr. Factor: 1

Elem	Al	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	62.925	.05408	2.6633	.00070	.01958	.01494	14.881
SDev	.190	.00081	.0135	.00003	.00012	.00038	.020
%RSD	.30255	1.4879	.50780	4.8190	.59369	2.5473	.13599
#1	63.059	.05465	2.6729	.00068	.01966	.01467	14.895
#2	62.790	.05351	2.6537	.00072	.01949	.01520	14.866

Elem	Cr	Co	Cu	Fe	Mg	Mn	Mo
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.11743	.01254	4.2235	149.18	3.1021	3.0064	.00429
SDev	.00111	.00037	.0163	.32	.0074	.0064	.00120
%RSD	.94881	2.9681	.38518	.21572	.23918	.21416	28.115
#1	.11822	.01280	4.2350	149.41	3.1074	3.0109	.00343
#2	.11665	.01228	4.2120	148.95	3.0969	3.0018	.00514

Elem	Ni	Ag	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.14806	.01610	.10869	-.00155	1.2108	.60794	.12983
SDev	.00082	.00036	.00031	.00025	.0011	.00201	.00115
%RSD	.55613	2.2237	.28843	16.381	.09253	.33132	.88315
#1	.14864	.01635	.10891	-.00173	1.2116	.60937	.13064
#2	.14747	.01585	.10847	-.00137	1.2100	.60652	.12902

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**G. WALKER**	**DATE:**	**APRIL 28, 2005**
FROM:	**BERNARD F SPADA III**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION- SVOC/PAH CTO 355, NAS PENSACOLA SDG 3554**		
SAMPLES:	5/Soil		

PEN43SS2401	PEN43SS2501	PEN43SS2601
PEN43SS3301	PEN43SS3401	

OVERVIEW

The sample set for CTO 355, NAS Pensacola, SDG 3554 consists of five (5) environmental soil samples. All samples were analyzed for semivolatile organic compounds (SVOC) and polynuclear aromatic hydrocarbons (PAH).

The samples were collected by Tetra Tech NUS on March 6, 2005 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8270C and 8270SIM analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- Data completeness
- * Holding times
- * GC/MS Tuning
- Initial and continuing calibration
- * Blank results
- Surrogate spike recoveries
- Internal standard recoveries
- Blank Spike/Blank Spike Duplicate Results
- Matrix Spike/Matrix Spike Duplicate Results
- * Compound Quantitation
- * Compound Identification
- * Tentatively Identified Compounds
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are included in Appendix B.

Semivolatile

The validator noted that the SVOC CCAL performed on March 30 at 11:34 contained in this SDG had a different RRF and %D value for 4-nitrophenol than the same CCAL provided in SDG 3551. The validator requested the laboratory to determine which was correct and re-submit. The laboratory determined that the CCAL in SDG 3551 was correct and re-submitted a new CCAL Form VII for SDG 3554. No action was taken on this basis. This item was noted as a completeness issue.

The laboratory did not submit the initial calibration performed on March 28, 2005, which was associated with the continuing calibration performed on March 30, 2005, with the data package. The validator requested the laboratory to submit the missing data. The data was submitted upon request.

The validator noted that the initial submittal of the continuing calibration (CCAL) performed on March 15, 2005 included information for benzaldehyde that was inconsistent with the initial calibration. According to the laboratory, the aforementioned CCAL had a retention time shift for benzaldehyde. The CCAL summary form (Form VII) was regenerated and re-submitted.

The initial calibration performed on March 15, 2005 was below the 0.05 relative response factor (RRF) quality control criterion for benzaldehyde. Non-detected results for benzaldehyde were rejected (UR) in samples PEN43SS2501 and PEN43SS3401.

The initial calibration performed on March 15, 2005 exceeded the 30% relative standard deviation (RSD) quality control criterion for benzaldehyde. No action was taken on this basis because all associated results for benzaldehyde were rejected for RRF non-compliance.

The continuing calibration performed on March 25 at 12:22 was below the 0.05 RRF quality control criterion for benzaldehyde. Non-detected results for benzaldehyde were rejected (UR) in samples PEN43SS2501 and PEN43SS3401.

The continuing calibration performed on March 25 at 12:22 exceeded the 25% difference quality control criterion for bis(2-chloroethyl)ether and 4-nitrophenol. Non-detected results for the aforementioned compounds were qualified as estimated (UJ) in samples PEN43SS2501 and PEN43SS3401.

The initial calibration performed on March 28, 2005 exceeded the 30% RSD quality control criterion for benzaldehyde and 2,4-dinitrophenol. Non-detected results for benzaldehyde were qualified as estimated (UJ) in samples PEN43SS2401, PEN43SS2601, and PEN43SS3301. No action was taken for 2,4-dinitrophenol on this basis because all associated results were rejected for RRF non-compliance.

The continuing calibration performed on March 30 at 11:34 was below the 0.05 RRF quality control criterion for caprolactam and 2,4-dinitrophenol. Non-detected results for the aforementioned compounds were rejected (UR) in samples PEN43SS2401, PEN43SS2601, and PEN43SS3301.

The continuing calibration performed on March 30 at 11:34 exceeded the 25% difference quality control criterion for benzaldehyde, hexachlorocyclopentadiene, and 2,4-dinitrophenol. No action was taken for benzaldehyde and 2,4-dinitrophenol on this basis because the associated results were rejected for RRF non-compliance. Non-detected results for hexachlorocyclopentadiene were qualified as estimated (UJ) in samples PEN43SS2401, PEN43SS2601, and PEN43SS3301.

The surrogate 2,4,6-tribromophenol exceeded the percent recovery quality control criterion in samples PEN43SS2501, PEN43SS3401, the LCS and LCSD. No action was taken on this basis because all results were non-detected in the environmental samples.

The percent recoveries of 4-chloroaniline, 3-nitroaniline, and N-nitrosodiphenylamine were below the quality control criterion in the LCS/LCSD. Non-detected results for the aforementioned compounds were qualified as estimated (UJ) in all samples.

An MS/MSD was not performed with this SDG. No action was taken on this basis because an LCS/LCSD was performed.

PAH

The continuing calibration performed on March 23 at 08:09 exceeded the 25% difference quality control criterion for benzo(a)anthracene. Positive results for benzo(a)anthracene were qualified as estimated (J) in samples PEN43SS2601, PEN43SS3301, and PEN43SS3401.

The continuing calibration performed on March 24 at 09:55 exceeded the 25% difference quality control criterion for fluoranthene, benzo(a)anthracene, benzo(b)fluoranthene, and benzo(g,h,i)perylene. Positive results for fluoranthene, benzo(a)anthracene, and benzo(b)fluoranthene were qualified as estimated (J) in samples PEN42SS2401 and PEN42SS2501. No action was taken for benzo(g,h,i)perylene on this basis because no results for benzo(g,h,i)perylene associated with this calibration were used for validation.

The percent recoveries of 2-methylnaphthalene and benzo(a)anthracene exceeded the quality control criterion in the LCS/LCSD. Positive results for the aforementioned compounds were qualified as estimated (J) in all samples. No action was taken for the non-detected result for 2-methylnaphthalene in sample PEN43SS3301.

Samples PEN42SS2401 and PEN42SS2501 were re-analyzed at 2X dilutions because the concentration of benzo(a)anthracene, benzo(b)fluoranthene, and fluoranthene exceeded the linear calibration range of the instrument. The results from the 2X dilutions for the aforementioned compounds were used for validation.

An MS/MSD was not performed with this SDG. No action was taken on this basis because an LCS/LCSD was performed.

Positive results below the reporting limit were qualified as estimated (J) due to uncertainty near the detection limit.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Qualifications were made based on calibration non-compliances and LCS recovery non-compliances.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the NFESC guidelines. The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC guidelines and the Quality Assurance Project Plan (QAPP)."

Bernard F Spada III

Tetra Tech NUS
Bernard F. Spada III
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 4821

SDG: 3554 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS2401RA	nsample	PEN43SS2401RA	nsample	PEN43SS2501
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0975-8RA	lab_id	WV0975-8RA	lab_id	WV0975-9
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	83.7	Pct_Solids	83.7	Pct_Solids	82.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	200	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	37	U	
2,4,5-TRICHLOROPHENOL	210	U	
2,4,6-TRICHLOROPHENOL	140	U	
2,4-DICHLOROPHENOL	160	U	
2,4-DIMETHYLPHENOL	140	U	
2,4-DINITROPHENOL	74	UR	C
2,4-DINITROTOLUENE	120	U	
2,6-DINITROTOLUENE	92	U	
2-CHLORONAPHTHALENE	58	U	
2-CHLOROPHENOL	110	U	
2-METHYLPHENOL	160	U	
2-NITROANILINE	90	U	
2-NITROPHENOL	130	U	
3,3'-DICHLOROBENZIDINE	160	U	
3-NITROANILINE	85	UJ	E
4,6-DINITRO-2-METHYLPHENOL	250	U	
4-BROMOPHENYL PHENYL ETHER	66	U	
4-CHLORO-3-METHYLPHENOL	140	U	
4-CHLOROANILINE	64	UJ	E
4-CHLOROPHENYL PHENYL ETHER	60	U	
4-METHYLPHENOL	180	U	
4-NITROANILINE	100	U	
4-NITROPHENOL	180	U	
ACETOPHENONE	67	U	
ATRAZINE	200	U	
BENZALDEHYDE	200	UJ	C
BIS(2-CHLOROETHOXY)METHANE	62	U	
BIS(2-CHLOROETHYL)ETHER	39	U	
BIS(2-ETHYLHEXYL)PHTHALATE	89	U	
BUTYL BENZYL PHTHALATE	81	U	
CAPROLACTAM	200	UR	C

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	72	U	
DIBENZOFURAN	74	U	
DIETHYL PHTHALATE	120	U	
DIMETHYL PHTHALATE	74	U	
DI-N-BUTYL PHTHALATE	100	U	
DI-N-OCTYL PHTHALATE	88	U	
HEXACHLOROBENZENE	280	U	
HEXACHLOROBUTADIENE	52	U	
HEXACHLOROCYCLOPENTADIENE	90	UJ	C
HEXACHLOROETHANE	72	U	
ISOPHORONE	62	U	
NITROBENZENE	89	U	
N-NITROSO-DI-N-PROPYLAMINE	67	U	
N-NITROSODIPHENYLAMINE	86	UJ	E
PENTACHLOROPHENOL	170	U	
PHENOL	110	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	200	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	37	U	
2,4,5-TRICHLOROPHENOL	220	U	
2,4,6-TRICHLOROPHENOL	140	U	
2,4-DICHLOROPHENOL	160	U	
2,4-DIMETHYLPHENOL	140	U	
2,4-DINITROPHENOL	75	U	
2,4-DINITROTOLUENE	120	U	
2,6-DINITROTOLUENE	94	U	
2-CHLORONAPHTHALENE	59	U	
2-CHLOROPHENOL	110	U	
2-METHYLPHENOL	160	U	
2-NITROANILINE	91	U	
2-NITROPHENOL	130	U	
3,3'-DICHLOROBENZIDINE	160	U	
3-NITROANILINE	87	UJ	E
4,6-DINITRO-2-METHYLPHENOL	250	U	
4-BROMOPHENYL PHENYL ETHER	68	U	
4-CHLORO-3-METHYLPHENOL	140	U	
4-CHLOROANILINE	65	UJ	E
4-CHLOROPHENYL PHENYL ETHER	61	U	
4-METHYLPHENOL	180	U	
4-NITROANILINE	100	U	
4-NITROPHENOL	190	UJ	C
ACETOPHENONE	69	U	
ATRAZINE	200	U	-
BENZALDEHYDE	200	UR	C
BIS(2-CHLOROETHOXY)METHANE	64	U	
BIS(2-CHLOROETHYL)ETHER	40	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	91	U	
BUTYL BENZYL PHTHALATE	83	U	
CAPROLACTAM	200	U	

PROJ_NO: 4821

SDG: 3554 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS2501	nsample	PEN43SS2601RA	nsample	PEN43SS2601RA
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0975-9	lab_id	WV0975-10RA	lab_id	WV0975-10RA
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	82.0	Pct_Solids	77.0	Pct_Solids	77.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	73	U	
DIBENZOFURAN	76	U	
DIETHYL PHTHALATE	120	U	
DIMETHYL PHTHALATE	76	U	
DI-N-BUTYL PHTHALATE	100	U	
DI-N-OCTYL PHTHALATE	90	U	
HEXACHLOROBENZENE	280	U	
HEXACHLOROBUTADIENE	53	U	
HEXACHLOROCYCLOPENTADIENE	91	U	
HEXACHLOROETHANE	74	U	
ISOPHORONE	63	U	
NITROBENZENE	91	U	
N-NITROSO-DI-N-PROPYLAMINE	69	U	
N-NITROSODIPHENYLAMINE	88	UJ	E
PENTACHLOROPHENOL	170	U	
PHENOL	110	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	210	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	40	U	
2,4,5-TRICHLOROPHENOL	230	U	
2,4,6-TRICHLOROPHENOL	150	U	
2,4-DICHLOROPHENOL	170	U	
2,4-DIMETHYLPHENOL	150	U	
2,4-DINITROPHENOL	80	UR	C
2,4-DINITROTOLUENE	130	U	
2,6-DINITROTOLUENE	100	U	
2-CHLORONAPHTHALENE	63	U	
2-CHLOROPHENOL	120	U	
2-METHYLPHENOL	180	U	
2-NITROANILINE	97	U	
2-NITROPHENOL	140	U	
3,3'-DICHLOROBENZIDINE	170	U	
3-NITROANILINE	92	UJ	E
4,6-DINITRO-2-METHYLPHENOL	270	U	
4-BROMOPHENYL PHENYL ETHER	72	U	
4-CHLORO-3-METHYLPHENOL	150	U	
4-CHLOROANILINE	69	UJ	E
4-CHLOROPHENYL PHENYL ETHER	65	U	
4-METHYLPHENOL	190	U	
4-NITROANILINE	110	U	
4-NITROPHENOL	200	U	
ACETOPHENONE	73	U	
ATRAZINE	210	U	
BENZALDEHYDE	210	UJ	C
BIS(2-CHLOROETHOXY)METHANE	68	U	
BIS(2-CHLOROETHYL)ETHER	43	U	
BIS(2-ETHYLHEXYL)PHTHALATE	96	U	
BUTYL BENZYL PHTHALATE	88	U	
CAPROLACTAM	210	UR	C

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	78	U	
DIBENZOFURAN	80	U	
DIETHYL PHTHALATE	130	U	
DIMETHYL PHTHALATE	81	U	
DI-N-BUTYL PHTHALATE	110	U	
DI-N-OCTYL PHTHALATE	96	U	
HEXACHLOROBENZENE	300	U	
HEXACHLOROBUTADIENE	57	U	
HEXACHLOROCYCLOPENTADIENE	97	UJ	C
HEXACHLOROETHANE	79	U	
ISOPHORONE	67	U	
NITROBENZENE	96	U	
N-NITROSO-DI-N-PROPYLAMINE	73	U	
N-NITROSODIPHENYLAMINE	93	UJ	E
PENTACHLOROPHENOL	180	U	
PHENOL	120	U	

PROJ_NO: 4821

SDG: 3554 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS3301RA	nsample	PEN43SS3301RA	nsample	PEN43SS3401
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0975-6RA	lab_id	WV0975-6RA	lab_id	WV0975-7
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	90.5	Pct_Solids	90.5	Pct_Solids	88.4
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	34	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	150	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	68	UR	C
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	85	U	
2-CHLORONAPHTHALENE	53	U	
2-CHLOROPHENOL	99	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	83	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	150	U	
3-NITROANILINE	79	UJ	E
4,6-DINITRO-2-METHYLPHENOL	230	U	
4-BROMOPHENYL PHENYL ETHER	62	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	59	UJ	E
4-CHLOROPHENYL PHENYL ETHER	56	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	95	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	62	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	58	U	
BIS(2-CHLOROETHYL)ETHER	36	U	
BIS(2-ETHYLHEXYL)PHTHALATE	82	U	
BUTYL BENZYL PHTHALATE	75	U	
CAPROLACTAM	180	UR	C

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	66	U	
DIBENZOFURAN	68	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	69	U	
DI-N-BUTYL PHTHALATE	93	U	
DI-N-OCTYL PHTHALATE	81	U	
HEXACHLOROBENZENE	260	U	
HEXACHLOROBUTADIENE	48	U	
HEXACHLOROCYCLOPENTADIENE	83	UJ	C
HEXACHLOROETHANE	67	U	
ISOPHORONE	57	U	
NITROBENZENE	82	U	
N-NITROSO-DI-N-PROPYLAMINE	62	U	
N-NITROSODIPHENYLAMINE	80	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	100	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	190	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	35	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	150	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	70	U	
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	87	U	
2-CHLORONAPHTHALENE	55	U	
2-CHLOROPHENOL	100	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	85	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	150	U	
3-NITROANILINE	81	UJ	E
4,6-DINITRO-2-METHYLPHENOL	230	U	
4-BROMOPHENYL PHENYL ETHER	63	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	60	UJ	E
4-CHLOROPHENYL PHENYL ETHER	57	U	
4-METHYLPHENOL	170	U	
4-NITROANILINE	97	U	
4-NITROPHENOL	180	UJ	C
ACETOPHENONE	64	U	
ATRAZINE	190	U	
BENZALDEHYDE	190	UR	C
BIS(2-CHLOROETHOXY)METHANE	59	U	
BIS(2-CHLOROETHYL)ETHER	37	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	84	U	
BUTYL BENZYL PHTHALATE	77	U	
CAPROLACTAM	190	U	

PROJ_NO: 4821

SDG: 3554 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS3401
samp_date	3/6/2005
lab_id	WV0975-7
qc_type	NM
units	UG/KG
Pct_Solids	88.4
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	68	U	
DIBENZOFURAN	70	U	
DIETHYL PHTHALATE	120	U	
DIMETHYL PHTHALATE	70	U	
DI-N-BUTYL PHTHALATE	95	U	
DI-N-OCTYL PHTHALATE	83	U	
HEXACHLOROBENZENE	260	U	
HEXACHLOROBUTADIENE	49	U	
HEXACHLOROCYCLOPENTADIENE	85	U	
HEXACHLOROETHANE	68	U	
ISOPHORONE	59	U	
NITROBENZENE	84	U	
N-NITROSO-DI-N-PROPYLAMINE	64	U	
N-NITROSODIPHENYLAMINE	81	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	100	U	

PROJ_NO: 4821

SDG: 3554 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SS2401
samp_date	3/6/2005
lab_id	WV0975-3
qc_type	NM
units	UG/KG
Pct_Solids	83.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	3	J	P
2-METHYLNAPHTHALENE	9	J	EP
ACENAPHTHENE	3	J	P
ACENAPHTHYLENE	9	J	P
ANTHRACENE	16	J	P
BENZO(A)PYRENE	160		
BENZO(G,H,I)PERYLENE	86		
BENZO(K)FLUORANTHENE	110		
CHRYSENE	160		
DIBENZO(A,H)ANTHRACENE	36		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	98		
NAPHTHALENE	1	U	
PHENANTHRENE	71		
PYRENE	190		

nsample	PEN43SS2401DL
samp_date	3/6/2005
lab_id	WV0975-3DL
qc_type	NM
units	UG/KG
Pct_Solids	83.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)ANTHRACENE	310	J	CE
BENZO(B)FLUORANTHENE	390	J	C
FLUORANTHENE	280	J	C

nsample	PEN43SS2501
samp_date	3/6/2005
lab_id	WV0975-4
qc_type	NM
units	UG/KG
Pct_Solids	82.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	2	U	
2-METHYLNAPHTHALENE	8	J	EP
ACENAPHTHENE	2	J	P
ACENAPHTHYLENE	11	J	P
ANTHRACENE	13	J	P
BENZO(A)PYRENE	150		
BENZO(G,H,I)PERYLENE	68		
BENZO(K)FLUORANTHENE	130		
CHRYSENE	140		
DIBENZO(A,H)ANTHRACENE	30		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	84		
NAPHTHALENE	1	U	
PHENANTHRENE	62		
PYRENE	180		

PROJ_NO: 4821

SDG: 3554 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SS2501DL	nsample	PEN43SS2601	nsample	PEN43SS3301
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0975-4DL	lab_id	WV0975-5	lab_id	WV0975-1
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	82.0	Pct_Solids	77.0	Pct_Solids	90.5
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)ANTHRACENE	280	J	CE
BENZO(B)FLUORANTHENE	340	J	C
FLUORANTHENE	260	J	C

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	2	U	
2-METHYLNAPHTHALENE	8	J	EP
ACENAPHTHENE	3	J	P
ACENAPHTHYLENE	0.7	U	
ANTHRACENE	13	J	P
BENZO(A)ANTHRACENE	120	J	CE
BENZO(A)PYRENE	62		
BENZO(B)FLUORANTHENE	140		
BENZO(G,H,I)PERYLENE	29		
BENZO(K)FLUORANTHENE	46		
CHRYSENE	60		
DIBENZO(A,H)ANTHRACENE	13	J	P
FLUORANTHENE	140		
FLUORENE	0.8	U	
INDENO(1,2,3-CD)PYRENE	35		
NAPHTHALENE	1	U	
PHENANTHRENE	48		
PYRENE	86		

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	2	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	1	J	P
ANTHRACENE	2	J	P
BENZO(A)ANTHRACENE	29	J	CE
BENZO(A)PYRENE	18	J	P
BENZO(B)FLUORANTHENE	48		
BENZO(G,H,I)PERYLENE	7	J	P
BENZO(K)FLUORANTHENE	16	J	P
CHRYSENE	17	J	P
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	45		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	11	J	P
NAPHTHALENE	1	U	
PHENANTHRENE	10	J	P
PYRENE	24		

PROJ_NO: 4821

SDG: 3554 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SS3401
samp_date	3/6/2005
lab_id	WV0975-2
qc_type	NM
units	UG/KG
Pct_Solids	88.4
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	2	U	
2-METHYLNAPHTHALENE	6	J	EP
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	2	J	P
ANTHRACENE	2	J	P
BENZO(A)ANTHRACENE	55	J	CE
BENZO(A)PYRENE	35		
BENZO(B)FLUORANTHENE	83		
BENZO(G,H,I)PERYLENE	21	J	P
BENZO(K)FLUORANTHENE	23		
CHRYSENE	30		
DIBENZO(A,H)ANTHRACENE	12	J	P
FLUORANTHENE	62		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	22	J	P
NAPHTHALENE	1	U	
PHENANTHRENE	15	J	P
PYRENE	38		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 30-MAR-2005 16:37
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 83.7

Lab ID: WV0975-8RA
Client ID: PEN43SS2401
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	200	1.0	330	390	200
108-95-2	Phenol	U	110	1.0	330	390	110
111-44-4	Bis(2-Chloroethyl)ether	U	39	1.0	330	390	39
95-57-8	2-Chlorophenol	U	110	1.0	330	390	110
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	37	1.0	330	390	37
95-48-7	2-Methylphenol	U	160	1.0	330	390	160
67-72-1	Hexachloroethane	U	72	1.0	330	390	72
621-64-7	N-Nitroso-di-n-propylamine	U	67	1.0	330	390	67
106-44-5	4-Methylphenol	U	180	1.0	330	390	180
98-95-3	Nitrobenzene	U	89	1.0	330	390	89
78-59-1	Isophorone	U	62	1.0	330	390	62
88-75-5	2-Nitrophenol	U	130	1.0	330	390	130
105-67-9	2,4-Dimethylphenol	U	140	1.0	330	390	140
105-60-2	Caprolactam	U	200	1.0	330	390	200
111-91-1	Bis(2-Chloroethoxy)methane	U	62	1.0	330	390	62
120-83-2	2,4-Dichlorophenol	U	160	1.0	330	390	160
92-52-4	1,1'-Biphenyl	U	200	1.0	330	390	200
106-47-8	4-Chloroaniline	U	64	1.0	330	390	64
87-68-3	Hexachlorobutadiene	U	52	1.0	330	390	52
59-50-7	4-Chloro-3-Methylphenol	U	140	1.0	330	390	140
77-47-4	Hexachlorocyclopentadiene	U	90	1.0	330	390	90
88-06-2	2,4,6-Trichlorophenol	U	140	1.0	330	390	140
95-95-4	2,4,5-Trichlorophenol	U	210	1.0	330	390	210
91-58-7	2-Chloronaphthalene	U	58	1.0	330	390	58
88-74-4	2-Nitroaniline	U	90	1.0	330	390	90
131-11-3	Dimethyl Phthalate	U	74	1.0	330	390	74
606-20-2	2,6-Dinitrotoluene	U	92	1.0	330	390	92
99-09-2	3-Nitroaniline	U	85	1.0	330	390	85
51-28-5	2,4-Dinitrophenol	U	74	1.0	330	390	74
132-64-9	Dibenzofuran	U	74	1.0	330	390	74
100-02-7	4-Nitrophenol	U	180	1.0	330	390	180
121-14-2	2,4-Dinitrotoluene	U	120	1.0	330	390	120
1912-24-9	Atrazine	U	200	1.0	330	390	200
84-66-2	Diethylphthalate	U	120	1.0	330	390	120
7005-72-3	4-Chlorophenyl-phenylether	U	60	1.0	330	390	60
100-01-6	4-Nitroaniline	U	100	1.0	330	390	100
534-52-1	4,6-Dinitro-2-Methylphenol	U	250	1.0	330	390	250
86-30-6	N-Nitrosodiphenylamine	U	86	1.0	330	390	86
101-55-3	4-Bromophenyl-phenylether	U	66	1.0	330	390	66
118-74-1	Hexachlorobenzene	U	280	1.0	330	390	280
87-86-5	Pentachlorophenol	U	170	1.0	330	390	170
86-74-8	Carbazole	U	72	1.0	330	390	72
84-74-2	Di-n-butylphthalate	U	100	1.0	330	390	100

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 30-MAR-2005 16:37
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 83.7

Lab ID: WV0975-8RA
Client ID: PEN43SS2401
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	81	1.0	330	390	81
91-94-1	3,3'-Dichlorobenzidine	U	160	1.0	330	390	160
117-81-7	bis(2-Ethylhexyl)phthalate	U	89	1.0	330	390	89
117-84-0	Di-n-octylphthalate	U	88	1.0	330	390	88
98-96-2	Acetophenone	U	67	1.0	330	390	67
367-12-4	2-Fluorophenol		91%				
13127-88-3	Phenol-D6		82%				
4165-60-0	Nitrobenzene-D5		79%				
321-60-8	2-Fluorobiphenyl		81%				
118-79-6	2,4,6-Tribromophenol		79%				
1718-51-0	Terphenyl-D14		99%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 25-MAR-2005 21:36
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 82.0

Lab ID: WV0975-9
Client ID: PEN43SS2501
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	200	1.0	330	400	200
108-95-2	Phenol	U	110	1.0	330	400	110
111-44-4	Bis(2-Chloroethyl)ether	U	40	1.0	330	400	40
95-57-8	2-Chlorophenol	U	110	1.0	330	400	110
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	37	1.0	330	400	37
95-48-7	2-Methylphenol	U	160	1.0	330	400	160
67-72-1	Hexachloroethane	U	74	1.0	330	400	74
621-64-7	N-Nitroso-di-n-propylamine	U	69	1.0	330	400	69
106-44-5	4-Methylphenol	U	180	1.0	330	400	180
98-95-3	Nitrobenzene	U	91	1.0	330	400	91
78-59-1	Isophorone	U	63	1.0	330	400	63
88-75-5	2-Nitrophenol	U	130	1.0	330	400	130
105-67-9	2,4-Dimethylphenol	U	140	1.0	330	400	140
105-60-2	Caprolactam	U	200	1.0	330	400	200
111-91-1	Bis(2-Chloroethoxy)methane	U	64	1.0	330	400	64
120-83-2	2,4-Dichlorophenol	U	160	1.0	330	400	160
92-52-4	1,1'-Biphenyl	U	200	1.0	330	400	200
106-47-8	4-Chloroaniline	U	65	1.0	330	400	65
87-68-3	Hexachlorobutadiene	U	53	1.0	330	400	53
59-50-7	4-Chloro-3-Methylphenol	U	140	1.0	330	400	140
77-47-4	Hexachlorocyclopentadiene	U	91	1.0	330	400	91
88-06-2	2,4,6-Trichlorophenol	U	140	1.0	330	400	140
95-95-4	2,4,5-Trichlorophenol	U	220	1.0	330	400	220
91-58-7	2-Chloronaphthalene	U	59	1.0	330	400	59
88-74-4	2-Nitroaniline	U	91	1.0	330	400	91
131-11-3	Dimethyl Phthalate	U	76	1.0	330	400	76
606-20-2	2,6-Dinitrotoluene	U	94	1.0	330	400	94
99-09-2	3-Nitroaniline	U	87	1.0	330	400	87
51-28-5	2,4-Dinitrophenol	U	75	1.0	330	400	75
132-64-9	Dibenzofuran	U	76	1.0	330	400	76
100-02-7	4-Nitrophenol	U	190	1.0	330	400	190
121-14-2	2,4-Dinitrotoluene	U	120	1.0	330	400	120
1912-24-9	Atrazine	U	200	1.0	330	400	200
84-66-2	Diethylphthalate	U	120	1.0	330	400	120
7005-72-3	4-Chlorophenyl-phenylether	U	61	1.0	330	400	61
100-01-6	4-Nitroaniline	U	100	1.0	330	400	100
534-52-1	4,6-Dinitro-2-Methylphenol	U	250	1.0	330	400	250
86-30-6	N-Nitrosodiphenylamine	U	88	1.0	330	400	88
101-55-3	4-Bromophenyl-phenylether	U	68	1.0	330	400	68
118-74-1	Hexachlorobenzene	U	280	1.0	330	400	280
87-86-5	Pentachlorophenol	U	170	1.0	330	400	170
86-74-8	Carbazole	U	73	1.0	330	400	73
84-74-2	Di-n-butylphthalate	U	100	1.0	330	400	100

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 25-MAR-2005 21:36
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 82.0

Lab ID: WV0975-9
Client ID: PEN43SS2501
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	83	1.0	330	400	83
91-94-1	3,3'-Dichlorobenzidine	U	160	1.0	330	400	160
117-81-7	bis(2-Ethylhexyl)phthalate	U	91	1.0	330	400	91
117-84-0	Di-n-octylphthalate	U	90	1.0	330	400	90
98-96-2	Acetophenone	U	69	1.0	330	400	69
367-12-4	2-Fluorophenol		78%				
13127-88-3	Phenol-D6		92%				
4165-60-0	Nitrobenzene-D5		68%				
321-60-8	2-Fluorobiphenyl		75%				
118-79-6	2,4,6-Tribromophenol		J148%				
1718-51-0	Terphenyl-D14		96%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 30-MAR-2005 17:19
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 77.0

Lab ID: WV0975-10RA
Client ID: PEN43SS2601
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	210	1.0	330	430	210
108-95-2	Phenol	U	120	1.0	330	430	120
111-44-4	Bis(2-Chloroethyl)ether	U	43	1.0	330	430	43
95-57-8	2-Chlorophenol	U	120	1.0	330	430	120
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	40	1.0	330	430	40
95-48-7	2-Methylphenol	U	180	1.0	330	430	180
67-72-1	Hexachloroethane	U	79	1.0	330	430	79
621-64-7	N-Nitroso-di-n-propylamine	U	73	1.0	330	430	73
106-44-5	4-Methylphenol	U	190	1.0	330	430	190
98-95-3	Nitrobenzene	U	96	1.0	330	430	96
78-59-1	Isophorone	U	67	1.0	330	430	67
88-75-5	2-Nitrophenol	U	140	1.0	330	430	140
105-67-9	2,4-Dimethylphenol	U	150	1.0	330	430	150
105-60-2	Caprolactam	U	210	1.0	330	430	210
111-91-1	Bis(2-Chloroethoxy)methane	U	68	1.0	330	430	68
120-83-2	2,4-Dichlorophenol	U	170	1.0	330	430	170
92-52-4	1,1'-Biphenyl	U	210	1.0	330	430	210
106-47-8	4-Chloroaniline	U	69	1.0	330	430	69
87-68-3	Hexachlorobutadiene	U	57	1.0	330	430	57
59-50-7	4-Chloro-3-Methylphenol	U	150	1.0	330	430	150
77-47-4	Hexachlorocyclopentadiene	U	97	1.0	330	430	97
88-06-2	2,4,6-Trichlorophenol	U	150	1.0	330	430	150
95-95-4	2,4,5-Trichlorophenol	U	230	1.0	330	430	230
91-58-7	2-Chloronaphthalene	U	63	1.0	330	430	63
88-74-4	2-Nitroaniline	U	97	1.0	330	430	97
131-11-3	Dimethyl Phthalate	U	81	1.0	330	430	81
606-20-2	2,6-Dinitrotoluene	U	100	1.0	330	430	100
99-09-2	3-Nitroaniline	U	92	1.0	330	430	92
51-28-5	2,4-Dinitrophenol	U	80	1.0	330	430	80
132-64-9	Dibenzofuran	U	80	1.0	330	430	80
100-02-7	4-Nitrophenol	U	200	1.0	330	430	200
121-14-2	2,4-Dinitrotoluene	U	130	1.0	330	430	130
1912-24-9	Atrazine	U	210	1.0	330	430	210
84-66-2	Diethylphthalate	U	130	1.0	330	430	130
7005-72-3	4-Chlorophenyl-phenylether	U	65	1.0	330	430	65
100-01-6	4-Nitroaniline	U	110	1.0	330	430	110
534-52-1	4,6-Dinitro-2-Methylphenol	U	270	1.0	330	430	270
86-30-6	N-Nitrosodiphenylamine	U	93	1.0	330	430	93
101-55-3	4-Bromophenyl-phenylether	U	72	1.0	330	430	72
118-74-1	Hexachlorobenzene	U	300	1.0	330	430	300
87-86-5	Pentachlorophenol	U	180	1.0	330	430	180
86-74-8	Carbazole	U	78	1.0	330	430	78
84-74-2	Di-n-butylphthalate	U	110	1.0	330	430	110

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 30-MAR-2005 17:19
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 77.0

Lab ID: WV0975-10RA
Client ID: PEN43SS2601
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	88	1.0	330	430	88
91-94-1	3,3'-Dichlorobenzidine	U	170	1.0	330	430	170
117-81-7	bis(2-Ethylhexyl)phthalate	U	96	1.0	330	430	96
117-84-0	Di-n-octylphthalate	U	96	1.0	330	430	96
98-96-2	Acetophenone	U	73	1.0	330	430	73
367-12-4	2-Fluorophenol		85%				
13127-88-3	Phenol-D6		82%				
4165-60-0	Nitrobenzene-D5		76%				
321-60-8	2-Fluorobiphenyl		80%				
118-79-6	2,4,6-Tribromophenol		92%				
1718-51-0	Terphenyl-D14		101%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 30-MAR-2005 15:54
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 90.5

Lab ID: WV0975-6RA
Client ID: PEN43SS3301
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	100	1.0	330	360	100
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	99	1.0	330	360	99
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	34	1.0	330	360	34
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	67	1.0	330	360	67
621-64-7	N-Nitroso-di-n-propylamine	U	62	1.0	330	360	62
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	82	1.0	330	360	82
78-59-1	Isophorone	U	57	1.0	330	360	57
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	58	1.0	330	360	58
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	360	150
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	59	1.0	330	360	59
87-68-3	Hexachlorobutadiene	U	48	1.0	330	360	48
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	83	1.0	330	360	83
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	360	200
91-58-7	2-Chloronaphthalene	U	53	1.0	330	360	53
88-74-4	2-Nitroaniline	U	83	1.0	330	360	83
131-11-3	Dimethyl Phthalate	U	69	1.0	330	360	69
606-20-2	2,6-Dinitrotoluene	U	85	1.0	330	360	85
99-09-2	3-Nitroaniline	U	79	1.0	330	360	79
51-28-5	2,4-Dinitrophenol	U	68	1.0	330	360	68
132-64-9	Dibenzofuran	U	68	1.0	330	360	68
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	360	110
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	56	1.0	330	360	56
100-01-6	4-Nitroaniline	U	95	1.0	330	360	95
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	360	230
86-30-6	N-Nitrosodiphenylamine	U	80	1.0	330	360	80
101-55-3	4-Bromophenyl-phenylether	U	62	1.0	330	360	62
118-74-1	Hexachlorobenzene	U	260	1.0	330	360	260
87-86-5	Pentachlorophenol	U	160	1.0	330	360	160
86-74-8	Carbazole	U	66	1.0	330	360	66
84-74-2	Di-n-butylphthalate	U	93	1.0	330	360	93

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 30-MAR-2005 15:54
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 90.5

Lab ID: WV0975-6RA
Client ID: PEN43SS3301
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	75	1.0	330	360	75
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	360	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	82	1.0	330	360	82
117-84-0	Di-n-octylphthalate	U	81	1.0	330	360	81
98-96-2	Acetophenone	U	62	1.0	330	360	62
367-12-4	2-Fluorophenol		81%				
13127-88-3	Phenol-D6		73%				
4165-60-0	Nitrobenzene-D5		67%				
321-60-8	2-Fluorobiphenyl		78%				
118-79-6	2,4,6-Tribromophenol		95%				
1718-51-0	Terphenyl-D14		108%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 25-MAR-2005 20:11
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 88.4

Lab ID: WV0975-7
Client ID: PEN43SS3401
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	190	1.0	330	370	190
108-95-2	Phenol	U	100	1.0	330	370	100
111-44-4	Bis(2-Chloroethyl)ether	U	37	1.0	330	370	37
95-57-8	2-Chlorophenol	U	100	1.0	330	370	100
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	35	1.0	330	370	35
95-48-7	2-Methylphenol	U	150	1.0	330	370	150
67-72-1	Hexachloroethane	U	68	1.0	330	370	68
621-64-7	N-Nitroso-di-n-propylamine	U	64	1.0	330	370	64
106-44-5	4-Methylphenol	U	170	1.0	330	370	170
98-95-3	Nitrobenzene	U	84	1.0	330	370	84
78-59-1	Isophorone	U	59	1.0	330	370	59
88-75-5	2-Nitrophenol	U	120	1.0	330	370	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	370	130
105-60-2	Caprolactam	U	190	1.0	330	370	190
111-91-1	Bis(2-Chloroethoxy)methane	U	59	1.0	330	370	59
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	370	150
92-52-4	1,1'-Biphenyl	U	190	1.0	330	370	190
106-47-8	4-Chloroaniline	U	60	1.0	330	370	60
87-68-3	Hexachlorobutadiene	U	49	1.0	330	370	49
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	370	130
77-47-4	Hexachlorocyclopentadiene	U	85	1.0	330	370	85
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	370	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	370	200
91-58-7	2-Chloronaphthalene	U	55	1.0	330	370	55
88-74-4	2-Nitroaniline	U	85	1.0	330	370	85
131-11-3	Dimethyl Phthalate	U	70	1.0	330	370	70
606-20-2	2,6-Dinitrotoluene	U	87	1.0	330	370	87
99-09-2	3-Nitroaniline	U	81	1.0	330	370	81
51-28-5	2,4-Dinitrophenol	U	70	1.0	330	370	70
132-64-9	Dibenzofuran	U	70	1.0	330	370	70
100-02-7	4-Nitrophenol	U	180	1.0	330	370	180
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	370	110
1912-24-9	Atrazine	U	190	1.0	330	370	190
84-66-2	Diethylphthalate	U	120	1.0	330	370	120
7005-72-3	4-Chlorophenyl-phenylether	U	57	1.0	330	370	57
100-01-6	4-Nitroaniline	U	97	1.0	330	370	97
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	370	230
86-30-6	N-Nitrosodiphenylamine	U	81	1.0	330	370	81
101-55-3	4-Bromophenyl-phenylether	U	63	1.0	330	370	63
118-74-1	Hexachlorobenzene	U	260	1.0	330	370	260
87-86-5	Pentachlorophenol	U	160	1.0	330	370	160
86-74-8	Carbazole	U	68	1.0	330	370	68
84-74-2	Di-n-butylphthalate	U	95	1.0	330	370	95

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 25-MAR-2005 20:11
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 88.4

Lab ID: WV0975-7
Client ID: PEN43SS3401
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	77	1.0	330	370	77
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	370	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	84	1.0	330	370	84
117-84-0	Di-n-octylphthalate	U	83	1.0	330	370	83
98-96-2	Acetophenone	U	64	1.0	330	370	64
367-12-4	2-Fluorophenol		85%				
13127-88-3	Phenol-D6		95%				
4165-60-0	Nitrobenzene-D5		68%				
321-60-8	2-Fluorobiphenyl		77%				
118-79-6	2,4,6-Tribromophenol		J150%				
1718-51-0	Terphenyl-D14		102%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 23-MAR-2005 16:51
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 83.7

Lab ID: WV0975-3
Client ID: PEN43SS2401
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15102
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1	1.0	20	24	1
91-57-6	2-Methylnaphthalene	IJ	9	1.0	20	24	0.7
90-12-0	1-Methylnaphthalene	I	3	1.0	20	24	2
208-96-8	Acenaphthylene	I	9	1.0	20	24	0.6
83-32-9	Acenaphthene	I	3	1.0	20	24	0.8
86-73-7	Fluorene	U	0.7	1.0	20	24	0.7
85-01-8	Phenanthrene		71	1.0	20	24	2
120-12-7	Anthracene	I	16	1.0	20	24	1.0
206-44-0	Fluoranthene	L	200	1.0	20	24	2
129-00-0	Pyrene		190	1.0	20	24	2
56-55-3	Benzo(a)anthracene	JL	200	1.0	20	24	1
218-01-9	Chrysene		160	1.0	20	24	1
205-99-2	Benzo(b)fluoranthene	L	240	1.0	20	24	2
207-08-9	Benzo(k)fluoranthene		110	1.0	20	24	2
50-32-8	Benzo(a)pyrene		160	1.0	20	24	0.9
193-39-5	Indeno(1,2,3-cd)pyrene		98	1.0	20	24	2
53-70-3	Dibenzo(a,h)anthracene		36	1.0	20	24	2
191-24-2	Benzo(g,h,i)perylene		86	1.0	20	24	2
7297-45-2	2-Methylnaphthalene-d10		101%				
81103-79-9	Fluorene-d10		106%				
1718-52-1	Pyrene-d10		109%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 24-MAR-2005 10:45
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 83.7

Lab ID: WV0975-3DL
Client ID: PEN43SS2401
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15102
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	2	2.0	20	48	2
91-57-6	2-Methylnaphthalene	IJ	15	2.0	20	48	1
90-12-0	1-Methylnaphthalene	U	5	2.0	20	48	5
208-96-8	Acenaphthylene	I	8	2.0	20	48	1
83-32-9	Acenaphthene	I	3	2.0	20	48	2
86-73-7	Fluorene	U	1	2.0	20	48	1
85-01-8	Phenanthrene		80	2.0	20	48	4
120-12-7	Anthracene	I	21	2.0	20	48	2
206-44-0	Fluoranthene		280	2.0	20	48	4
129-00-0	Pyrene		220	2.0	20	48	4
56-55-3	Benzo(a)anthracene	J	310	2.0	20	48	2
218-01-9	Chrysene		180	2.0	20	48	3
205-99-2	Benzo(b)fluoranthene		390	2.0	20	48	5
207-08-9	Benzo(k)fluoranthene		120	2.0	20	48	3
50-32-8	Benzo(a)pyrene		180	2.0	20	48	2
193-39-5	Indeno(1,2,3-cd)pyrene		110	2.0	20	48	5
53-70-3	Dibenzo(a,h)anthracene	I	45	2.0	20	48	5
191-24-2	Benzo(g,h,i)perylene		100	2.0	20	48	4
7297-45-2	2-Methylnaphthalene-d10		108%				
81103-79-9	Fluorene-d10		130%				
1718-52-1	Pyrene-d10		123%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 23-MAR-2005 17:35
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 82.0

Lab ID: WV0975-4
Client ID: PEN43SS2501
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15102
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1	1.0	20	24	1
91-57-6	2-Methylnaphthalene	IJ	8	1.0	20	24	0.7
90-12-0	1-Methylnaphthalene	U	2	1.0	20	24	2
208-96-8	Acenaphthylene	I	11	1.0	20	24	0.6
83-32-9	Acenaphthene	I	2	1.0	20	24	0.8
86-73-7	Fluorene	U	0.7	1.0	20	24	0.7
85-01-8	Phenanthrene		62	1.0	20	24	2
120-12-7	Anthracene	I	13	1.0	20	24	1.0
206-44-0	Fluoranthene	L	200	1.0	20	24	2
129-00-0	Pyrene		180	1.0	20	24	2
56-55-3	Benzo(a)anthracene	JL	200	1.0	20	24	1
218-01-9	Chrysene		140	1.0	20	24	1
205-99-2	Benzo(b)fluoranthene	L	220	1.0	20	24	2
207-08-9	Benzo(k)fluoranthene		130	1.0	20	24	2
50-32-8	Benzo(a)pyrene		150	1.0	20	24	0.9
193-39-5	Indeno(1,2,3-cd)pyrene		84	1.0	20	24	2
53-70-3	Dibenzo(a,h)anthracene		30	1.0	20	24	2
191-24-2	Benzo(g,h,i)perylene		68	1.0	20	24	2
7297-45-2	2-Methylnaphthalene-d10		92%				
81103-79-9	Fluorene-d10		98%				
1718-52-1	Pyrene-d10		100%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 24-MAR-2005 11:29
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 82.0

Lab ID: WV0975-4DL
Client ID: PEN43SS2501
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15102
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	2	2.0	20	49	2
91-57-6	2-Methylnaphthalene	IJ	14	2.0	20	49	1
90-12-0	1-Methylnaphthalene	U	5	2.0	20	49	5
208-96-8	Acenaphthylene	I	11	2.0	20	49	1
83-32-9	Acenaphthene	I	2	2.0	20	49	2
86-73-7	Fluorene	U	1	2.0	20	49	1
85-01-8	Phenanthrene		66	2.0	20	49	4
120-12-7	Anthracene	I	16	2.0	20	49	2
206-44-0	Fluoranthene		260	2.0	20	49	4
129-00-0	Pyrene		180	2.0	20	49	4
56-55-3	Benzo(a)anthracene	J	280	2.0	20	49	2
218-01-9	Chrysene		140	2.0	20	49	3
205-99-2	Benzo(b)fluoranthene		340	2.0	20	49	5
207-08-9	Benzo(k)fluoranthene		120	2.0	20	49	3
50-32-8	Benzo(a)pyrene		150	2.0	20	49	2
193-39-5	Indeno(1,2,3-cd)pyrene		87	2.0	20	49	5
53-70-3	Dibenzo(a,h)anthracene	I	32	2.0	20	49	5
191-24-2	Benzo(g,h,i)perylene		71	2.0	20	49	4
7297-45-2	2-Methylnaphthalene-d10		96%				
81103-79-9	Fluorene-d10		101%				
1718-52-1	Pyrene-d10		102%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 23-MAR-2005 18:20
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 77.0

Lab ID: WV0975-5
Client ID: PEN43SS2601
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15102
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1	1.0	20	26	1
91-57-6	2-Methylnaphthalene	IJ	8	1.0	20	26	0.7
90-12-0	1-Methylnaphthalene	U	2	1.0	20	26	2
208-96-8	Acenaphthylene	U	0.7	1.0	20	26	0.7
83-32-9	Acenaphthene	I	3	1.0	20	26	0.9
86-73-7	Fluorene	U	0.8	1.0	20	26	0.8
85-01-8	Phenanthrene		48	1.0	20	26	2
120-12-7	Anthracene	I	13	1.0	20	26	1
206-44-0	Fluoranthene		140	1.0	20	26	2
129-00-0	Pyrene		86	1.0	20	26	2
56-55-3	Benzo(a)anthracene	J	120	1.0	20	26	1
218-01-9	Chrysene		60	1.0	20	26	2
205-99-2	Benzo(b)fluoranthene		140	1.0	20	26	3
207-08-9	Benzo(k)fluoranthene		46	1.0	20	26	2
50-32-8	Benzo(a)pyrene		62	1.0	20	26	1.0
193-39-5	Indeno(1,2,3-cd)pyrene		35	1.0	20	26	3
53-70-3	Dibenzo(a,h)anthracene	I	13	1.0	20	26	2
191-24-2	Benzo(g,h,i)perylene		29	1.0	20	26	2
7297-45-2	2-Methylnaphthalene-d10		95%				
81103-79-9	Fluorene-d10		101%				
1718-52-1	Pyrene-d10		105%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 23-MAR-2005 15:24
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 90.5

Lab ID: WV0975-1
Client ID: PEN43SS3301
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15102
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	22	0.6
90-12-0	1-Methylnaphthalene	U	2	1.0	20	22	2
208-96-8	Acenaphthylene	I	1	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene	I	10	1.0	20	22	2
120-12-7	Anthracene	I	2	1.0	20	22	0.9
206-44-0	Fluoranthene		45	1.0	20	22	2
129-00-0	Pyrene		24	1.0	20	22	2
56-55-3	Benzo(a)anthracene	J	29	1.0	20	22	1
218-01-9	Chrysene	I	17	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene		48	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene	I	16	1.0	20	22	1
50-32-8	Benzo(a)pyrene	I	18	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	11	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene	I	7	1.0	20	22	2
7297-45-2	2-Methylnaphthalene-d10		92%				
81103-79-9	Fluorene-d10		106%				
1718-52-1	Pyrene-d10		111%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 23-MAR-2005 16:07
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 88.4

Lab ID: WV0975-2
Client ID: PEN43SS3401
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15102
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1	1.0	20	23	1
91-57-6	2-Methylnaphthalene	IJ	6	1.0	20	23	0.6
90-12-0	1-Methylnaphthalene	U	2	1.0	20	23	2
208-96-8	Acenaphthylene	I	2	1.0	20	23	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	23	0.8
86-73-7	Fluorene	U	0.7	1.0	20	23	0.7
85-01-8	Phenanthrene	I	15	1.0	20	23	2
120-12-7	Anthracene	I	2	1.0	20	23	0.9
206-44-0	Fluoranthene		62	1.0	20	23	2
129-00-0	Pyrene		38	1.0	20	23	2
56-55-3	Benzo(a)anthracene	J	55	1.0	20	23	1
218-01-9	Chrysene		30	1.0	20	23	1
205-99-2	Benzo(b)fluoranthene		83	1.0	20	23	2
207-08-9	Benzo(k)fluoranthene		23	1.0	20	23	2
50-32-8	Benzo(a)pyrene		35	1.0	20	23	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	22	1.0	20	23	2
53-70-3	Dibenzo(a,h)anthracene	I	12	1.0	20	23	2
191-24-2	Benzo(g,h,i)perylene	I	21	1.0	20	23	2
7297-45-2	2-Methylnaphthalene-d10		93%				
81103-79-9	Fluorene-d10		107%				
1718-52-1	Pyrene-d10		106%				

APPENDIX C

SUPPORT DOCUMENTATION

Spada, Bernie

From: Andrea Colby [acolby@katahdinlab.com]
Sent: Wednesday, April 20, 2005 4:59 PM
To: 'Spada, Bernie'
Subject: RE: SDG-3554

Bernie,
Here is additional information for WV0975. There was a missing ICAL and we had to requant a CCV for benzaldehyde. Let me know if we should send a revised hardcopy.
Thanks,
Andrea

From: Spada, Bernie [mailto:SpadaB@ttnus.com]
Sent: Tuesday, April 19, 2005 1:06 PM
To: Andrea Colby
Subject: SDG-3554

Andrea,

I am performing the validation for SDG-3554 and have a question for you. The SVOC fraction has one ICAL and two CCALs associated with it. The ICAL on March 15 on the GCMS-X instrument shows and RRF of 4.2*10-2 for benzaldehyde, however the CCAL from March 25 at 12:22 shows a CCAL RRF of 1.0616 associated to an ICAL RRF of 1.148 that matches the date/time for the ICAL above. The second CCAL appears to match up better with the ICAL. Can you help me out with the CCAL on March 25? Let me know what is correct.

Thank you.

Bernard F Spada III
Bernard F Spada III
Environmental Scientist
TETRA TECH NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220-2745
Telephone: (412) 921-8729
FAX: (412) 921-4040
spadab@ttnus.com
http://www.ttnus.com
http://www.tetratech.com

Peter Lemay

From: "Andrea Colby" <acolby@katahdinlab.com>
To: <plemay@katahdinlab.com>
Sent: Tuesday, April 19, 2005 2:24 PM
Subject: FW: SDG-3554

ete,
an you look into this? WV0975.
nanks,
ndrea

---

rom: Spada, Bernie [mailto:SpadaB@ttnus.com]
ent: Tuesday, April 19, 2005 1:06 PM
o: Andrea Colby
ubject: SDG-3554

ndrea,

am performing the validation for SDG-3554 and have a question for you. The SVOC fraction has one ICAL and two CCALs ssociated with it. The ICAL on March 15 on the GCMS-X instrument shows and RRF of 4.2*10-2 for benzaldehyde, however the CAL from March 25 at 12:22 shows a CCAL RRF of 1.0616 associated to an ICAL RRF of 1.148 that matches the date/time for e ICAL above. The second CCAL appears to match up better with the ICAL. Can you help me out with the CCAL on March 5? Let me know what is correct.

nank you.

ernard F Spada III
ernard F Spada III
nvironmental Scientist
ETRA TECH NUS, Inc.
oster Plaza 7
61 Andersen Drive
ittsburgh, PA 15220-2745
elephone: (412) 921-8729
AX: (412) 921-4040
padab@ttnus.com
ttp://www.ttnus.com
ttp://www.tetratech.com

Two issues

1) The CU (File X7589) on 3-25-05 had a retention time shift for Benzaldehyde. The compound was using the retention time of Acetophenone.
A Form 7 and chromatogram has been regenerated.

2) The CU (File X7642) on 3-28-05 is correct. The issue is that this CU is quantitated against an ICAL that was not provided in the package. The following supporting data associated with this ICAL is provided: A) A copy of the instrument run log, B) The Form 6, C) The chromatograms of each point of the ICAL, D) The Form 5, E) The tune chromatogram

HOLDTIME

SDG 3554

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SS2501	WV0975-004	NM	3/6/2005	3/18/2005	3/29/2005	12	11	23
M	MG/KG	PEN43SS2401	WV0975-003	NM	3/6/2005	3/18/2005	3/22/2005	12	4	16
M	MG/KG	PEN43SS3401	WV0975-002	NM	3/6/2005	3/18/2005	3/29/2005	12	11	23
M	MG/KG	PEN43SS3401	WV0975-002	NM	3/6/2005	3/18/2005	3/22/2005	12	4	16
M	MG/KG	PEN43SS3301	WV0975-001	NM	3/6/2005	3/18/2005	3/29/2005	12	11	23
M	MG/KG	PEN43SS3301	WV0975-001	NM	3/6/2005	3/18/2005	3/22/2005	12	4	16
M	MG/KG	PEN43SS2601	WV0975-005	NM	3/6/2005	3/18/2005	3/22/2005	12	4	16
M	MG/KG	PEN43SS2501	WV0975-004	NM	3/6/2005	3/18/2005	3/22/2005	12	4	16
M	MG/KG	PEN43SS2401	WV0975-003	NM	3/6/2005	3/18/2005	3/29/2005	12	11	23
M	MG/KG	PEN43SS2401	WV0975-003	NM	3/6/2005	3/18/2005	3/28/2005	12	10	22
M	MG/KG	PEN43SS2601	WV0975-005	NM	3/6/2005	3/18/2005	3/29/2005	12	11	23
TS	%	PEN43SS3301	WV0975-1	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3401	WV0975-2	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3401	WV0975-7	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3301	WV0975-6	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SS2401	WV0975-3	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2601	WV0975-5	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2601	WV0975-10	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2501	WV0975-9	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2501	WV0975-4	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2401	WV0975-8	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
OS	%	PEN43SS2501DL	WV0975-4DL	NM	3/6/2005	3/14/2005	3/24/2005	8	10	18
OS	%	PEN43SS3401	WV0975-7	NM	3/6/2005	3/14/2005	3/25/2005	8	11	19
OS	%	PEN43SS2401DL	WV0975-3DL	NM	3/6/2005	3/14/2005	3/24/2005	8	10	18
OS	%	PEN43SS2401RA	WV0975-8RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	%	PEN43SS2501	WV0975-4	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	%	PEN43SS2501	WV0975-9	NM	3/6/2005	3/14/2005	3/25/2005	8	11	19
OS	%	PEN43SS2401	WV0975-3	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	%	PEN43SS2601RA	WV0975-10RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	%	PEN43SS3301	WV0975-1	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	%	PEN43SS3301RA	WV0975-6RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	%	PEN43SS3401	WV0975-2	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	%	PEN43SS2601	WV0975-5	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	PEN43SS2501	WV0975-4	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	UG/KG	PEN43SS3401	WV0975-7	NM	3/6/2005	3/14/2005	3/25/2005	8	11	19
OS	UG/KG	PEN43SS3401	WV0975-2	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	UG/KG	PEN43SS3301RA	WV0975-6RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	UG/KG	PEN43SS3301	WV0975-1	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	UG/KG	PEN43SS2601RA	WV0975-10RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	UG/KG	PEN43SS2601	WV0975-5	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	UG/KG	PEN43SS2401	WV0975-3	NM	3/6/2005	3/14/2005	3/23/2005	8	9	17
OS	UG/KG	PEN43SS2501	WV0975-9	NM	3/6/2005	3/14/2005	3/25/2005	8	11	19
OS	UG/KG	PEN43SS2401RA	WV0975-8RA	NM	3/6/2005	3/14/2005	3/30/2005	8	16	24
OS	UG/KG	PEN43SS2401DL	WV0975-3DL	NM	3/6/2005	3/14/2005	3/24/2005	8	10	18
OS	UG/KG	PEN43SS2501DL	WV0975-4DL	NM	3/6/2005	3/14/2005	3/24/2005	8	10	18

Katahdin
ANALYTICAL SERVICES

Cert. No. E87604

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CTO 355 NAS PENSACOLA
SDG: CTO355-4

Sample Receipt

The following samples were received on March 8, 2005 and were logged in under Katahdin Analytical Services work order numbers WV0975 for a hardcopy due date of April 3, 2005.

KATAHDIN Sample No.	TTNUS Sample Identification
WV0975-1	PEN43SS3301
WV0975-2	PEN43SS3401
WV0975-3	PEN43SS2401
WV0975-4	PEN43SS2501
WV0975-5	PEN43SS2601
WV0975-6	PEN43SS3301
WV0975-7	PEN43SS3401
WV0975-8	PEN43SS2401
WV0975-9	PEN43SS2501
WV0975-10	PEN43SS2601

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Andrea J. Colby**. This narrative is an integral part of the Report of Analysis.

Organics Laboratory

The samples of SDG CTO355-4 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, and III 1996, Office of Solid Waste and Emergency Response, U.S. EPA, for the specific methods listed below or on the Report of Analysis. Some manual integrations may have been performed due to split peaks and/or corrected baselines. All have been flagged with a "M" (software-generated) on the pertinent quantitation reports.

8270C SIM Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

The initial calibration standards (files U0471 and U0473) had responses for the internal standards chrysene-d12 and/or perylene-d12, which were all low and outside the method acceptance limits of -50% to +100% of the responses of the mid-level calibration standard from the initial calibration performed on 03/21/05.

The calibration verification standard (CV) (file U0515) had a high response for the (CCC) calibration check compound fluoranthene, which resulted in a %D that was outside the method acceptance limit of 20%. The associated samples may be biased high for this analyte.

8270C SCAN Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

The initial calibration analyzed on the X instrument had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. The target analytes benzaldehyde and phenol failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the average model. Since these target analytes were not detected of above the PQL in any of the affected samples, these samples were not reanalyzed.

Samples WV0975-7 and 9 had high recoveries for one surrogate, which were outside the laboratory established acceptance limits. Since a high recovery would indicate a high bias and no target analytes were detected above the MDL, the samples were not reanalyzed.

The laboratory control sample (LCS) WG15101-2 and the laboratory control sample duplicate (LCSD) WG15101-3 had high recoveries for one surrogate, which were outside the method established limits. Since the spiked analyte recoveries were within acceptable limits, the samples were not reanalyzed.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of Katahdin SDG CTO355-4 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Waste", SW-846, November 1986, Third Edition.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Solid-matrix Katahdin Sample Nos. WV0975-(1-5) were digested for ICP analysis on 03/18/05 (QC Batch VC18ICS0) in accordance with USEPA Method 3050B. Katahdin Sample No. WV0975-1 was prepared with duplicate matrix-spiked aliquots.

ICP analyses of SDG CTO355-4 sample digestates were performed using a Thermo Jarrell Ash (TJA) Trace ICP spectrometer and a TJA ICAP 61E ICP spectrometer. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following comments or exceptions:

Some of the results for run QC samples (ICV, ICB, CCV, CCB, ICSA, and ICSAB) included in the accompanying data package may have exceeded acceptance limits for some elements. Please note that all client samples and batch QC samples associated with out-of-control results for run QC samples were subsequently reanalyzed for the analytes in question.

Matrix QC Summary

The matrix-spike recoveries for all analytes for Katahdin Sample No. WV0975-1 are within the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix spike duplicate analysis of Katahdin Sample No. WV0975-1 is within the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for all analytes.

The serial dilution analysis of Katahdin Sample No. WV0975-1 is within the laboratory's ICP serial dilution acceptance limit (<10% difference between the original sample result and the result for a 5-fold dilution of the sample, if the result for the dilution is at least ten times the instrument detection limit) for all analytes.

Wet Chemistry Analysis

The samples of SDG CTO355-4 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total solids were performed according to "U.S. EPA Contract Laboratory Program Statement of Work for Inorganic Analysis", SOW 7/88.

All analyses were performed within analytical hold time. All quality control criteria were met.

No deviations were noted by the Wet Chemistry group.

Katahdin
ANALYTICAL SERVICES

Cert. No. E87604

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
04-01-05

Leslie Dimond
Quality Assurance Officer

WU0574

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2603 | PAGE 1 OF 3

PROJECT NO: N4821	FACILITY: PENSACOLA 43	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE) William D. Olson		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX		CITY, STATE Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G A G G

PRESERVATIVE USED: 4° 4° HNO3 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TCL 5 VOC 8270	PAHS 8270 SIM	6010B As/Ba/Cu/Pb/Va	6010B As/Ba/Cu/Pb/Va	8270/SIM TCL SVOC/PAHS				COMMENTS
3/6	0705	PEN43RB0306	RB	–	–	QC	G	5	2	2	1	—	—	—	—	—	
	0730	PEN43SB2401	SB24	2	3	SO	G	2	—	—	—	1	1	—	—	—	
	0735	PEN43SB2402	SB24	5	6	SO	G	2	—	—	—	1	1	—	—	—	
	0825	PEN43SS1801	SS18	0	1	SO	G	2	—	—	—	1	1	—	—	—	
	0825	PEN43SS1801D	SS18	0	1	SO	G	2	—	—	—	1	1	—	—	—	
	0835	PEN43SS1901	SS19	0	1	SO	G	2	—	—	—	1	1	—	—	—	
	0845	PEN43SS2001	SS20	0	1	SO	G	2	—	—	—	1	1	—	—	—	
	0855	PEN43SS2101	SS21	0	1	SO	G	2	—	—	—	1	1	—	—	—	
	0855	PEN43SS2101MS	SS21	0	1	SO	G	2	—	—	—	1	1	—	—	—	
	0855	PEN43SS2101MSD	SS21	0	1	SO	G	2	—	—	—	1	1	—	—	—	
	0910	PEN43SS2201	SS22	0	1	SO	G	2	—	—	—	1	1	—	—	—	
	0920	PEN43SS2301	SS23	0	1	SO	G	2	—	—	—	1	1	—	—	—	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY William D. Olson	3/7/05	1215	1. RECEIVED BY [signature]	3/8/05	0855
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

0000007

TETRA TECH NUS, INC.

CHAIN OF CUSTODY NUMBER 2604 (WW0974, WW0975)

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
N4821	PENSACOLA 43	G. Walker	850 385 9899	KATAHDIN Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
William D. Olson		Bill Olson	850 385 9899	340 County Rd #5
		CARRIER/WAYBILL NUMBER		CITY, STATE
		FEDEX		Westbrook ME

STANDARD TAT [X]
RUSH TAT [ ] [ ] 24 hr. [ ] 48 hr. [ ] 72 hr. [ ] 7 day [ ] 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G G G

PRESERVATIVE USED: 4° 4° 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	8270 SIM TCL SVOC	6010B CU	6010 As/Ba/Pb/Ua	6010 Cu/Pb	COMMENTS
3/6	0930	PEW43SB3501	SS35	0	1	SO	G	2	1	1	—	—	
	0940	PEW43SS3601	SS36	0	1	SO	G	2	1	1	—	—	
	0950	PEW43SS3701	SS37	0	1	SO	G	2	1	1	—	—	
	1000	PEW43SS2701	SS27	0	1	SO	G	2	1	—	1	—	
	1010	PEW43SS2801	SS28	0	1	SO	G	2	1	—	1	—	
	1020	PEW43SS2901	SS29	0	1	SO	G	2	1	—	1	—	
	1025	PEW43SS3001	SS30	0	1	SO	G	2	1	—	—	1	
	1035	PEW43SS3101	SS31	0	1	SO	G	2	1	—	—	1	
	1045	PEW43SS3201	SS32	0	1	SO	G	2	1	—	—	1	
	1055	PEW43SS3301	SS33	0	1	SO	G	2	1	—	—	1	
	1100	PEW43SS3401	SS34	0	1	SO	G	2	1	—	—	1	
										—	—		
										—	—		

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY: William D. Olson	3/7/05	1215	1. RECEIVED BY: [signature]	3/8/05	0855
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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4/02R
FORM NO. TINUS-001

WW0975

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2605 | PAGE 3 OF 3

PROJECT NO: N4821	FACILITY: PENSACOLA 43	PROJECT MANAGER: G. Walker	PHONE NUMBER: 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER: Bill Olson	PHONE NUMBER: 850 385 9899	ADDRESS: 340 County Rd #5
		CARRIER/WAYBILL NUMBER: FEDEX		CITY, STATE: West Brook Me

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 8270/8310 TCLSVOC / PAH	6010B As/Ba/Cu/Pb							COMMENTS
3/6	1115	PEW4355 2401	SS24	0	1	SO	G	2	1	1							
3/6	1125	PEW4355 2501	SS25	0	1	SO	G	2	1	1							
3/6	1135	PEW4355 2601	SS26	0	1	SO	G	2	1	1							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	3/7/05	1215	1. RECEIVED BY [signature]	3/8/05	0830
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

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4/02R
FORM NO. TtNUS-001

000009

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID: XD446 DFTPP Injection Date: 03/15/05

Instrument ID: GCMS-X DFTPP Injection Time: 1435

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	60.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	41.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	22.0
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	4.8 (35.0)2
442	40.0 - 100.0% of mass 198	71.5
443	17.0 - 23.0% of mass 442	13.8 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0315	X7466	03/15/05	1455
02		SSTD200X0315	X7467	03/15/05	1545
03		SSTD150X0315	X7468	03/15/05	1628
04		SSTD100X0315	X7469	03/15/05	1710
05		SSTD025X0315	X7470	03/15/05	1753
06		SSTD010X0315	X7471	03/15/05	1835
07					
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18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-X Calibration Date(s): 03/15/05 03/15/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1455 1835

LAB FILE ID: RF10: X7471 RF25: X7470 RF50: X7466
RF100: X7469 RF150: X7468 RF200: X7467

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.023	0.018	0.030	0.049	0.077	0.055	AVRG		4.204e-002		53.339	15.000	<
Phenol	1.206	1.244	1.302	1.122	0.917	0.706	AVRG		1.08296486		21.060	15.000	<
Bis(2-Chloroethyl)ether	195060	467530	1035100	1455400	2193100	2741900	2ORDR	0.14973440	0.12576519	0.50013151	0.99207	0.99000	
2-Chlorophenol	1.053	1.009	1.100	0.978	0.864	0.765	AVRG		0.96149802		12.994	15.000	
2,2'-Oxybis(1-Chloropropa	2.980	2.913	3.120	2.997	2.714	2.539	AVRG		2.87734127		7.386	15.000	
2-Methylphenol	0.732	0.738	0.850	0.751	0.699	0.654	AVRG		0.73743574		8.844	15.000	
Hexachloroethane	0.504	0.504	0.542	0.489	0.435	0.391	AVRG		0.47761044		11.405	15.000	
N-Nitroso-di-n-propylamin	0.848	0.822	0.886	0.807	0.744	0.691	AVRG		0.79955338		8.908	15.000	
4-Methylphenol	0.687	0.810	0.909	0.836	0.753	0.717	AVRG		0.78525417		10.503	15.000	
Nitrobenzene	0.350	0.349	0.364	0.347	0.307	0.295	AVRG		0.33555281		8.185	15.000	
Isophorone	0.583	0.572	0.621	0.577	0.553	0.537	AVRG		0.57378620		4.991	15.000	
2-Nitrophenol	0.149	0.174	0.181	0.167	0.167	0.156	AVRG		0.16581372		7.091	15.000	
2,4-Dimethylphenol	0.234	0.252	0.286	0.269	0.260	0.222	AVRG		0.25387360		9.212	15.000	
Caprolactam	0.053	0.066	0.070	0.069	0.058	0.060	AVRG		6.281e-002		10.818	15.000	
Bis(2-Chloroethoxy)methan	0.369	0.370	0.392	0.358	0.331	0.309	AVRG		0.35468405		8.412	15.000	
2,4-Dichlorophenol	0.223	0.232	0.263	0.230	0.233	0.207	AVRG		0.23129040		7.917	15.000	
1,1'-Biphenyl	303980	793750	1745000	2602500	4488000	5566700	2ORDR	9.954e-002	0.35755052	0.23934715	0.99738	0.99000	
4-Chloroaniline	0.268	0.323	0.330	0.317	0.324	0.292	AVRG		0.30887040		7.868	15.000	
Hexachlorobutadiene	0.193	0.206	0.198	0.188	0.175	0.153	AVRG		0.18565853		10.276	15.000	
4-Chloro-3-Methylphenol	0.186	0.203	0.216	0.217	0.207	0.188	AVRG		0.20267751		6.652	15.000	
Hexachlorocyclopentadiene	27936	140060	428640	767580	1692300	2249600	LINR	0.10914853	3.10561830		0.99688	0.99000	
2,4,6-Trichlorophenol	0.295	0.342	0.350	0.330	0.310	0.296	AVRG		0.32066683		7.272	15.000	
2,4,5-Trichlorophenol	0.243	0.322	0.366	0.348	0.339	0.319	AVRG		0.32306234		13.206	15.000	
2-Chloronaphthalene	0.938	0.987	0.988	0.896	0.817	0.754	AVRG		0.89671807		10.556	15.000	
2-Nitroaniline	0.303	0.331	0.361	0.360	0.341	0.348	AVRG		0.34079174		6.344	15.000	
Dimethyl Phthalate	1.082	1.138	1.138	1.003	0.955	0.899	AVRG		1.03590447		9.578	15.000	
2,6-Dinitrotoluene	0.228	0.257	0.273	0.263	0.256	0.246	AVRG		0.25404788		6.055	15.000	
3-Nitroaniline	0.184	0.235	0.246	0.238	0.220	0.230	AVRG		0.22536410		9.776	15.000	
2,4-Dinitrophenol	5820	47762	152320	296710	781430	1132700	2ORDR	0.16948183	8.25114486	-2.7481004	0.99501	0.99000	
Dibenzofuran	1.178	1.321	1.310	1.216	1.148	1.105	AVRG		1.21279322		7.214	15.000	
4-Nitrophenol	23267	35709	129150	222460	539180	803010	LINR	0.19276240	9.04102107		0.99118	0.99000	
2,4-Dinitrotoluene	0.243	0.316	0.330	0.334	0.333	0.316	AVRG		0.31187212		11.145	15.000	
Atrazine	0.147	0.172	0.170	0.171	0.162	0.154	AVRG		0.16260903		6.483	15.000	
Diethylphthalate	1.040	1.110	1.072	0.948	0.824	0.783	AVRG		0.96286630		14.024	15.000	
4-Chlorophenyl-phenylethe	0.463	0.512	0.493	0.455	0.382	0.365	AVRG		0.44507940		13.265	15.000	
4-Nitroaniline	37013	112890	343830	601740	1285700	1870800	LINR	0.11256233	3.87077072		0.99862	0.99000	
4,6-Dinitro-2-Methylpheno	18268	76770	232950	468880	979480	1312200	LINR	8.384e-002	8.39263420		0.99634	0.99000	
N-Nitrosodiphenylamine	176690	539760	1164000	1882000	3417300	4256600	2ORDR	9.93e-002	0.91798533	0.92247165	0.99761	0.99000	
4-Bromophenyl-phenylether	0.182	0.213	0.220	0.202	0.187	0.184	AVRG		0.19815140		8.057	15.000	
Hexachlorobenzene	0.237	0.270	0.254	0.252	0.235	0.227	AVRG		0.24598763		6.400	15.000	
Pentachlorophenol	7995	70831	220660	403080	1005500	1485000	LINR	0.22179315	7.63202419		0.99352	0.99000	
Carbazole	0.710	0.801	0.806	0.783	0.721	0.726	AVRG		0.75769108		5.742	15.000	
Di-n-butylphthalate	0.951	1.120	1.175	1.170	1.047	1.008	AVRG		1.07842886		8.455	15.000	
Butylbenzylphthalate	0.398	0.483	0.532	0.502	0.510	0.530	AVRG		0.49241492		10.096	15.000	

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-X Calibration Date(s): 03/15/05 03/15/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1455 1835

LAB FILE ID: RF10: X7471 RF25: X7470 RF50: X7466
RF100: X7469 RF150: X7468 RF200: X7467

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dichlorobenzidine	0.238	0.263	0.232	0.215	0.207	0.202	AVRG		0.22621530		10.129	15.000
bis(2-Ethylhexyl)phthalat	0.553	0.698	0.754	0.713	0.712	0.727	AVRG		0.69302415		10.270	15.000
Di-n-octylphthalate	277910	1090500	2274700	4810300	7852000	1.e+007	LINR	0.14430876	0.41857713		0.99702	0.99000
Acetophenone	1.197	1.267	1.349	1.224	1.162	1.086	AVRG		1.21427333		7.395	15.000
2-Fluorophenol	0.901	0.908	1.038	0.908	0.843	0.739	AVRG		0.88956540		10.993	15.000
Phenol-D6	0.990	1.043	1.197	1.054	0.941	0.857	AVRG		1.01370088		11.376	15.000
Nitrobenzene-D5	0.348	0.357	0.394	0.370	0.351	0.334	AVRG		0.35898591		5.874	15.000
2-Fluorobiphenyl	1.296	1.309	1.287	1.178	1.030	0.957	AVRG		1.17621578		12.820	15.000
2,4,6-Tribromophenol	0.151	0.213	0.202	0.208	0.223	0.221	AVRG		0.20299016		13.167	15.000
Terphenyl-D14	0.668	0.784	0.815	0.763	0.783	0.797	AVRG		0.76823603		6.786	15.000

Average %RSD test result.

Calculate Average %RSD: 10.80202770
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 2
SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 2FP#	S2 PHL#	S3 NBZ#	S4 FBP#	S5 TBP#	S6 TPH#	S7 #	S8 #	TOT OUT
01	WG15101-BLANK	WG15101-1	76	85	68	75	73	86			0
02	WG15101-LCS	WG15101-2	91	94	75	80	115J	91			1
03	WG15101-LCSD	WG15101-3	85	93	70	79	125J	95			1
04	PEN43SS3401	WV0975-7	85	95	68	77	150J	102			1
05	PEN43SS2501	WV0975-9	78	92	68	75	148J	96			1
06	PEN43SS3301	WV0975-6RA	81	73	67	78	95	108			0
07	PEN43SS2401	WV0975-8RA	91	82	79	81	79	99			0
08	PEN43SS2601	WV0975-10RA	85	82	76	80	92	101			0
09											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											

		QC LIMITS
S1 (2FP)	= 2-Fluorophenol	(40-130)
S2 (PHL)	= Phenol-D6	(35-120)
S3 (NBZ)	= Nitrobenzene-D5	(35-124)
S4 (FBP)	= 2-Fluorobiphenyl	(34-107)
S5 (TBP)	= 2,4,6-Tribromophenol	(37- 99)
S6 (TPH)	= Terphenyl-D14	(75-111)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID: XD454 DFTPP Injection Date: 03/25/05

Instrument ID: GCMS-X DFTPP Injection Time: 1117

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	67.3
70	Less than 2.0% of mass 69	0.3 (0.4)1
127	40.0 - 60.0% of mass 198	45.5
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	20.9
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	11.3 (79.3)2
442	40.0 - 100.0% of mass 198	73.5
443	17.0 - 23.0% of mass 442	14.2 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0325	X7589	03/25/05	1222
02	WG15101-BLANK	WG15101-1	X7590	03/25/05	1305
03	WG15101-LCS	WG15101-2	X7591	03/25/05	1347
04	WG15101-LCSD	WG15101-3	X7592	03/25/05	1430
05	PEN43SS3401	WV0975-7	X7600	03/25/05	2011
06	PEN43SS2501	WV0975-9	X7602	03/25/05	2136
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-X Calibration Date: 03/25/05 Time: 1222

Lab File ID: X7589 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzaldehyde	4.2e-002	3.34e-002	3.34e-002	0.01	-20.48	100.00	AVRG
Phenol	1.0830000	1.0867000	1.0867000	0.01	0.34	20.00	AVRG
Bis(2-Chloroethyl)ether	32.681000	50.000000	0.8289400	0.01	34.64	100.00	2RDR
2-Chlorophenol	0.9620000	0.9124000	0.9124000	0.01	-5.16	100.00	AVRG
2,2'-Oxybis(1-Chloropropane)	2.8770000	2.4429000	2.4429000	0.01	-15.09	100.00	AVRG
2-Methylphenol	0.7370000	0.7185000	0.7185000	0.01	-2.51	100.00	AVRG
Hexachloroethane	0.4780000	0.4525700	0.4525700	0.01	-5.32	100.00	AVRG
N-Nitroso-di-n-propylamine	0.8000000	0.7368000	0.7368000	0.05	-7.90	100.00	AVRG
4-Methylphenol	0.7850000	0.7319500	0.7319500	0.01	-6.76	100.00	AVRG
Nitrobenzene	0.3350000	0.3324300	0.3324300	0.01	-0.77	100.00	AVRG
Isophorone	0.5740000	0.5299900	0.5299900	0.01	-7.67	100.00	AVRG
2-Nitrophenol	0.1660000	0.1602700	0.1602700	0.01	-3.45	20.00	AVRG
2,4-Dimethylphenol	0.2540000	0.2589800	0.2589800	0.01	1.96	100.00	AVRG
Caprolactam	6.3e-002	6.23e-002	6.23e-002	0.01	-1.11	100.00	AVRG
Bis(2-Chloroethoxy)methane	0.3550000	0.3379400	0.3379400	0.01	-4.80	100.00	AVRG
2,4-Dichlorophenol	0.2310000	0.2164800	0.2164800	0.01	-6.28	20.00	AVRG
1,1'-Biphenyl	40.695000	50.000000	1.0792000	0.01	-18.61	100.00	2RDR
4-Chloroaniline	0.3090000	0.2959500	0.2959500	0.01	-4.22	100.00	AVRG
Hexachlorobutadiene	0.1860000	0.1769300	0.1769300	0.01	-4.88	20.00	AVRG
4-Chloro-3-Methylphenol	0.2030000	0.2012100	0.2012100	0.01	-0.88	20.00	AVRG
Hexachlorocyclopentadiene	49.126000	50.000000	0.2882600	0.05	-1.75	100.00	LINR
2,4,6-Trichlorophenol	0.3200000	0.3053700	0.3053700	0.01	-4.57	20.00	AVRG
2,4,5-Trichlorophenol	0.3230000	0.3298400	0.3298400	0.01	2.12	100.00	AVRG
2-Chloronaphthalene	0.8970000	0.8763900	0.8763900	0.01	-2.30	100.00	AVRG
2-Nitroaniline	0.3410000	0.3114000	0.3114000	0.01	-8.68	100.00	AVRG
Dimethyl Phthalate	1.0360000	1.0011000	1.0011000	0.01	-3.37	100.00	AVRG
2,6-Dinitrotoluene	0.2540000	0.2443100	0.2443100	0.01	-3.82	100.00	AVRG
3-Nitroaniline	0.2260000	0.2159600	0.2159600	0.01	-4.44	100.00	AVRG
2,4-Dinitrophenol	48.409000	50.000000	0.1055400	0.05	-3.18	100.00	2RDR

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-X Calibration Date: 03/25/05 Time: 1222

Lab File ID: X7589 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	1.2130000	1.1935000	1.1935000	0.01	-1.61	100.00	AVRG	
4-Nitrophenol	36.150000	50.000000	6.29e-002	0.05	27.70	100.00	LINR	
2,4-Dinitrotoluene	0.3120000	0.3002300	0.3002300	0.01	-3.77	100.00	AVRG	
Atrazine	0.1630000	0.1552400	0.1552400	0.01	-4.76	100.00	AVRG	
Diethylphthalate	0.9630000	0.9318400	0.9318400	0.01	-3.24	100.00	AVRG	
4-Chlorophenyl-phenylether	0.4450000	0.4459400	0.4459400	0.01	0.21	100.00	AVRG	
4-Nitroaniline	45.010000	50.000000	0.2093000	0.01	-9.98	100.00	LINR	
4,6-Dinitro-2-Methylphenol	47.502000	50.000000	0.1052100	0.01	-5.00	100.00	LINR	
N-Nitrosodiphenylamine	39.942000	50.000000	0.4864400	0.01	-20.12	20.00	2RDR	<-
4-Bromophenyl-phenylether	0.1980000	0.2004700	0.2004700	0.01	1.25	100.00	AVRG	
Hexachlorobenzene	0.2460000	0.2516600	0.2516600	0.01	2.30	100.00	AVRG	
Pentachlorophenol	42.420000	50.000000	8.79e-002	0.01	-15.16	20.00	LINR	
Carbazole	0.7580000	0.7162800	0.7162800	0.01	-5.50	100.00	AVRG	
Di-n-butylphthalate	1.0780000	1.0234000	1.0234000	0.01	-5.06	100.00	AVRG	
Butylbenzylphthalate	0.4920000	0.4613400	0.4613400	0.01	-6.23	100.00	AVRG	
3,3'-Dichlorobenzidine	0.2260000	0.2128600	0.2128600	0.01	-5.81	100.00	AVRG	
bis(2-Ethylhexyl)phthalate	0.6930000	0.6588400	0.6588400	0.01	-4.93	100.00	AVRG	
Di-n-octylphthalate	41.947000	50.000000	1.7285000	0.01	-16.11	20.00	LINR	
Acetophenone	1.2140000	1.1543000	1.1543000	0.01	-4.92	100.00	AVRG	
2-Fluorophenol	0.8900000	0.8116200	0.8116200	0.01	-8.81	100.00	AVRG	
Phenol-D6	1.0140000	0.9579700	0.9579700	0.01	-5.52	100.00	AVRG	
Nitrobenzene-D5	0.3590000	0.3337800	0.3337800	0.01	-7.02	100.00	AVRG	
2-Fluorobiphenyl	1.1760000	1.1434000	1.1434000	0.01	-2.77	100.00	AVRG	
2,4,6-Tribromophenol	0.2030000	0.2047300	0.2047300	0.01	0.85	100.00	AVRG	
Terphenyl-D14	0.7680000	0.7683600	0.7683600	0.01	0.05	100.00	AVRG	

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/14/05
Analysis Date: 25-MAR-2005 13:05
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15101-1
Client ID: WG15101-Blank
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/14/05
Analysis Date: 25-MAR-2005 13:05
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15101-1
Client ID: WG15101-Blank
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	U	74	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-96-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		76%				
13127-88-3	Phenol-D6		85%				
4165-60-0	Nitrobenzene-D5		68%				
321-60-8	2-Fluorobiphenyl		75%				
118-79-6	2,4,6-Tribromophenol		73%				
1718-51-0	Terphenyl-D14		86%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/14/05
Analysis Date: 03/25/05
Report Date: 03/31/2005
Matrix: SOIL

Lab ID: WG15101-2 & WG15101-3
Client ID: WG15101-LCS & WG15101-LCSD
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15101
Units: ug/Kg

COMPOUND	LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS CONC.	LCSD CONC.	LCS %REC.	LCSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Phenol	3333	3333	NA	3080	3040	92	91	1	50	48-116
Bis(2-Chloroethyl)ether	1667	1667	NA	1150	1100	69	66	4	50	54-114
2-Chlorophenol	3333	3333	NA	2960	2880	89	86	3	50	60-118
2,2'-Oxybis(1-Chloropropane)	1667	1667	NA	1390	1330	83	80	4	50	49-122
2-Methylphenol	3333	3333	NA	3080	3060	92	92	0.6	50	53-121
Hexachloroethane	1667	1667	NA	1430	1420	86	85	0.7	50	40- 99
N-Nitroso-di-n-propylamine	1667	1667	NA	1430	1370	86	82	4	50	36-115
4-Methylphenol	3333	3333	NA	3090	3440	93	103	11	50	59-127
Nitrobenzene	1667	1667	NA	1460	1430	88	86	2	50	49-113
Isophorone	1667	1667	NA	1350	1320	81	79	2	50	46-112
2-Nitrophenol	3333	3333	NA	2930	2870	88	86	2	50	57-120
2,4-Dimethylphenol	3333	3333	NA	2840	2940	85	88	3	50	54-113
Bis(2-Chloroethoxy)methane	1667	1667	NA	1460	1410	88	85	3	50	50-117
2,4-Dichlorophenol	3333	3333	NA	2890	2920	87	88	1	50	59-116
4-Chloroaniline	1667	1667	NA	217	280	* 13	* 17	25	50	20-120
Hexachlorobutadiene	1667	1667	NA	1500	1450	90	87	3	50	53-114
4-Chloro-3-Methylphenol	3333	3333	NA	3330	3440	100	103	3	50	62-126
Hexachlorocyclopentadiene	1667	1667	NA	1200	1130	72	68	6	50	28- 73
2,4,6-Trichlorophenol	3333	3333	NA	2970	3090	89	93	4	50	62-120
2,4,5-Trichlorophenol	3333	3333	NA	3300	3480	99	104	5	50	62-124
2-Chloronaphthalene	1667	1667	NA	1530	1540	92	92	0.6	50	42-160
2-Nitroaniline	1667	1667	NA	1500	1580	90	95	5	50	66-121
Dimethyl Phthalate	1667	1667	NA	1680	1720	101	103	2	50	56-133
2,6-Dinitrotoluene	1667	1667	NA	1600	1570	96	94	2	50	66-127
3-Nitroaniline	1667	1667	NA	664	778	* 40	* 47	16	50	57-120
2,4-Dinitrophenol	3333	3333	NA	1880	1890	56	57	0.5	50	3-118
Dibenzofuran	1667	1667	NA	1640	1620	98	97	1	50	66-119
4-Nitrophenol	3333	3333	NA	3130	3290	94	99	5	50	41-149
2,4-Dinitrotoluene	1667	1667	NA	1730	1760	104	106	2	50	60-125
Diethylphthalate	1667	1667	NA	1620	1670	97	100	3	50	57-135
4-Chlorophenyl-phenylether	1667	1667	NA	1670	1720	100	103	3	50	53-133
4-Nitroaniline	1667	1667	NA	1470	1540	88	92	5	50	62-125
4,6-Dinitro-2-Methylphenol	3333	3333	NA	2890	2620	87	79	10	50	46-125
N-Nitrosodiphenylamine	3333	3333	NA	971	902	* 29	* 27	7	50	70-131
4-Bromophenyl-phenylether	1667	1667	NA	1740	1690	104	101	3	50	67-138
Hexachlorobenzene	1667	1667	NA	1780	1800	107	108	1	50	63-131
Pentachlorophenol	3333	3333	NA	2840	2850	85	86	0.4	50	54-131
Carbazole	1667	1667	NA	1660	1670	100	100	0.6	50	78-133
Di-n-butylphthalate	1667	1667	NA	1610	1610	97	97	0.0	50	65-139
Butylbenzylphthalate	1667	1667	NA	1580	1540	95	92	2	50	44-155
3,3'-Dichlorobenzidine	1667	1667	NA	947	980	57	59	3	50	38-137
bis(2-Ethylhexyl)phthalate	1667	1667	NA	1610	1620	97	97	0.6	50	45-154
Di-n-octylphthalate	1667	1667	NA	1250	1320	75	79	5	50	53-143

 FORM III SV-2 X7591.D & X7592.D

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID (Standard): X7589 Date Analyzed: 03/25/05

Instrument ID: GCMS-X Time Analyzed: 1222

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD		952989	7.54	2933948	10.16	1452039	13.91
UPPER LIMIT		1905978	8.04	5867896	10.66	2904078	14.41
LOWER LIMIT		476495	7.04	1466974	9.66	726020	13.41
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG15101-BLANK	WG15101-1	984313	7.56	3182911	10.16	1573558	13.90
02	WG15101-LCS	WG15101-2	1069349	7.56	3581008	10.17	1886675	13.91
03	WG15101-LCSD	WG15101-3	1033443	7.56	3530195	10.16	1885184	13.91
04	PEN43SS3401	WV0975-7	1329300	7.56	4599766	10.17	2492572	13.91
05	PEN43SS2501	WV0975-9	1305840	7.57	4398400	10.16	2389196	13.92
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID (Standard): X7589 Date Analyzed: 03/25/05

Instrument ID: GCMS-X Time Analyzed: 1222

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	2166775	17.03	1913255	22.73	1146406	25.57
UPPER LIMIT	4333550	17.53	3826510	23.23	2292812	26.07
LOWER LIMIT	1083388	16.53	956628	22.23	573203	25.07

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	WG15101-BLANK	WG15101-1	2462159	17.02	2136277	22.72	1436801	25.56
02	WG15101-LCS	WG15101-2	2999974	17.03	2689784	22.73	1913589	25.57
03	WG15101-LCSD	WG15101-3	3218941	17.03	2859607	22.73	1904534	25.58
04	PEN43SS3401	WV0975-7	4262693	17.04	3583830	22.74	1839854	25.59
05	PEN43SS2501	WV0975-9	4165921	17.04	3535454	22.74	1662317	25.58
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID: XD455 DFTPP Injection Date: 03/28/05

Instrument ID: GCMS-X DFTPP Injection Time: 1101

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	56.4	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Less than 100.0% of mass 198	62.3	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	40.0 - 60.0% of mass 198	45.4	
197	Less than 1.0% of mass 198	0.9	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	7.5	
275	10.0 - 30.0% of mass 198	21.5	
365	1.0 - 100.0% of mass 198	2.6	
441	0.0 - 100.0% of mass 443	12.7	(92.6)2
442	40.0 - 100.0% of mass 198	62.7	
443	17.0 - 23.0% of mass 442	13.7	(21.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0328	X7606	03/28/05	1206
02		SSTD200X0328	X7607	03/28/05	1258
03		SSTD150X0328	X7608	03/28/05	1341
04		SSTD100X0328	X7609	03/28/05	1423
05		SSTD025X0328	X7610	03/28/05	1505
06		SSTD010X0328	X7611	03/28/05	1548
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-X Calibration Date(s): 03/28/05 03/28/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1206 1548

LAB FILE ID: RF10: X7611 RF25: X7610 RF50: X7606
RF100: X7609 RF150: X7608 RF200: X7607

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.089	0.108	0.053	0.042	0.024	0.011	AVRG		5.464e-002		68.593	15.000	<
Phenol	1.168	1.203	1.116	1.066	0.876	0.841	AVRG		1.04495955		14.549	15.000	
Bis(2-Chloroethyl)ether	0.983	0.984	0.913	0.837	0.738	0.689	AVRG		0.85722886		14.554	15.000	
2-Chlorophenol	0.968	1.019	0.929	0.898	0.750	0.758	AVRG		0.88715331		12.494	15.000	
2,2'-Oxybis(1-Chloropropa	2.908	3.181	2.907	2.741	2.579	2.493	AVRG		2.80145951		8.953	15.000	
2-Methylphenol	0.669	0.770	0.747	0.712	0.574	0.590	AVRG		0.67687764		12.018	15.000	
Hexachloroethane	0.418	0.500	0.447	0.455	0.432	0.397	AVRG		0.44141153		8.040	15.000	
N-Nitroso-di-n-propylamin	0.906	0.893	0.854	0.797	0.682	0.689	AVRG		0.80353239		12.307	15.000	
4-Methylphenol	0.652	0.771	0.762	0.774	0.603	0.637	AVRG		0.69998049		11.093	15.000	
Nitrobenzene	0.293	0.348	0.323	0.330	0.342	0.304	AVRG		0.32358541		6.678	15.000	
Isophorone	0.515	0.547	0.529	0.523	0.487	0.485	AVRG		0.51427011		4.733	15.000	
2-Nitrophenol	0.128	0.155	0.144	0.156	0.144	0.152	AVRG		0.14641014		7.075	15.000	
2,4-Dimethylphenol	0.226	0.254	0.245	0.259	0.236	0.231	AVRG		0.24176747		5.393	15.000	
Caprolactam	0.065	0.058	0.065	0.066	0.055	0.065	AVRG		6.242e-002		7.834	15.000	
Bis(2-Chloroethoxy)methan	0.312	0.345	0.335	0.324	0.330	0.314	AVRG		0.32682795		3.861	15.000	
2,4-Dichlorophenol	0.202	0.205	0.207	0.215	0.184	0.203	AVRG		0.20279148		4.988	15.000	
1,1'-Biphenyl	1.118	1.172	1.070	1.101	1.130	0.978	AVRG		1.09469350		6.066	15.000	
4-Chloroaniline	0.219	0.263	0.248	0.277	0.240	0.266	AVRG		0.25236630		8.338	15.000	
Hexachlorobutadiene	0.134	0.164	0.150	0.153	0.140	0.155	AVRG		0.14927939		7.194	15.000	
4-Chloro-3-Methylphenol	0.211	0.194	0.207	0.209	0.174	0.188	AVRG		0.19713738		7.376	15.000	
Hexachlorocyclopentadiene	28126	120690	205160	531910	610580	1206000	LINR	0.21919406	3.39311435		0.99364	0.99000	
2,4,6-Trichlorophenol	0.259	0.295	0.279	0.300	0.273	0.282	AVRG		0.28136317		5.229	15.000	
2,4,5-Trichlorophenol	0.257	0.291	0.286	0.330	0.292	0.305	AVRG		0.29359350		8.185	15.000	
2-Chloronaphthalene	0.816	0.947	0.860	0.864	0.873	0.769	AVRG		0.85515924		6.976	15.000	
2-Nitroaniline	0.324	0.340	0.356	0.377	0.367	0.345	AVRG		0.35160744		5.466	15.000	
Dimethyl Phthalate	0.925	0.866	0.939	0.962	0.888	0.874	AVRG		0.90891883		4.246	15.000	
2,6-Dinitrotoluene	0.223	0.210	0.209	0.241	0.213	0.229	AVRG		0.22096605		5.667	15.000	
3-Nitroaniline	0.203	0.189	0.192	0.234	0.226	0.217	AVRG		0.21030157		8.707	15.000	
2,4-Dinitrophenol	0.034	0.042	0.080	0.112	0.093	0.122	AVRG		8.072e-002		44.485	15.000	<
Dibenzofuran	1.174	1.168	1.129	1.218	1.100	1.043	AVRG		1.13853272		5.423	15.000	
4-Nitrophenol	0.107	0.106	0.128	0.138	0.080	0.134	AVRG		0.11559912		19.064	15.000	<
2,4-Dinitrotoluene	0.211	0.220	0.271	0.309	0.277	0.295	AVRG		0.26374573		15.085	15.000	<
Atrazine	0.120	0.126	0.133	0.147	0.134	0.140	AVRG		0.13341129		7.141	15.000	
Diethylphthalate	0.904	0.829	0.933	0.950	0.862	0.815	AVRG		0.88214725		6.293	15.000	
4-Chlorophenyl-phenylethe	0.406	0.446	0.417	0.425	0.390	0.387	AVRG		0.41179763		5.381	15.000	
4-Nitroaniline	38495	86382	179680	487630	456100	903460	LINR	0.12977514	4.52166674		0.99552	0.99000	
4,6-Dinitro-2-Methylpheno	21757	54193	110600	350360	297150	716030	2ORDR	9.745e-002	11.2786000	-4.4515473	0.99355	0.99000	
N-Nitrosodiphenylamine	0.476	0.542	0.498	0.487	0.474	0.437	AVRG		0.48578894		7.140	15.000	
4-Bromophenyl-phenylether	0.160	0.198	0.165	0.181	0.168	0.171	AVRG		0.17380392		7.911	15.000	
Hexachlorobenzene	0.183	0.238	0.194	0.210	0.197	0.211	AVRG		0.20570958		9.279	15.000	
Pentachlorophenol	10381	37559	108340	275340	243080	669420	2ORDR	8.135e-002	14.7372820	-10.088195	0.99457	0.99000	
Carbazole	0.582	0.645	0.624	0.683	0.676	0.655	AVRG		0.64424233		5.788	15.000	
Di-n-butylphthalate	0.813	0.888	0.890	0.955	0.973	0.945	AVRG		0.91086905		6.509	15.000	
Butylbenzylphthalate	0.503	0.517	0.470	0.537	0.492	0.476	AVRG		0.49927535		5.049	15.000	

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-X Calibration Date(s): 03/28/05 03/28/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1206 1548

LAB FILE ID: RF10: X7611 RF25: X7610 RF50: X7606
RF100: X7609 RF150: X7608 RF200: X7607

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dichlorobenzidine	0.256	0.320	0.252	0.232	0.233	0.213	AVRG		0.25111025		14.830	15.000
bis(2-Ethylhexyl)phthalat	0.589	0.706	0.670	0.702	0.718	0.654	AVRG		0.67338550		7.086	15.000
Di-n-octylphthalate	1.420	1.558	1.689	1.849	1.868	1.688	AVRG		1.67854665		10.191	15.000
Acetophenone	1.208	1.296	1.224	1.179	0.999	1.010	AVRG		1.15278376		10.504	15.000
2-Fluorophenol	0.724	0.866	0.768	0.790	0.688	0.716	AVRG		0.75869196		8.460	15.000
Phenol-D6	1.053	1.199	1.037	1.039	0.858	0.830	AVRG		1.00271318		13.694	15.000
Nitrobenzene-D5	0.318	0.359	0.340	0.323	0.348	0.318	AVRG		0.33454842		5.154	15.000
2-Fluorobiphenyl	1.091	1.162	1.052	1.070	1.072	0.954	AVRG		1.06695821		6.313	15.000
2,4,6-Tribromophenol	0.132	0.133	0.136	0.172	0.136	0.178	AVRG		0.14801744		14.414	15.000
Terphenyl-D14	0.880	0.814	0.764	0.838	0.718	0.781	AVRG		0.79930559		7.166	15.000

Average %RSD test result.

Calculate Average %RSD: 9.224775314
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID: XD457 DFTPP Injection Date: 03/30/05

Instrument ID: GCMS-X DFTPP Injection Time: 1115

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.9
68	Less than 2.0% of mass 69	0.3 (0.5)1
69	Less than 100.0% of mass 198	61.9
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	40.0 - 60.0% of mass 198	42.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	13.4 (83.4)2
442	40.0 - 100.0% of mass 198	72.5
443	17.0 - 23.0% of mass 442	16.1 (22.2)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0330	X7642	03/30/05	1134
02	PEN43SS3301	WV0975-6RA	X7648	03/30/05	1554
03	PEN43SS2401	WV0975-8RA	X7649	03/30/05	1637
04	PEN43SS2601	WV0975-10RA	X7650	03/30/05	1719
05					
06					
07					
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12					
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20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-X Calibration Date: 03/30/05 Time: 1134

Lab File ID: X7642 Init. Calib. Date(s): 03/28/05 03/28/05

Init. Calib. Times: 1206 1548

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Benzaldehyde	5.4e-002	6.91e-002	6.91e-002	0.01	27.96	100.00	AVRG	
Phenol	1.0450000	1.0324000	1.0324000	0.01	-1.20	20.00	AVRG	
Bis(2-Chloroethyl)ether	0.8570000	0.8484400	0.8484400	0.01	-1.00	100.00	AVRG	
2-Chlorophenol	0.8870000	0.8267300	0.8267300	0.01	-6.79	100.00	AVRG	
2,2'-Oxybis(1-Chloropropane)	2.8020000	2.6882000	2.6882000	0.01	-4.06	100.00	AVRG	
2-Methylphenol	0.6770000	0.6386000	0.6386000	0.01	-5.67	100.00	AVRG	
Hexachloroethane	0.4420000	0.4313000	0.4313000	0.01	-2.42	100.00	AVRG	
N-Nitroso-di-n-propylamine	0.8040000	0.6891600	0.6891600	0.05	-14.28	100.00	AVRG	
4-Methylphenol	0.7000000	0.6323600	0.6323600	0.01	-9.66	100.00	AVRG	
Nitrobenzene	0.3230000	0.3266300	0.3266300	0.01	1.12	100.00	AVRG	
Isophorone	0.5140000	0.4783900	0.4783900	0.01	-6.93	100.00	AVRG	
2-Nitrophenol	0.1460000	0.1364200	0.1364200	0.01	-6.56	20.00	AVRG	
2,4-Dimethylphenol	0.2420000	0.2201500	0.2201500	0.01	-9.03	100.00	AVRG	
Caprolactam	6.2e-002	4.7e-002	4.7e-002	0.01	-24.19	100.00	AVRG	
Bis(2-Chloroethoxy)methane	0.3270000	0.3053900	0.3053900	0.01	-6.61	100.00	AVRG	
2,4-Dichlorophenol	0.2030000	0.1747900	0.1747900	0.01	-13.90	20.00	AVRG	
1,1'-Biphenyl	1.0950000	1.0393000	1.0393000	0.01	-5.09	100.00	AVRG	
4-Chloroaniline	0.2520000	0.2514200	0.2514200	0.01	-0.23	100.00	AVRG	
Hexachlorobutadiene	0.1490000	0.1323400	0.1323400	0.01	-11.18	20.00	AVRG	
4-Chloro-3-Methylphenol	0.1970000	0.1675000	0.1675000	0.01	-14.98	20.00	AVRG	
Hexachlorocyclopentadiene	35.051000	50.000000	0.1549200	0.05	-29.90	100.00	LINR	
2,4,6-Trichlorophenol	0.2810000	0.2425200	0.2425200	0.01	-13.69	20.00	AVRG	
2,4,5-Trichlorophenol	0.2940000	0.2362400	0.2362400	0.01	-19.65	100.00	AVRG	
2-Chloronaphthalene	0.8550000	0.7834200	0.7834200	0.01	-8.37	100.00	AVRG	
2-Nitroaniline	0.3520000	0.3183200	0.3183200	0.01	-9.57	100.00	AVRG	
Dimethyl Phthalate	0.9090000	0.8282000	0.8282000	0.01	-8.89	100.00	AVRG	
2,6-Dinitrotoluene	0.2210000	0.1965200	0.1965200	0.01	-11.08	100.00	AVRG	
3-Nitroaniline	0.2100000	0.1942100	0.1942100	0.01	-7.52	100.00	AVRG	
2,4-Dinitrophenol	8.e-002	4.36e-002	4.36e-002	0.05	-45.50	100.00	AVRG	<-

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-X Calibration Date: 03/30/05 Time: 1134

Lab File ID: X7642 Init. Calib. Date(s): 03/28/05 03/28/05

Init. Calib. Times: 1206 1548

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dibenzofuran	1.1390000	1.0429000	1.0429000	0.01	-8.44	100.00	AVRG
4-Nitrophenol	0.1160000	0.1073700	0.1073700	0.05	-7.44	100.00	AVRG
2,4-Dinitrotoluene	0.2640000	0.2311300	0.2311300	0.01	-12.45	100.00	AVRG
Atrazine	0.1330000	0.1330500	0.1330500	0.01	0.04	100.00	AVRG
Diethylphthalate	0.8820000	0.8082800	0.8082800	0.01	-8.36	100.00	AVRG
4-Chlorophenyl-phenylether	0.4120000	0.3939500	0.3939500	0.01	-4.38	100.00	AVRG
4-Nitroaniline	42.916000	50.000000	0.1668600	0.01	-14.17	100.00	LINR
4,6-Dinitro-2-Methylphenol	41.216000	50.000000	6.85e-002	0.01	-17.57	100.00	2RDR
N-Nitrosodiphenylamine	0.4860000	0.4573100	0.4573100	0.01	-5.90	20.00	AVRG
4-Bromophenyl-phenylether	0.1740000	0.1592300	0.1592300	0.01	-8.49	100.00	AVRG
Hexachlorobenzene	0.2060000	0.1921700	0.1921700	0.01	-6.71	100.00	AVRG
Pentachlorophenol	43.513000	50.000000	5.75e-002	0.01	-12.97	20.00	2RDR
Carbazole	0.6440000	0.6412300	0.6412300	0.01	-0.43	100.00	AVRG
Di-n-butylphthalate	0.9110000	0.8806200	0.8806200	0.01	-3.33	100.00	AVRG
Butylbenzylphthalate	0.4990000	0.4603300	0.4603300	0.01	-7.75	100.00	AVRG
3,3'-Dichlorobenzidine	0.2510000	0.2557400	0.2557400	0.01	1.89	100.00	AVRG
bis(2-Ethylhexyl)phthalate	0.6730000	0.6223500	0.6223500	0.01	-7.53	100.00	AVRG
Di-n-octylphthalate	1.6790000	1.5052000	1.5052000	0.01	-10.35	20.00	AVRG
Acetophenone	1.1530000	1.0090000	1.0090000	0.01	-12.49	100.00	AVRG
2-Fluorophenol	0.7590000	0.7298700	0.7298700	0.01	-3.84	100.00	AVRG
Phenol-D6	1.0030000	0.8565200	0.8565200	0.01	-14.60	100.00	AVRG
Nitrobenzene-D5	0.3340000	0.3127400	0.3127400	0.01	-6.36	100.00	AVRG
2-Fluorobiphenyl	1.0670000	1.0442000	1.0442000	0.01	-2.14	100.00	AVRG
2,4,6-Tribromophenol	0.1480000	0.1256600	0.1256600	0.01	-15.09	100.00	AVRG
Terphenyl-D14	0.7990000	0.6795100	0.6795100	0.01	-14.96	100.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID: UD939 DFTPP Injection Date: 03/21/05

Instrument ID: GCMS-U DFTPP Injection Time: 1027

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	43.4
68	Less than 2.0% of mass 69	0.4 (0.8)1
69	Less than 100.0% of mass 198	51.0
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	59.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	21.8
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	14.1 (85.6)2
442	40.0 - 100.0% of mass 198	86.3
443	17.0 - 23.0% of mass 442	16.5 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00U0321	U0468	03/21/05	1152
02		SSTD5.00U0321	U0469	03/21/05	1237
03		SSTD3.00U0321	U0470	03/21/05	1323
04		SSTD2.00U0321	U0471	03/21/05	1409
05		SSTD0.50U0321	U0472	03/21/05	1456
06		SSTD0.20U0321	U0473	03/21/05	1543
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-U Calibration Date(s): 03/21/05 03/21/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1152 1543

LAB FILE ID: RF0.2: U0473 RF0.5: U0472 RF1: U0468
RF2: U0471 RF3: U0470 RF5: U0469

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF3	RF5	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Naphthalene	0.699	0.736	0.706	0.704	0.636	0.691	AVRG		0.69535072		4.740	15.000
2-Methylnaphthalene	3457	10301	29418	48383	87220	153390	LINR	0.16495608	2.32362463		0.99374	0.99000
1-Methylnaphthalene	0.524	0.490	0.480	0.447	0.404	0.435	AVRG		0.46321135		9.257	15.000
Acenaphthylene	0.776	0.882	0.988	0.988	0.988	1.182	AVRG		0.96727124		13.947	15.000
Acenaphthene	0.748	0.794	0.826	0.876	0.808	0.888	AVRG		0.82328997		6.376	15.000
Fluorene	0.756	0.902	0.907	0.901	0.868	1.026	AVRG		0.89344281		9.704	15.000
Phenanthrene	0.580	0.632	0.612	0.636	0.641	0.819	AVRG		0.65347518		12.850	15.000
Anthracene	0.641	0.677	0.675	0.723	0.732	0.862	AVRG		0.71857827		10.840	15.000
Fluoranthene	3406	9306	28478	40373	77519	141260	2ORDR	2.357e-003	2.10947738	-0.1574019	0.99977	0.99000
Pyrene	1.429	1.260	1.039	1.419	1.113	1.281	AVRG		1.25683474		12.564	15.000
Benzo(a)anthracene	634	2617	10251	11432	30987	64932	2ORDR	4.508e-002	3.40336959	-0.4516082	0.99970	0.99000
Chrysene	4674	12428	28914	36671	76818	124260	LINR	-8.03e-002	1.08431523		0.99518	0.99000
Benzo(b)fluoranthene	577	2213	7117	7734	23300	42466	2ORDR	5.048e-002	1.94788787	-0.1272343	0.99934	0.99000
Benzo(k)fluoranthene	1.839	1.790	1.683	2.083	1.963	2.177	AVRG		1.92254958		9.705	15.000
Benzo(a)pyrene	0.962	1.046	0.835	0.970	0.962	1.100	AVRG		0.97882254		9.190	15.000
Indeno(1,2,3-cd)pyrene	0.852	0.754	0.632	0.756	0.751	0.968	AVRG		0.78549294		14.439	15.000
Dibenzo(a,h)anthracene	0.751	0.724	0.623	0.675	0.544	0.715	AVRG		0.67209930		11.486	15.000
Benzo(g,h,i)perylene	1902	5432	13311	14618	36980	66830	2ORDR	-9.73e-002	1.15987041	-3.7e-002	0.99503	0.99000
2-Methylnaphthalene-d10	0.280	0.338	0.310	0.315	0.289	0.318	AVRG		0.30840243		6.850	15.000
Fluorene-d10	0.767	0.881	0.875	0.920	0.862	0.983	AVRG		0.88150714		8.062	15.000
Pyrene-d10	1.115	0.954	0.768	1.094	0.870	0.997	AVRG		0.96618874		13.732	15.000

Average %RSD test result.

Calculate Average %RSD: 12.42383003
Maximum Average %RSD: 30.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 2
SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	WG15102-BLANK	WG15102-1	95	94	95						0
02	WG15102-LCS	WG15102-2	88	86	98						0
03	WG15102-LCSD	WG15102-3	94	89	94						0
04	PEN43SS3301	WV0975-1	92	106	111						0
05	PEN43SS3401	WV0975-2	93	107	106						0
06	PEN43SS2401	WV0975-3	101	106	109						0
07	PEN43SS2501	WV0975-4	92	98	100						0
08	PEN43SS2601	WV0975-5	95	101	105						0
09	PEN43SS2401	WV0975-3DL	108	130	123						0
10	PEN43SS2501	WV0975-4DL	96	101	102						0
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											

		QC LIMITS
S1	= 2-Methylnaphthalene-d1	(30-150)
S2	= Fluorene-d10	(30-150)
S3	= Pyrene-d10	(30-150)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID: UD941 DFTPP Injection Date: 03/23/05

Instrument ID: GCMS-U DFTPP Injection Time: 0749

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	42.4
68	Less than 2.0% of mass 69	0.8 (1.7)1
69	Less than 100.0% of mass 198	49.4
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	40.0 - 60.0% of mass 198	57.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.2
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	15.2 (82.0)2
442	40.0 - 100.0% of mass 198	96.5
443	17.0 - 23.0% of mass 442	18.6 (19.2)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00U0323	U0500	03/23/05	0809
02	WG15102-BLANK	WG15102-1	U0507	03/23/05	1312
03	WG15102-LCS	WG15102-2	U0508	03/23/05	1356
04	WG15102-LCSD	WG15102-3	U0509	03/23/05	1440
05	PEN43SS3301	WV0975-1	U0510	03/23/05	1524
06	PEN43SS3401	WV0975-2	U0511	03/23/05	1607
07	PEN43SS2401	WV0975-3	U0512	03/23/05	1651
08	PEN43SS2501	WV0975-4	U0513	03/23/05	1735
09	PEN43SS2601	WV0975-5	U0514	03/23/05	1820
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-U Calibration Date: 03/23/05 Time: 0809

Lab File ID: U0500 Init. Calib. Date(s): 03/21/05 03/21/05

Init. Calib. Times: 1152 1543

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6950000	0.7438100	0.7438100	0.01	7.02	100.00	AVRG
2-Methylnaphthalene	1.0016000	1.0000000	0.3742400	0.01	0.16	100.00	LINR
Acenaphthylene	0.9670000	0.9933400	0.9933400	0.01	2.72	100.00	AVRG
Acenaphthene	0.8230000	0.9341200	0.9341200	0.01	13.50	20.00	AVRG
Fluorene	0.8930000	0.9606400	0.9606400	0.01	7.57	100.00	AVRG
Phenanthrene	0.6530000	0.6234600	0.6234600	0.01	-4.52	100.00	AVRG
Anthracene	0.7180000	0.7487200	0.7487200	0.01	4.28	100.00	AVRG
Fluoranthene	1.1319000	1.0000000	0.5655100	0.01	13.19	20.00	2RDR
Pyrene	1.2570000	1.0163000	1.0163000	0.01	-19.15	100.00	AVRG
Benzo(a)anthracene	1.3001000	1.0000000	0.3976400	0.01	30.01	100.00	2RDR
Chrysene	1.1007000	1.0000000	1.0743000	0.01	10.07	100.00	LINR
Benzo(b)fluoranthene	0.9929500	1.0000000	0.5102800	0.01	-0.70	100.00	2RDR
Benzo(k)fluoranthene	1.9220000	1.9324000	1.9324000	0.01	0.54	100.00	AVRG
Benzo(a)pyrene	0.9790000	1.0329000	1.0329000	0.01	5.50	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.7860000	0.7786700	0.7786700	0.01	-0.93	100.00	AVRG
Dibenzo(a,h)anthracene	0.6720000	0.7612900	0.7612900	0.01	13.29	100.00	AVRG
Benzo(g,h,i)perylene	1.0429000	1.0000000	1.0066000	0.01	4.29	100.00	2RDR
1-Methylnaphthalene	0.4630000	0.4637700	0.4637700	0.01	0.17	100.00	AVRG
2-Methylnaphthalene-d10	0.3080000	0.3334000	0.3334000	0.01	8.25	100.00	AVRG
Fluorene-d10	0.8810000	0.9366200	0.9366200	0.01	6.31	100.00	AVRG
Pyrene-d10	0.9660000	0.7749900	0.7749900	0.01	-19.77	100.00	AVRG

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: 1st Quarter Day 1 Effluent Sample
PO No:
Sample Date:
Received Date:
Extraction Date: 03/14/05
Analysis Date: 23-MAR-2005 13:12
Report Date: 03/28/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15102-1
Client ID: WG15102-Blank
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15102
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	20	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	20	0.6
90-12-0	1-Methylnaphthalene	U	2	1.0	20	20	2
208-96-8	Acenaphthylene	U	0.5	1.0	20	20	0.5
83-32-9	Acenaphthene	U	0.7	1.0	20	20	0.7
86-73-7	Fluorene	U	0.6	1.0	20	20	0.6
85-01-8	Phenanthrene	U	1	1.0	20	20	1
120-12-7	Anthracene	U	0.8	1.0	20	20	0.8
206-44-0	Fluoranthene	U	2	1.0	20	20	2
129-00-0	Pyrene	U	2	1.0	20	20	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	20	1
218-01-9	Chrysene	U	1	1.0	20	20	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	20	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	20	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	20	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	20	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	20	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	20	2
7297-45-2	2-Methylnaphthalene-d10		95%				
81103-79-9	Fluorene-d10		94%				
1718-52-1	Pyrene-d10		95%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: 1st Quarter Day 1 Effluent Sample
PO No:
Sample Date:
Received Date:
Extraction Date: 03/14/05
Analysis Date: 03/23/05
Report Date: 03/28/2005
Matrix: SOIL

Lab ID: WG15102-2 & WG15102-3
Client ID: WG15102-LCS & WG15102-LCSD
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15102
Units: ug/Kg

COMPOUND	LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS CONC.	LCSD CONC.	LCS %REC.	LCSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Naphthalene	67	67	NA	58	62	88	93	6	50	30-150
2-Methylnaphthalene	67	67	NA	105	111	* 158	* 166	6	50	30-150
Acenaphthylene	67	67	NA	65	68	98	102	3	50	30-150
Acenaphthene	67	67	NA	57	59	86	89	4	50	30-150
Fluorene	67	67	NA	56	59	84	89	5	50	30-150
Phenanthrene	67	67	NA	68	71	102	107	5	50	30-150
Anthracene	67	67	NA	65	65	97	97	0.3	50	30-150
Fluoranthene	67	67	NA	88	90	131	135	3	50	30-150
Pyrene	67	67	NA	62	61	93	91	2	50	30-150
Benzo(a)anthracene	67	67	NA	113	114	* 170	* 171	0.9	50	30-150
Chrysene	67	67	NA	68	70	102	105	3	50	30-150
Benzo(b)fluoranthene	67	67	NA	99	99	149	148	0.6	50	30-150
Benzo(k)fluoranthene	67	67	NA	60	66	91	99	8	50	30-150
Benzo(a)pyrene	67	67	NA	71	74	106	112	5	50	30-150
Indeno(1,2,3-cd)pyrene	67	67	NA	72	64	108	96	12	50	30-150
Dibenzo(a,h)anthracene	67	67	NA	65	58	98	87	11	50	30-150
Benzo(g,h,i)perylene	67	67	NA	59	50	88	76	15	50	30-150

FORM III SV-2

U0508.D & U0509.D

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID (Standard): U0500 Date Analyzed: 03/23/05

Instrument ID: GCMS-U Time Analyzed: 0809

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		15396	8.78	69076	11.63	32217	15.75
UPPER LIMIT		30792	9.28	138152	12.13	64434	16.25
LOWER LIMIT		7698	8.28	34538	11.13	16109	15.25
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG15102-BLANK	WG15102-1	17758	8.76	83191	11.61	41649	15.74
02	WG15102-LCS	WG15102-2	16216	8.75	76039	11.59	38502	15.72
03	WG15102-LCSD	WG15102-3	17489	8.75	82988	11.59	42860	15.72
04	PEN43SS3301	WV0975-1	17199	8.76	80253	11.61	40393	15.74
05	PEN43SS3401	WV0975-2	17143	8.76	81761	11.61	41693	15.74
06	PEN43SS2401	WV0975-3	15063	8.75	71437	11.60	37932	15.74
07	PEN43SS2501	WV0975-4	13909	8.76	67718	11.61	34805	15.74
08	PEN43SS2601	WV0975-5	15424	8.75	76397	11.60	40946	15.73
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID (Standard): U0500 Date Analyzed: 03/23/05

Instrument ID: GCMS-U Time Analyzed: 0809

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	44151	19.24	31254	25.56	15190	28.75
UPPER LIMIT	88302	19.74	62508	26.06	30380	29.25
LOWER LIMIT	22076	18.74	15627	25.06	7595	28.25

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	WG15102-BLANK	WG15102-1	62505	19.24	46332	25.56	25586	28.73
02	WG15102-LCS	WG15102-2	61104	19.22	42169	25.54	20730	28.73
03	WG15102-LCSD	WG15102-3	70080	19.22	50367	25.54	28240	28.72
04	PEN43SS3301	WV0975-1	64763	19.24	44488	25.54	19288	28.72
05	PEN43SS3401	WV0975-2	67851	19.21	45394	25.54	22887	28.71
06	PEN43SS2401	WV0975-3	65694	19.22	38664	25.52	21323	28.69
07	PEN43SS2501	WV0975-4	62380	19.21	37333	25.51	16581	28.69
08	PEN43SS2601	WV0975-5	64318	19.21	40663	25.51	17964	28.69
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID: UD942 DFTPP Injection Date: 03/24/05

Instrument ID: GCMS-U DFTPP Injection Time: 0932

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.9
68	Less than 2.0% of mass 69	0.9 (1.8)1
69	Less than 100.0% of mass 198	50.0
70	Less than 2.0% of mass 69	0.1 (0.3)1
127	40.0 - 60.0% of mass 198	59.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.5
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	14.0 (83.4)2
442	40.0 - 100.0% of mass 198	87.2
443	17.0 - 23.0% of mass 442	16.8 (19.2)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00U0324	U0515	03/24/05	0955
02	PEN43SS2401	WV0975-3DL	U0516	03/24/05	1045
03	PEN43SS2501	WV0975-4DL	U0517	03/24/05	1129
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-U Calibration Date: 03/24/05 Time: 0955

Lab File ID: U0515 Init. Calib. Date(s): 03/21/05 03/21/05

Init. Calib. Times: 1152 1543

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Naphthalene	0.6950000	0.7326600	0.7326600	0.01	5.42	100.00	AVRG	
2-Methylnaphthalene	0.9891700	1.0000000	0.3689100	0.01	-1.08	100.00	LINR	
Acenaphthylene	0.9670000	1.1483000	1.1483000	0.01	18.75	100.00	AVRG	
Acenaphthene	0.8230000	0.8856500	0.8856500	0.01	7.61	20.00	AVRG	
Fluorene	0.8930000	0.9933000	0.9933000	0.01	11.23	100.00	AVRG	
Phenanthrene	0.6530000	0.6989900	0.6989900	0.01	7.04	100.00	AVRG	
Anthracene	0.7180000	0.8302900	0.8302900	0.01	15.64	100.00	AVRG	
Fluoranthene	1.2617000	1.0000000	0.6348000	0.01	26.17	20.00	2RDR	<-
Pyrene	1.2570000	1.3458000	1.3458000	0.01	7.06	100.00	AVRG	
Benzo(a)anthracene	1.8803000	1.0000000	0.6019800	0.01	88.03	100.00	2RDR	
Chrysene	0.9938800	1.0000000	0.9758200	0.01	-0.61	100.00	LINR	
Benzo(b)fluoranthene	1.6197000	1.0000000	0.8730300	0.01	61.97	100.00	2RDR	
Benzo(k)fluoranthene	1.9220000	1.7132000	1.7132000	0.01	-10.86	100.00	AVRG	
Benzo(a)pyrene	0.9790000	1.0331000	1.0331000	0.01	5.53	20.00	AVRG	
Indeno(1,2,3-cd)pyrene	0.7860000	0.8025600	0.8025600	0.01	2.11	100.00	AVRG	
Dibenzo(a,h)anthracene	0.6720000	0.6535700	0.6535700	0.01	-2.74	100.00	AVRG	
Benzo(g,h,i)perylene	0.7405500	1.0000000	0.7266000	0.01	25.94	100.00	2RDR	
1-Methylnaphthalene	0.4630000	0.4788500	0.4788500	0.01	3.42	100.00	AVRG	
2-Methylnaphthalene-d10	0.3080000	0.3439400	0.3439400	0.01	11.67	100.00	AVRG	
Fluorene-d10	0.8810000	0.9476900	0.9476900	0.01	7.57	100.00	AVRG	
Pyrene-d10	0.9660000	1.0693000	1.0693000	0.01	10.69	100.00	AVRG	

FORM VII PEST

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID (Standard): U0515 Date Analyzed: 03/24/05

Instrument ID: GCMS-U Time Analyzed: 0955

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		12408	8.76	57686	11.60	28134	15.74
UPPER LIMIT		24816	9.26	115372	12.10	56268	16.24
LOWER LIMIT		6204	8.26	28843	11.10	14067	15.24
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	PEN43SS2401	WV0975-3DL	13344	8.75	62185	11.60	31339	15.74
02	PEN43SS2501	WV0975-4DL	14802	8.75	69424	11.60	35496	15.74
03								
04								
05								
06								
07								
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10								
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14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Lab File ID (Standard): U0515 Date Analyzed: 03/24/05

Instrument ID: GCMS-U Time Analyzed: 0955

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		40275	19.21	19566	25.54	8763	28.72
UPPER LIMIT		80550	19.71	39132	26.04	17526	29.22
LOWER LIMIT		20138	18.71	9783	25.04	4382	28.22
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SS2401	WV0975-3DL	51247	19.22	28786	25.52	14707	28.71
02 PEN43SS2501	WV0975-4DL	60443	19.22	35781	25.52	15742	28.69
03							
04							
05							
06							
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12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

Semivolatile
~~VOLATIL~~E ORGANIC COMPOUNDS IN WATER
CALCULATION VERIFICATION

Program:	SOUTHDIV	**Sample No.:**	PEN43SS2401
Method:	8270C	**Sample Matrix:**	Soil
Site Name:	NAS Pensacola		
		Analyte Name:	Pyrene
Site Location:			
		Spl Delivery Grp:	3554
Project No.	N4821		
		Laboratory:	Katahdin

Equation:

$$Concentration\,(\mu g / \cancel{L}\ kg) = \frac{(A_x)(I_s)(Df)}{(A_{is})(RRF)(V_0)}$$

where:

Ax = Area of characteristic ion (EICP) for compound to be measured.
Ais = Area of characteristic ion (EICP) for the specific internal standard (See Tables 3 and 4).
Is = Amount of internal standard added in nanograms (ng).
Vo = Weight of sample in grams (g).
RRF = Relative response factor from ambient temperature purge of calibration standard.
Df = Dilution Factor
= Ratio of number of milliliters (mL) of water purged (i.e., Vo above) to number of mL of the original water sample used for purging.
For example, if 2.0 mL of sample is diluted to 5 mL with reagent water and purged, Df = 5 mL/2.0 m L = 2.5. If no dilution is performed, Df = 1.
%S = Percent solids as a whole number ie (88.2 for 88.2%)

Sample Data:

A_x =	287031
I_s =	800
Df =	1
A_{is} =	38664
RRF =	1.257
V_0 =	30
%S =	83.7

Green = inputs
Blue = outputs
Pink = error

	Concentration	Units
Lab Result:	190	ug/kg
TtNUS Result:	188.1611759	ug/kg

Comments:

Calculations by: Bernard F Spada III **Date:** 20-Apr-05
Reviewed by: **Date:**

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/14/05
Analysis Date: 23-MAR-2005 16:51
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 83.7

Lab ID: WV0975-3
Client ID: PEN43SS2401
SDG: CTO355-4
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15102
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1	1.0	20	24	1
91-57-6	2-Methylnaphthalene	IJ	9	1.0	20	24	0.7
90-12-0	1-Methylnaphthalene	I	3	1.0	20	24	2
208-96-8	Acenaphthylene	I	9	1.0	20	24	0.6
83-32-9	Acenaphthene	I	3	1.0	20	24	0.8
86-73-7	Fluorene	U	0.7	1.0	20	24	0.7
85-01-8	Phenanthrene		71	1.0	20	24	2
120-12-7	Anthracene	I	16	1.0	20	24	1.0
206-44-0	Fluoranthene	L	200	1.0	20	24	2
129-00-0	Pyrene		190	1.0	20	24	2
56-55-3	Benzo(a)anthracene	JL	200	1.0	20	24	1
218-01-9	Chrysene		160	1.0	20	24	1
205-99-2	Benzo(b)fluoranthene	L	240	1.0	20	24	2
207-08-9	Benzo(k)fluoranthene		110	1.0	20	24	2
50-32-8	Benzo(a)pyrene		160	1.0	20	24	0.9
193-39-5	Indeno(1,2,3-cd)pyrene		98	1.0	20	24	2
53-70-3	Dibenzo(a,h)anthracene		36	1.0	20	24	2
191-24-2	Benzo(g,h,i)perylene		86	1.0	20	24	2
7297-45-2	2-Methylnaphthalene-d10		101%				
81103-79-9	Fluorene-d10		106%				
1718-52-1	Pyrene-d10		109%				

Data File: \\Target_server\GG\chem\gcms-u.i\U032305.b\U0512.D
Report Date: 24-Mar-2005 11:27

Katahdin Analytical Services

Data file : \\Target_server\GG\chem\gcms-u.i\U032305.b\U0512.D
Lab Smp Id: WV0975-3 Client Smp ID: PEN43SS2401
Inj Date : 23-MAR-2005 16:51 MS Autotune Date: 23-APR-2004 09:14
Operator : JCG Inst ID: gcms-u.i
Smp Info : WV0975-3
Misc Info : SW846 M8270C
Comment :
Method : \\Target_server\GG\chem\gcms-u.i\U032305.b\usim018.m
Meth Date : 23-Mar-2005 10:20 cgomez Quant Type: ISTD
Cal Date : 21-MAR-2005 15:43 Cal File: U0473.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tetrat355001.sub
Target Version: 4.12
Processing Host: TARGET06

Concentration Formula: Amt * DF * (Vt/Vo)* 1000 * (100/(100 - M)) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Volume of final extract (L)
Vo	0.03000	Sample Weight
M	16.292	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kg)
*	1 1,4-Dichlorobenzene-D4	152	8.754	8.776	(1.000)	15063	0.80000	
*	2 Naphthalene-D8	136	11.599	11.627	(1.000)	71437	0.80000	
$	4 2-Methylnaphthalene-d10	150	13.197	13.231	(1.138)	55657	2.02101	80.5
	5 2-Methylnaphthalene	142	13.266	13.301	(1.144)	3958	0.23496	9.36(a)
	7 Acenaphthylene	152	15.373	15.387	(0.977)	9928	0.21647	8.62(a)
*	8 Acenaphthene-D10	164	15.737	15.751	(1.000)	37932	0.80000	
	9 Acenaphthene	153	15.805	15.818	(1.004)	2645	0.06776	2.70(a)
$	10 Fluorene-d10	176	16.935	16.981	(1.076)	88542	2.11840	84.4
*	14 Phenanthrene-D10	188	19.215	19.241	(1.000)	65694	0.80000	
	15 Phenanthrene	178	19.268	19.295	(1.003)	96283	1.79426	71.4
	16 Anthracene	178	19.376	19.429	(1.008)	24340	0.41249	16.4(a)
	18 Fluoranthene	202	22.082	22.122	(1.149)	307636	5.14324	205(A)
$	19 Pyrene-d10	212	22.540	22.580	(0.883)	102229	2.18925	87.2
	20 Pyrene	202	22.581	22.620	(0.885)	287031	4.72535	188
	22 Benzo(a)anthracene	228	25.477	25.537	(0.998)	129070	5.09896	203(AH)
*	23 Chrysene-D12	240	25.524	25.560	(1.000)	38664	0.80000	
	24 Chrysene	228	25.570	25.618	(1.002)	184712	4.07992	162
	25 Benzo(b)fluoranthene	252	27.918	27.976	(0.973)	142363	5.90720	235(AM)
	26 Benzo(k)fluoranthene	252	27.941	28.022	(0.974)	140912	2.74987	110(MH)
	27 Benzo(a)pyrene	252	28.577	28.646	(0.996)	102278	3.92031	156
*	28 Perylene-D12	264	28.693	28.751	(1.000)	21323	0.80000	

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-4

Instrument ID: GCMS-U Calibration Date(s): 03/21/05 03/21/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1152 1543

LAB FILE ID: RF0.2: U0473 RF0.5: U0472 RF1: U0468
RF2: U0471 RF3: U0470 RF5: U0469

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF3	RF5	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Naphthalene	0.699	0.736	0.706	0.704	0.636	0.691	AVRG		0.69535072		4.740	15.000
2-Methylnaphthalene	3457	10301	29418	48383	87220	153390	LINR	0.16495608	2.32362463		0.99374	0.99000
1-Methylnaphthalene	0.524	0.490	0.480	0.447	0.404	0.435	AVRG		0.46321135		9.257	15.000
Acenaphthylene	0.776	0.882	0.988	0.988	0.988	1.182	AVRG		0.96727124		13.947	15.000
Acenaphthene	0.748	0.794	0.826	0.876	0.808	0.888	AVRG		0.82328997		6.376	15.000
Fluorene	0.756	0.902	0.907	0.901	0.868	1.026	AVRG		0.89344281		9.704	15.000
Phenanthrene	0.580	0.632	0.612	0.636	0.641	0.819	AVRG		0.65347518		12.850	15.000
Anthracene	0.641	0.677	0.675	0.723	0.732	0.862	AVRG		0.71857827		10.840	15.000
Fluoranthene	3406	9306	28478	40373	77519	141260	2ORDR	2.357e-003	2.10947738	-0.1574019	0.99977	0.99000
Pyrene	1.429	1.260	1.039	1.419	1.113	1.281	AVRG		1.25683474		12.564	15.000
Benzo(a)anthracene	634	2617	10251	11432	30987	64932	2ORDR	4.508e-002	3.40336959	-0.4516082	0.99970	0.99000
Chrysene	4674	12428	28914	36671	76818	124260	LINR	-8.03e-002	1.08431523		0.99518	0.99000
Benzo(b)fluoranthene	577	2213	7117	7734	23300	42466	2ORDR	5.048e-002	1.94788787	-0.1272343	0.99934	0.99000
Benzo(k)fluoranthene	1.839	1.790	1.683	2.083	1.963	2.177	AVRG		1.92254958		9.705	15.000
Benzo(a)pyrene	0.962	1.046	0.835	0.970	0.962	1.100	AVRG		0.97882254		9.190	15.000
Indeno(1,2,3-cd)pyrene	0.852	0.754	0.632	0.756	0.751	0.968	AVRG		0.78549294		14.439	15.000
Dibenzo(a,h)anthracene	0.751	0.724	0.623	0.675	0.544	0.715	AVRG		0.67209930		11.486	15.000
Benzo(g,h,i)perylene	1902	5432	13311	14618	36980	66830	2ORDR	-9.73e-002	1.15987041	-3.7e-002	0.99503	0.99000
2-Methylnaphthalene-d10	0.280	0.338	0.310	0.315	0.289	0.318	AVRG		0.30840243		6.850	15.000
Fluorene-d10	0.767	0.881	0.875	0.920	0.862	0.983	AVRG		0.88150714		8.062	15.000
Pyrene-d10	1.115	0.954	0.768	1.094	0.870	0.997	AVRG		0.96618874		13.732	15.000

Average %RSD test result.

Calculate Average %RSD: 12.42383003
Maximum Average %RSD: 30.00000000

Note: Passes Average %RSD Test.

FORM VI SV

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **APRIL 25, 2005**

FROM: **ERIN M. FAUST** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – METALS**
CTO – 355 NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – 3553

SAMPLES: 19/Soil/

PEN43SB2302	PEN43SB2401	PEN43SB2402
PEN43SS1801	PEN43SS1801D	PEN43SS1901
PEN43SS2001	PEN43SS2101	PEN43SS2201
PEN43SS2301	PEN43SS2701	PEN43SS2801
PEN43SS2901	PEN43SS3001	PEN43SS3101
PEN43SS3201	PEN43SS3501	PEN43SS3601
PEN43SS3701		

1/Aqueous/

PEN43RB0306

Overview

The sample set for CTO 355, NAS Pensacola, SDG 3553, consists of nineteen (19) soil environmental samples and one (1) aqueous rinsate blank. One (1) field duplicate pair (PEN43SS1801 / PEN43S S1801D) is included within this SDG.

Samples PEN43SS3501, PEN43SS3601 and PEN43SS3701 were analyzed for copper. Samples PEN43SS3001, PEN43SS3101 and PEN43SS3201 were analyzed for copper and lead. Samples PEN43SS2701, PEN43SS2801 and PEN43SS2901 were analyzed for arsenic, barium, lead and vanadium. All remaining samples were analyzed for arsenic, barium, copper, lead and vanadium. The samples were collected by Tetra Tech NUS on March 4 and 6, 2005 and analyzed by Katahdin Analytical Services under Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. Metals analyses were conducted using SW-846 method 6010B.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verification Results
* • Laboratory Blank Analyses
* • ICP Interference Check Sample Results
* • Matrix Spike/Matrix Spike Duplicate Results
* • Laboratory Control Sample Results
* • ICP Serial Dilution Results

* • Field Duplicate Results
* • Sample Quantitation
* • Detection Limits

* - All quality control criteria were met for this parameter.

Notes

Sample PEN43SS2101 was diluted 2X for arsenic, copper and vanadium and 5X for lead. Sample PEN43SS2701 was diluted 2X for arsenic and vanadium and 10X for lead. Sample PEN43SS2801 was diluted 2X for arsenic and vanadium and 20X for lead.

The following contaminant was detected in the laboratory method/preparation blanks at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
Barium	2.04 µg/L	1.02 mg/kg

An action level of 5X the maximum concentration has been used to evaluate the sample data for blank contamination. Sample aliquot, percent solids and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No validation action was necessary because all reported results for barium were greater than the action level.

The rinsate blank sample was not used to establish blank action levels and was not qualified due to laboratory blank contamination.

The matrix spike (MS) and matrix spike duplicate (MSD) percent recoveries for barium, copper and lead were outside the 75-125% quality control limits, affecting the soil matrix. No validation action was necessary because the concentrations of barium, copper and lead in the un-spiked sample were greater than four times the concentrations of these analytes in the spiking solution.

The Contract Required Detection Limit (CRDL) percent recovery for lead on 3/28/05 at 18:40 was > 120% quality control limit. No validation action was taken based on the CRDL percent recoveries.

The Practical Quantitation Limit (PQL) percent recovery for arsenic on 3/28/05 was < 80% quality control limit. No validation action was taken based on the PQL percent recoveries.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", July 2002 and the NFESC document entitled "Navy IRCDQM" (September 1999).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Erin M Faust

Tetra Tech NUS
Erin M. Faust
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB2302	nsample	PEN43SB2401	nsample	PEN43SB2402
samp_date	3/4/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0952-001	lab_id	WV0974-003	lab_id	WV0974-004
qc_type	NM	qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG	units	MG/KG
Pct_Solids	94.4	Pct_Solids	94.7	Pct_Solids	94.4
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.27	I		
BARIUM	1.0			
COPPER	0.26	IJ		
LEAD	0.50	J		
VANADIUM	1.4	I		

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.22	U	U	
BARIUM	1.5			
COPPER	0.74	IJ		
LEAD	1.3	J		
VANADIUM	1.6	I		

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.24	U	U	
BARIUM	1.7			
COPPER	0.55	IJ		
LEAD	2.0	J		
VANADIUM	2.6			

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SS1801
samp_date	3/6/2005
lab_id	WV0974-005
qc_type	NM
units	MG/KG
Pct_Solids	90.5
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	1.3			
BARIUM	9.3			
COPPER	6.7	J		
LEAD	32.0	J		
VANADIUM	7.0			

nsample	PEN43SS1801D
samp_date	3/6/2005
lab_id	WV0974-006
qc_type	NM
units	MG/KG
Pct_Solids	82.8
DUP_OF:	PEN43SS1801

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	1.2			
BARIUM	10.4			
COPPER	7.6	J		
LEAD	37.7	J		
VANADIUM	6.2			

nsample	PEN43SS1901
samp_date	3/6/2005
lab_id	WV0974-007
qc_type	NM
units	MG/KG
Pct_Solids	94.1
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	3.5			
BARIUM	6.6			
COPPER	29.1	J		
LEAD	88.0	J		
VANADIUM	6.7			

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SS2001	nsample	PEN43SS2101	nsample	PEN43SS2201
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-008	lab_id	WV0974-009	lab_id	WV0974-010
qc_type	NM	qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG	units	MG/KG
Pct_Solids	88.8	Pct_Solids	93.7	Pct_Solids	94.3
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	1.8			
BARIUM	12.6			
COPPER	5.4	J		
LEAD	30.4	J		
VANADIUM	11.6			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	4.2			
BARIUM	710			
COPPER	240	J		
LEAD	2080	J		
VANADIUM	5.7			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.23	U	U	
BARIUM	2.2			
COPPER	3.2	J		
LEAD	17.1	J		
VANADIUM	1.4	I		

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SS2301
samp_date	3/6/2005
lab_id	WV0974-011
qc_type	NM
units	MG/KG
Pct_Solids	89.9
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	1.2			
BARIUM	3.4			
COPPER	5.4	J		
LEAD	17.6	J		
VANADIUM	5.9			

nsample	PEN43SS2701
samp_date	3/6/2005
lab_id	WV0974-015
qc_type	NM
units	MG/KG
Pct_Solids	92.2
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	6.0			
BARIUM	310			
LEAD	3850	J		
VANADIUM	10.0			

nsample	PEN43SS2801
samp_date	3/6/2005
lab_id	WV0974-016
qc_type	NM
units	MG/KG
Pct_Solids	89.3
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	8.0			
BARIUM	726			
LEAD	7360	J		
VANADIUM	73.1			

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SS2901	nsample	PEN43SS3001	nsample	PEN43SS3101
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-017	lab_id	WV0974-018	lab_id	WV0974-019
qc_type	NM	qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG	units	MG/KG
Pct_Solids	92.7	Pct_Solids	93.7	Pct_Solids	92.5
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	1.4			
BARIUM	61.7			
LEAD	417	J		
VANADIUM	4.1			

Parameter	Result	Lab Qual	Val Qual	Qual Code
COPPER	1.7	IJ		
LEAD	10.7	J		

Parameter	Result	Lab Qual	Val Qual	Qual Code
COPPER	8.2	J		
LEAD	32.5	J		

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SS3201	nsample	PEN43SS3501	nsample	PEN43SS3601
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-020	lab_id	WV0974-012	lab_id	WV0974-013
qc_type	NM	qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG	units	MG/KG
Pct_Solids	93.7	Pct_Solids	93.0	Pct_Solids	93.6
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
COPPER	3.9	J		
LEAD	28.0	J		

Parameter	Result	Lab Qual	Val Qual	Qual Code
COPPER	12.2	J		

Parameter	Result	Lab Qual	Val Qual	Qual Code
COPPER	7.0	J		

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SS3701
samp_date	3/6/2005
lab_id	WV0974-014
qc_type	NM
units	MG/KG
Pct_Solids	92.3
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
COPPER	4.5	J		

PROJ_NO: 4821

SDG: 3553 MEDIA: WATER DATA FRACTION: M

nsample	PEN43RB0306
samp_date	3/6/2005
lab_id	WV0974-001
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	2.81	U	U	
BARIUM	0.50	U	U	
COPPER	2.52	U	U	
LEAD	2.2	I		
VANADIUM	5.07	U	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43RB0306

Matrix: WATER **SDG Name:** CTO355-3

Percent Solids: 0.00 **Lab Sample ID:** WV0974-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	0.50	U		P	1	5.0	0.50
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-92-1	LEAD, TOTAL	2.2	I		P	1	5.0	2.07
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2302

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 94.4 **Lab Sample ID:** WV0952-001

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.27	I		P	1	0.50	0.18
7440-39-3	BARIUM, TOTAL	1.0			P	1	0.31	0.03
7440-50-8	COPPER, TOTAL	0.26	I	J	P	1	1.6	0.16
7439-92-1	LEAD, TOTAL	0.50		J	P	1	0.31	0.13
7440-62-2	VANADIUM, TOTAL	1.4	I		P	1	1.6	0.32

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2401

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 94.7 **Lab Sample ID:** WV0974-003

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.22	U		P	1	0.64	0.22
7440-39-3	BARIUM, TOTAL	1.5			P	1	0.40	0.04
7440-50-8	COPPER, TOTAL	0.74	I	J	P	1	2.0	0.20
7439-92-1	LEAD, TOTAL	1.3		J	P	1	0.40	0.17
7440-62-2	VANADIUM, TOTAL	1.6	I		P	1	2.0	0.41

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2402

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 94.4 **Lab Sample ID:** WV0974-004

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.24	U		P	1	0.68	0.24
7440-39-3	BARIUM, TOTAL	1.7			P	1	0.43	0.04
7440-50-8	COPPER, TOTAL	0.55	I	J	P	1	2.1	0.22
7439-92-1	LEAD, TOTAL	2.0		J	P	1	0.43	0.18
7440-62-2	VANADIUM, TOTAL	2.6			P	1	2.1	0.43

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS1801

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 90.5 **Lab Sample ID:** WV0974-005

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	1.3			P	1	0.66	0.23
7440-39-3	BARIUM, TOTAL	9.3			P	1	0.41	0.04
7440-50-8	COPPER, TOTAL	6.7		J	P	1	2.1	0.21
7439-92-1	LEAD, TOTAL	32.0		J	P	1	0.41	0.17
7440-62-2	VANADIUM, TOTAL	7.0			P	1	2.1	0.42

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS1801D

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 82.8 **Lab Sample ID:** WV0974-006

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	1.2			P	1	0.73	0.26
7440-39-3	BARIUM, TOTAL	10.4			P	1	0.46	0.05
7440-50-8	COPPER, TOTAL	7.6		J	P	1	2.3	0.23
7439-92-1	LEAD, TOTAL	37.7		J	P	1	0.46	0.19
7440-62-2	VANADIUM, TOTAL	6.2			P	1	2.3	0.46

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS1901

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 94.1 **Lab Sample ID:** WV0974-007

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	3.5			P	1	0.58	0.20
7440-39-3	BARIUM, TOTAL	6.6			P	1	0.36	0.04
7440-50-8	COPPER, TOTAL	29.1		J	P	1	1.8	0.18
7439-92-1	LEAD, TOTAL	88.0		J	P	1	0.36	0.15
7440-62-2	VANADIUM, TOTAL	6.7			P	1	1.8	0.37

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS2001

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 88.8 **Lab Sample ID:** WV0974-008

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	1.8			P	1	0.65	0.23
7440-39-3	BARIUM, TOTAL	12.6			P	1	0.40	0.04
7440-50-8	COPPER, TOTAL	5.4		J	P	1	2.0	0.20
7439-92-1	LEAD, TOTAL	30.4		J	P	1	0.40	0.17
7440-62-2	VANADIUM, TOTAL	11.6			P	1	2.0	0.41

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS2101

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 93.7 **Lab Sample ID:** WV0974-009

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	4.2			P	2	1.4	0.50
7440-39-3	BARIUM, TOTAL	710			P	1	0.44	0.04
7440-50-8	COPPER, TOTAL	240		J	P	2	4.4	0.45
7439-92-1	LEAD, TOTAL	2080		J	P	5	2.2	0.92
7440-62-2	VANADIUM, TOTAL	5.7			P	2	4.4	0.90

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS2201

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 94.3 **Lab Sample ID:** WV0974-010

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.23	U		P	1	0.65	0.23
7440-39-3	BARIUM, TOTAL	2.2			P	1	0.41	0.04
7440-50-8	COPPER, TOTAL	3.2		J	P	1	2.0	0.21
7439-92-1	LEAD, TOTAL	17.1		J	P	1	0.41	0.17
7440-62-2	VANADIUM, TOTAL	1.4	I		P	1	2.0	0.41

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS2301

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 89.9 **Lab Sample ID:** WV0974-011

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	1.2			P	1	0.70	0.24
7440-39-3	BARIUM, TOTAL	3.4			P	1	0.43	0.04
7440-50-8	COPPER, TOTAL	5.4		J	P	1	2.2	0.22
7439-92-1	LEAD, TOTAL	17.6		J	P	1	0.43	0.18
7440-62-2	VANADIUM, TOTAL	5.9			P	1	2.2	0.44

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS2701

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 92.2 **Lab Sample ID:** WV0974-015

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	6.0			P	2	1.2	0.42
7440-39-3	BARIUM, TOTAL	310			P	1	0.38	0.04
7439-92-1	LEAD, TOTAL	3850		J	P	10	3.8	1.56
7440-62-2	VANADIUM, TOTAL	10			P	2	3.8	0.76

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS2801

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 89.3 **Lab Sample ID:** WV0974-016

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	8.0			P	2	1.2	0.41
7440-39-3	BARIUM, TOTAL	726			P	1	0.36	0.04
7439-92-1	LEAD, TOTAL	7360		J	P	20	7.2	2.99
7440-62-2	VANADIUM, TOTAL	73.1			P	2	3.6	0.73

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS2901

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 92.7 **Lab Sample ID:** WV0974-017

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	1.4			P	1	0.65	0.23
7440-39-3	BARIUM, TOTAL	61.7			P	1	0.40	0.04
7439-92-1	LEAD, TOTAL	417		J	P	1	0.40	0.17
7440-62-2	VANADIUM, TOTAL	4.1			P	1	2.0	0.41

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS3001

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 93.7 **Lab Sample ID:** WV0974-018

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-50-8	COPPER, TOTAL	1.7	I	J	P	1	2.2	0.22
7439-92-1	LEAD, TOTAL	10.7		J	P	1	0.44	0.18

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS3101

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 92.5 **Lab Sample ID:** WV0974-019

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-50-8	COPPER, TOTAL	8.2		J	P	1	1.7	0.17
7439-92-1	LEAD, TOTAL	32.5		J	P	1	0.34	0.14

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS3201

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 93.7 **Lab Sample ID:** WV0974-020

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-50-8	COPPER, TOTAL	3.9		J	P	1	1.8	0.18
7439-92-1	LEAD, TOTAL	28.0		J	P	1	0.36	0.15

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS3501

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 93.0 **Lab Sample ID:** WV0974-012

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-50-8	COPPER, TOTAL	12.2		J	P	1	1.7	0.17

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS3601

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 93.6 **Lab Sample ID:** WV0974-013

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-50-8	COPPER, TOTAL	7.0		J	P	1	2.0	0.21

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SS3701

Matrix: SOIL **SDG Name:** CTO355-3

Percent Solids: 92.3 **Lab Sample ID:** WV0974-014

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-50-8	COPPER, TOTAL	4.5		J	P	1	2.1	0.21

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

APPENDIX C
SUPPORT DOCUMENTATION

WV0951, WV0952

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 2610 PAGE 3 OF 3

PROJECT NO: 4821	FACILITY: PEN 43	PROJECT MANAGER: G. Walker	PHONE NUMBER: 850 385 9899
SAMPLERS (SIGNATURE): Matt D. Olson		FIELD OPERATIONS LEADER: Bill Olson	PHONE NUMBER: 850 385 9899
		CARRIER/WAYBILL NUMBER: FEDEX 8428 7247 7090	

LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
ADDRESS: 340 County Rd #5
CITY, STATE: Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	6010B As/Ba/Cu/Pb/Na	8270/8310 TCL SVOC PAHs								COMMENTS
3/4	1230	PEN 43 SB2502		4	5	SO	G	2	1	1								
3/4	1240	PEN 43SB2001		2	3	SO	G	2	1	1								
3/4	1245	PEN 43 SB2002		5	7	SO	G	2	1	1								
3/4	1305	PEN 43 SB 2101		2	3	SO	G	2	1	1								
3/4	1310	PEN43SB2102		5	7	SO	G	2	1	1								
3/4	1320	PEN 43SB2201		2	3	SO	G	2	1	1								
3/4	1325	PEN 43 SB2202		7	8	SO	G	2	1	1								
3/4	1335	PEN 43 SB 2301		2	3	SO	G	2	1	1								
3/4	1340	PEN43 SB2302		6 WV0 3/4/05	~~7~~	SO	G	2	1	1								
3/4		PEN43SB 2401		~~6~~	~~7~~	SO	G	2	1	1								
3/4		PEN 43 SB 2402				SO	G	2	1	1								

Samples 3/7/05

1. RELINQUISHED BY: Matt D. Olson	DATE: 3/4/05	TIME: 1630	1. RECEIVED BY: [signature]	DATE: 3/8/05	TIME: 1235
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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1100000

WU0974

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2603 | PAGE 1 OF 3

PROJECT NO: N4821	FACILITY: PENSACOLA 43	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE) William D. Olson		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX		CITY, STATE Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P G G
PRESERVATIVE USED: 4° 4° HNO3 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TCL 5 VOC 8270	PAHS 8270 SIM	6010B As/Ba/Cu/Pb/Va	6010B As/Ba/Cu/Pb/Va	8270/SIM TCL SVOC/PAHS			COMMENTS
3/6	0705	PEN43RB0306	RB	–	–	QC	G	5	2	2	1	—	—	—	—	
	0730	PEN43SB2401	SB24	2	3	SO	G	2	—	—	—	1	1	—	—	
	0735	PEN43SB2402	SB24	5	6	SO	G	2	—	—	—	1	1	—	—	
	0825	PEN43SS1801	SS18	0	1	SO	G	2	—	—	—	1	1	—	—	
	0825	PEN43SS1801D	SS18	0	1	SO	G	2	—	—	—	1	1	—	—	
	0835	PEN43SS1901	SS19	0	1	SO	G	2	—	—	—	1	1	—	—	
	0845	PEN43SS2001	SS20	0	1	SO	G	2	—	—	—	1	1	—	—	
	0855	PEN43SS2101	SS21	0	1	SO	G	2	—	—	—	1	1	—	—	
	0855	PEN43SS2101MS	SS21	0	1	SO	G	2	—	—	—	1	1	—	—	
	0855	PEN43SS2101MSD	SS21	0	1	SO	G	2	—	—	—	1	1	—	—	
	0910	PEN43SS2201	SS22	0	1	SO	G	2	—	—	—	1	1	—	—	
	0920	PEN43SS2301	SS23	0	1	SO	G	2	—	—	—	1	1	—	—	

1. RELINQUISHED BY William D. Olson	DATE 3/7/05	TIME 1215	1. RECEIVED BY [signature]	DATE 3/8/05	TIME 0850
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

0000012

TETRA TECH NUS, INC.

CHAIN OF CUSTODY NUMBER 2604 (WU0974, WU0975)

PROJECT NO: N4821	FACILITY: PENSACOLA 43	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: KATAHDIN Andrea Colby
SAMPLERS (SIGNATURE) William D. Olson		FIELD OPERATIONS LEADER B. Wilson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX		CITY, STATE Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G G G

PRESERVATIVE USED: 4° 4° 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	8270 Sim TCL SVOC	6010B Cu	6010 As/Ba/Pb/Ua	6010 Cu/Pb				COMMENTS
3/6	0930	PEW43SS3501	SS35	0	1	SO	G	2	1	1	—	—	—	—	—	
	0940	PEW43SS3601	SS36	0	1	SO	G	2	1	1	—	—	—	—	—	
	0950	PEW43SS3701	SS37	0	1	SO	G	2	1	1	—	—	—	—	—	
	1000	PEW43SS2701	SS27	0	1	SO	G	2	1	—	1	—	—	—	—	
	1010	PEW43SS2801	SS28	0	1	SO	G	2	1	—	1	—	—	—	—	
	1020	PEW43SS2901	SS29	0	1	SO	G	2	1	—	1	—	—	—	—	
	1025	PEW43SS3001	SS30	0	1	SO	G	2	1	—	—	1	—	—	—	
	1035	PEW43SS3101	SS31	0	1	SO	G	2	1	—	—	1	—	—	—	
	1045	PEW43SS3201	SS32	0	1	SO	G	2	1	—	—	1	—	—	—	
	1055	PEW43SS3301	SS33	0	1	SO	G	2	1	—	—	1	—	—	—	
	1100	PEW43SS3401	SS34	0	1	SO	G	2	1	—	—	1	—	—	—	

1. RELINQUISHED BY William D. Olson	DATE 3/7/05	TIME 1215	1. RECEIVED BY [signature]	DATE 3/8/05	TIME 0855
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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FORM NO. TtNUS-001

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HOLDTIME

SDG 3553

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SS1801D	WV0974-006	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS2301	WV0974-011	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS2201	WV0974-010	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS2101	WV0974-009	NM	3/6/2005	3/22/2005	3/28/2005	16	6	22
M	MG/KG	PEN43SS2101	WV0974-009	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS2001	WV0974-008	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS2001	WV0974-008	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SB2302	WV0952-001	NM	3/4/2005	3/22/2005	3/29/2005	18	7	25
M	MG/KG	PEN43SS1901	WV0974-007	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS2701	WV0974-015	NM	3/6/2005	3/22/2005	3/28/2005	16	6	22
M	MG/KG	PEN43SS1801D	WV0974-006	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS1801	WV0974-005	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS1801	WV0974-005	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SB2402	WV0974-004	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SB2402	WV0974-004	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB2401	WV0974-003	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SB2401	WV0974-003	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS1901	WV0974-007	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS3001	WV0974-018	NM	3/6/2005	3/22/2005	3/28/2005	16	6	22
M	MG/KG	PEN43SB2302	WV0952-001	NM	3/4/2005	3/22/2005	3/24/2005	18	2	20
M	MG/KG	PEN43SS3701	WV0974-014	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS3601	WV0974-013	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS3501	WV0974-012	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS3201	WV0974-020	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS3201	WV0974-020	NM	3/6/2005	3/22/2005	3/28/2005	16	6	22
M	MG/KG	PEN43SS3101	WV0974-019	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS2301	WV0974-011	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS3001	WV0974-018	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS2701	WV0974-015	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS2901	WV0974-017	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS2901	WV0974-017	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS2801	WV0974-016	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS2801	WV0974-016	NM	3/6/2005	3/22/2005	3/28/2005	16	6	22

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SS2801	WV0974-016	NM	3/6/2005	3/22/2005	3/24/2005	16	2	18
M	MG/KG	PEN43SS2701	WV0974-015	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS2101	WV0974-009	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	MG/KG	PEN43SS3101	WV0974-019	NM	3/6/2005	3/22/2005	3/28/2005	16	6	22
M	MG/KG	PEN43SS2201	WV0974-010	NM	3/6/2005	3/22/2005	3/29/2005	16	7	23
M	UG/L	PEN43RB0306	WV0974-001	NM	3/6/2005	3/9/2005	3/28/2005	3	19	22
TS	%	PEN43SS3201	WV0974-20	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2701	WV0974-15	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2701	WV0974-33	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2801	WV0974-16	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2801	WV0974-34	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2901	WV0974-17	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2901	WV0974-35	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3001	WV0974-18	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3001	WV0974-36	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2301	WV0974-29	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3101	WV0974-37	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3501	WV0974-30	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SS3201	WV0974-38	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3501	WV0974-12	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SB2302	WV0952-1	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SS3601	WV0974-13	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3701	WV0974-32	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3701	WV0974-14	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3101	WV0974-19	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SB2402	WV0974-22	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SB2302	WV0952-4	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2401	WV0974-21	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS3601	WV0974-31	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2301	WV0974-11	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SB2401	WV0974-3	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SB2402	WV0974-4	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS1801	WV0974-23	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS1801	WV0974-5	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS1801D	WV0974-24	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS1801D	WV0974-6	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SS1901	WV0974-7	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2001	WV0974-26	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2001	WV0974-8	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2101	WV0974-27	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2101	WV0974-9	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2201	WV0974-28	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS1901	WV0974-25	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
TS	%	PEN43SS2201	WV0974-10	NM	3/6/2005	3/9/2005	3/10/2005	3	1	4
OS	%	PEN43SS2301	WV0974-11	NM	3/6/2005	3/11/2005	3/28/2005	5	17	22
OS	%	PEN43SS2001	WV0974-8	NM	3/6/2005	3/11/2005	3/30/2005	5	19	24
OS	%	PEN43SS2101	WV0974-27	NM	3/6/2005	3/11/2005	3/29/2005	5	18	23
OS	%	PEN43SS2801	WV0974-16	NM	3/6/2005	3/11/2005	3/29/2005	5	18	23
OS	%	PEN43SS2101	WV0974-9	NM	3/6/2005	3/11/2005	3/28/2005	5	17	22
OS	%	PEN43SS2101RE	WV0974-27RE	NM	3/6/2005	4/1/2005	4/5/2005	26	4	30
OS	%	PEN43SS2201	WV0974-10	NM	3/6/2005	3/11/2005	3/28/2005	5	17	22
OS	%	PEN43SS2201	WV0974-28	NM	3/6/2005	3/11/2005	3/29/2005	5	18	23
OS	%	PEN43SS2701	WV0974-33	NM	3/6/2005	3/11/2005	3/29/2005	5	18	23
OS	%	PEN43SS2201RE	WV0974-28RE	NM	3/6/2005	4/1/2005	4/5/2005	26	4	30

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CTO 355 NAS PENSACOLA
SDG: CTO355-3

Sample Receipt

The following samples were received on March 5 and March 8, 2005 and were logged in under Katahdin Analytical Services work order numbers WV0952 and WV0974 for a hardcopy due date of April 3, 2005.

KATAHDIN Sample No.	TTNUS Sample Identification
WV0952-1	PEN43SB2302
WV0952-4	PEN43SB2302
WV0974-1	PEN43RB0306
WV0974-2	PEN43RB0306
WV0974-3	PEN43SB2401
WV0974-4	PEN43SB2402
WV0974-5	PEN43SS1801
WV0974-6	PEN43SS1801D
WV0974-7	PEN43SS1901
WV0974-8	PEN43SS2001
WV0974-9	PEN43SS2101
WV0974-10	PEN43SS2201
WV0974-11	PEN43SS2301
WV0974-12	PEN43SS3501
WV0974-13	PEN43SS3601
WV0974-14	PEN43SS3701
WV0974-15	PEN43SS2701
WV0974-16	PEN43SS2801
WV0974-17	PEN43SS2901
WV0974-18	PEN43SS3001
WV0974-19	PEN43SS3101
WV0974-20	PEN43SS3201
WV0974-21	PEN43SB2401
WV0974-22	PEN43SB2402
WV0974-23	PEN43SS1801
WV0974-24	PEN43SS1801D
WV0974-25	PEN43SS1901
WV0974-26	PEN43SS2001
WV0974-27	PEN43SS2101
WV0974-28	PEN43SS2201
WV0974-29	PEN43SS2301
WV0974-30	PEN43SS3501
WV0974-31	PEN43SS3601
WV0974-32	PEN43SS3701

WV0974-33	PEN43SS2701
WV0974-34	PEN43SS2801
WV0974-35	PEN43SS2901
WV0974-36	PEN43SS3001
WV0974-37	PEN43SS3101
WV0974-38	PEN43SS3201

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Andrea J. Colby**. This narrative is an integral part of the Report of Analysis.

Organics Laboratory

The samples of SDG CTO355-3 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, and III 1996, Office of Solid Waste and Emergency Response, U.S. EPA, for the specific methods listed below or on the Report of Analysis. Sample WV0974-9/27 was selected for matrix spike and matrix spike analysis, as per client request. Some manual integrations may have been performed due to split peaks and/or corrected baselines. All have been flagged with a "M" (software-generated) on the pertinent quantitation reports.

8270C SCAN Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The acceptance limits for the MS/MSD are for a short list of the spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

One or more target analytes may have been detected above the MDL in some method blanks. Any of these analytes that were also detected in any of the associated samples were flagged with a "V" qualifier indicating that the analyte was detected in the method blank analyzed and/or extracted concurrently with the sample.

The initial calibration analyzed on the U instrument on 04/05/05 had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. Also, there were six target analytes and one surrogate that failed for both the linear and quadratic models in the initial

acceptance limits. Since the recoveries of the spiked analytes were acceptable, the samples were not reanalyzed.

8270C SIM Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The acceptance limits for the MS/MSD are for a short list of the spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

The initial calibration analyzed on the K instrument on 03/17/05 had %RSD values for three analytes that exceeded the method acceptance limit of 15%. For these analytes, a linear model was used for quantitation instead of an average response factor. The target analyte 1-methylnaphthalene that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. This compound was calibrated using the average model.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of Katahdin SDG CTO355-3 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Waste", SW-846, November 1986, Third Edition.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample No. WV0974-1 was digested for ICP analysis on 03/09/05 (QC Batch VC09ICW0) in accordance with USEPA Method 3010A. Katahdin Sample No. WV0974-1 was prepared with duplicate matrix-spiked aliquots.

Solid-matrix Katahdin Sample Nos. WV0952-1 and WV974-(3-20) were digested for ICP analysis on 03/22/05 (QC Batch VC22ICS0) in accordance with USEPA Method 3050B. Katahdin Sample No. WV0974-9 was prepared with duplicate matrix-spiked aliquots.

ICP analyses of SDG CTO355-3 sample digestates were performed using a Thermo Jarrell Ash (TJA) Trace ICP spectrometer and a TJA ICAP 61E ICP spectrometer. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following comments or exceptions:

Some of the results for run QC samples (ICV, ICB, CCV, CCB, ICSA, and ICSAB) included in the accompanying data package may have exceeded acceptance limits for some elements. Please note that all client samples and batch QC samples associated with out-of-control results for run QC samples were subsequently reanalyzed for the analytes in question.

Matrix QC Summary

The matrix-spike recoveries for all analytes for Katahdin Sample Nos. WV0974-(1 and 9) are within the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix spike duplicate analysis of Katahdin Sample No. WV0974-1 is within the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for all analytes.

The serial dilution analyses of Katahdin Sample Nos. WV0974-(1 and 9) are within the laboratory's ICP serial dilution acceptance limit (<10% difference between the original sample result and the result for a 5-fold dilution of the sample, if the result for the dilution is at least ten times the instrument detection limit) for all analytes.

The matrix spike duplicate analysis of Katahdin Sample No. WV0974-9 is outside the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for copper and lead.

Wet Chemistry Analysis

The samples of SDG CTO355-3 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total solids were performed according to "U.S. EPA Contract Laboratory Program Statement of Work for Inorganic Analysis", SOW 7/88.

All analyses were performed within analytical hold time. All quality control criteria were met.

No deviations were noted by the Wet Chemistry group.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Deborah J. Nadeau 4.8.05

Deborah Nadeau
Operations Manager

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: CTO355-3 **SOW No.** SW846

Client Field ID	Lab Sample ID
PEN43RB0306	WV0974-001
PEN43RB0306	WV0974-001P
PEN43RB0306	WV0974-001S
PEN43SB2302	WV0952-001
PEN43SB2401	WV0974-003
PEN43SB2402	WV0974-004
PEN43SS1801	WV0974-005
PEN43SS1801D	WV0974-006
PEN43SS1901	WV0974-007
PEN43SS2001	WV0974-008
PEN43SS2101	WV0974-009
PEN43SS2101	WV0974-009P
PEN43SS2101	WV0974-009S
PEN43SS2201	WV0974-010
PEN43SS2301	WV0974-011
PEN43SS2701	WV0974-015
PEN43SS2801	WV0974-016
PEN43SS2901	WV0974-017
PEN43SS3001	WV0974-018
PEN43SS3101	WV0974-019
PEN43SS3201	WV0974-020
PEN43SS3501	WV0974-012
PEN43SS3601	WV0974-013
PEN43SS3701	WV0974-014

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Edward A. Morgan Name: Edward A. Morgan

Date: April 1, 2005 Title: Senior Chemist

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICV

File: AVC28B Mar 28, 2005 12:47

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	18740.55	93.7
ARSENIC	600.0	598.52	99.8
CALCIUM	20000.0	20124.51	100.6
IRON	20000.0	19747.45	98.7
LEAD	550.0	549.07	99.8
MAGNESIUM	20000.0	20592.39	103.0

SAMPLE: CCV

File: AVC28B Mar 28, 2005 13:29

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48712.52	97.4
ARSENIC	1000.0	990.81	99.1
CALCIUM	50000.0	50243.69	100.5
IRON	20000.0	19518.60	97.6
LEAD	1000.0	998.58	99.9
MAGNESIUM	50000.0	50262.77	100.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: AVC28B Mar 28, 2005 14:08

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48774.12	97.5
ARSENIC	1000.0	1028.23	102.8
CALCIUM	50000.0	50518.44	101.0
IRON	20000.0	19316.03	96.6
LEAD	1000.0	1034.62	103.5
MAGNESIUM	50000.0	50004.06	100.0

SAMPLE: CCV

File: AVC28B Mar 28, 2005 14:44

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48602.35	97.2
ARSENIC	1000.0	1020.67	102.1
CALCIUM	50000.0	49718.46	99.4
IRON	20000.0	18893.61	94.5
LEAD	1000.0	1020.63	102.1
MAGNESIUM	50000.0	48892.80	97.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: AVC28B Mar 28, 2005 16:08

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47390.14	94.8
ARSENIC	1000.0	1060.22	106.0
CALCIUM	50000.0	48918.62	97.8
IRON	20000.0	17824.36	89.1 *
LEAD	1000.0	1048.21	104.8
MAGNESIUM	50000.0	47456.50	94.9

SAMPLE: CCV

File: AVC28B Mar 28, 2005 17:36

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46600.46	93.2
ARSENIC	1000.0	1038.39	103.8
CALCIUM	50000.0	47564.68	95.1
IRON	20000.0	17157.93	85.8 *
LEAD	1000.0	1035.54	103.6
MAGNESIUM	50000.0	45900.28	91.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: AVC28B Mar 28, 2005 19:01

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47155.83	94.3
ARSENIC	1000.0	1084.55	108.5
CALCIUM	50000.0	48124.59	96.2
IRON	20000.0	16906.42	84.5 *
LEAD	1000.0	1073.17	107.3
MAGNESIUM	50000.0	46146.46	92.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICV

File: AVC29A Mar 29, 2005 12:26

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19107.69	95.5
ARSENIC	600.0	624.95	104.2
CALCIUM	20000.0	20564.54	102.8
IRON	20000.0	20445.90	102.2
LEAD	550.0	560.28	101.9
MAGNESIUM	20000.0	21133.80	105.7

SAMPLE: CCV

File: AVC29A Mar 29, 2005 13:08

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49394.36	98.8
ARSENIC	1000.0	1031.73	103.2
CALCIUM	50000.0	51410.48	102.8
IRON	20000.0	20412.08	102.1
LEAD	1000.0	1024.68	102.5
MAGNESIUM	50000.0	51892.89	103.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 14:35

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49350.44	98.7
ARSENIC	1000.0	1053.48	105.3
CALCIUM	50000.0	51568.38	103.1
IRON	20000.0	20497.03	102.5
LEAD	1000.0	1034.44	103.4
MAGNESIUM	50000.0	51927.07	103.9

SAMPLE: CCV

File: AVC29A Mar 29, 2005 14:58

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49032.66	98.1
ARSENIC	1000.0	1032.99	103.3
CALCIUM	50000.0	50323.05	100.6
IRON	20000.0	20058.16	100.3
LEAD	1000.0	1008.07	100.8
MAGNESIUM	50000.0	50645.76	101.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 16:26

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50127.84	100.3
ARSENIC	1000.0	1065.33	106.5
CALCIUM	50000.0	51749.40	103.5
IRON	20000.0	20605.65	103.0
LEAD	1000.0	1031.14	103.1
MAGNESIUM	50000.0	51887.26	103.8

SAMPLE: CCV

File: AVC29A Mar 29, 2005 17:51

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49582.00	99.2
ARSENIC	1000.0	1067.78	106.8
CALCIUM	50000.0	51343.10	102.7
IRON	20000.0	20532.77	102.7
LEAD	1000.0	1031.31	103.1
MAGNESIUM	50000.0	51435.95	102.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 19:15

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49530.15	99.1
ARSENIC	1000.0	1089.26	108.9
CALCIUM	50000.0	51539.16	103.1
IRON	20000.0	20636.52	103.2
LEAD	1000.0	1042.34	104.2
MAGNESIUM	50000.0	51664.58	103.3

SAMPLE: CCV

File: AVC29A Mar 29, 2005 20:40

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49662.82	99.3
ARSENIC	1000.0	1087.99	108.8
CALCIUM	50000.0	51625.40	103.3
IRON	20000.0	20607.18	103.0
LEAD	1000.0	1039.44	103.9
MAGNESIUM	50000.0	51659.52	103.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 22:04

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50498.02	101.0
ARSENIC	1000.0	1092.69	109.3
CALCIUM	50000.0	52570.93	105.1
IRON	20000.0	21035.96	105.2
LEAD	1000.0	1057.34	105.7
MAGNESIUM	50000.0	52575.08	105.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICV

File: BVC24A Mar 24, 2005 11:23

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19527.40	97.6
BARIUM	500.0	501.50	100.3
CALCIUM	20000.0	19302.86	96.5
COPPER	500.0	473.05	94.6
IRON	20000.0	20084.65	100.4
MAGNESIUM	20000.0	19357.23	96.8
VANADIUM	500.0	502.89	100.6

SAMPLE: CCV

File: BVC24A Mar 24, 2005 12:00

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49764.51	99.5
BARIUM	1000.0	992.54	99.3
CALCIUM	50000.0	47288.54	94.6
COPPER	1000.0	993.66	99.4
IRON	20000.0	19650.74	98.3
MAGNESIUM	50000.0	49198.63	98.4
VANADIUM	1000.0	979.09	97.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: BVC24A Mar 24, 2005 13:13

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47950.74	95.9
BARIUM	1000.0	949.46	94.9
CALCIUM	50000.0	47902.16	95.8
COPPER	1000.0	941.07	94.1
IRON	20000.0	19291.10	96.5
MAGNESIUM	50000.0	48013.95	96.0
VANADIUM	1000.0	961.71	96.2

SAMPLE: CCV

File: BVC24A Mar 24, 2005 14:20

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47028.46	94.1
BARIUM	1000.0	939.84	94.0
CALCIUM	50000.0	48332.74	96.7
COPPER	1000.0	925.26	92.5
IRON	20000.0	19370.22	96.9
MAGNESIUM	50000.0	47345.37	94.7
VANADIUM	1000.0	959.45	95.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: BVC24A Mar 24, 2005 15:24

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46953.49	93.9
BARIUM	1000.0	938.80	93.9
CALCIUM	50000.0	47948.66	95.9
COPPER	1000.0	926.01	92.6
IRON	20000.0	19350.94	96.8
MAGNESIUM	50000.0	47096.03	94.2
VANADIUM	1000.0	956.86	95.7

SAMPLE: CCV

File: BVC24A Mar 24, 2005 16:32

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45601.80	91.2
BARIUM	1000.0	911.92	91.2
CALCIUM	50000.0	47744.03	95.5
COPPER	1000.0	895.52	89.6 OK
IRON	20000.0	18948.06	94.7
MAGNESIUM	50000.0	46175.70	92.4
VANADIUM	1000.0	940.86	94.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: BVC24A Mar 24, 2005 17:01

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47231.71	94.5
BARIUM	1000.0	945.53	94.6
CALCIUM	50000.0	48698.41	97.4
COPPER	1000.0	939.85	94.0
IRON	20000.0	19470.67	97.4
MAGNESIUM	50000.0	47615.45	95.2
VANADIUM	1000.0	968.77	96.9

SAMPLE: CCV

File: BVC24A Mar 24, 2005 18:03

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46097.16	92.2
BARIUM	1000.0	920.72	92.1
CALCIUM	50000.0	48754.53	97.5
COPPER	1000.0	903.76	90.4
IRON	20000.0	19183.49	95.9
MAGNESIUM	50000.0	46722.77	93.4
VANADIUM	1000.0	951.89	95.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: BVC24A Mar 24, 2005 19:10

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46304.00	92.6
BARIUM	1000.0	922.88	92.3
CALCIUM	50000.0	48619.33	97.2
COPPER	1000.0	908.88	90.9
IRON	20000.0	19278.21	96.4
MAGNESIUM	50000.0	46991.26	94.0
VANADIUM	1000.0	953.36	95.3

SAMPLE: CCV

File: BVC24A Mar 24, 2005 20:18

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45995.12	92.0
BARIUM	1000.0	920.53	92.1
CALCIUM	50000.0	49389.19	98.8
COPPER	1000.0	900.42	90.0
IRON	20000.0	19264.11	96.3
MAGNESIUM	50000.0	46966.40	93.9
VANADIUM	1000.0	953.68	95.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: BVC24A Mar 24, 2005 21:26

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46042.34	92.1
BARIUM	1000.0	923.32	92.3
CALCIUM	50000.0	48510.38	97.0
COPPER	1000.0	906.42	90.6
IRON	20000.0	19125.08	95.6
MAGNESIUM	50000.0	46725.72	93.5
VANADIUM	1000.0	946.12	94.6

SAMPLE: CCV

File: BVC24A Mar 24, 2005 22:34

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45984.34	92.0
BARIUM	1000.0	915.03	91.5
CALCIUM	50000.0	48959.64	97.9
COPPER	1000.0	897.01	89.7 OK
IRON	20000.0	19189.03	95.9
MAGNESIUM	50000.0	46847.67	93.7
VANADIUM	1000.0	952.44	95.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: BVC24A Mar 24, 2005 23:24

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45468.63	90.9
BARIUM	1000.0	908.07	90.8
CALCIUM	50000.0	48445.81	96.9
COPPER	1000.0	891.14	89.1 •
IRON	20000.0	18962.49	94.8
MAGNESIUM	50000.0	46312.53	92.6
VANADIUM	1000.0	938.64	93.9

— ok - no reported results for Cu bracketed by this CCV. EMF 4/25/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICV

File: BVC28A Mar 28, 2005 13:29

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19774.97	98.9
BARIUM	500.0	500.89	100.2
CALCIUM	20000.0	19512.29	97.6
COPPER	500.0	476.57	95.3
IRON	20000.0	20337.30	101.7
MAGNESIUM	20000.0	19459.55	97.3
VANADIUM	500.0	510.98	102.2

SAMPLE: CCV

File: BVC28A Mar 28, 2005 14:03

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49920.08	99.8
BARIUM	1000.0	1008.53	100.9
CALCIUM	50000.0	49782.82	99.6
COPPER	1000.0	971.53	97.2
IRON	20000.0	20325.79	101.6
MAGNESIUM	50000.0	49745.14	99.5
VANADIUM	1000.0	1013.30	101.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: BVC28A Mar 28, 2005 14:43

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49970.51	99.9
BARIUM	1000.0	1006.76	100.7
CALCIUM	50000.0	49538.16	99.1
COPPER	1000.0	975.26	97.5
IRON	20000.0	20213.67	101.1
MAGNESIUM	50000.0	49684.63	99.4
VANADIUM	1000.0	1010.66	101.1

SAMPLE: CCV

File: BVC28A Mar 28, 2005 15:29

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50078.65	100.2
BARIUM	1000.0	1016.26	101.6
CALCIUM	50000.0	49511.24	99.0
COPPER	1000.0	976.13	97.6
IRON	20000.0	20188.38	100.9
MAGNESIUM	50000.0	49736.77	99.5
VANADIUM	1000.0	1010.82	101.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: BVC28A Mar 28, 2005 16:45

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50181.31	100.4
BARIUM	1000.0	1011.81	101.2
CALCIUM	50000.0	50531.05	101.1
COPPER	1000.0	975.91	97.6
IRON	20000.0	20497.97	102.5
MAGNESIUM	50000.0	50220.14	100.4
VANADIUM	1000.0	1018.81	101.9

SAMPLE: CCV

File: BVC28A Mar 28, 2005 17:53

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50484.28	101.0
BARIUM	1000.0	1015.42	101.5
CALCIUM	50000.0	50484.54	101.0
COPPER	1000.0	979.40	97.9
IRON	20000.0	20450.45	102.3
MAGNESIUM	50000.0	50382.11	100.8
VANADIUM	1000.0	1019.25	101.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCV

File: BVC28A Mar 28, 2005 19:01

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50830.90	101.7
BARIUM	1000.0	1018.50	101.8
CALCIUM	50000.0	50489.70	101.0
COPPER	1000.0	985.45	98.5
IRON	20000.0	20535.65	102.7
MAGNESIUM	50000.0	50596.54	101.2
VANADIUM	1000.0	1022.85	102.3

SAMPLE: CCV

File: BVC28A Mar 28, 2005 19:51

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	51120.74	102.2
BARIUM	1000.0	1021.02	102.1
CALCIUM	50000.0	50744.53	101.5
COPPER	1000.0	986.55	98.7
IRON	20000.0	20646.23	103.2
MAGNESIUM	50000.0	50820.42	101.6
VANADIUM	1000.0	1029.43	102.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CRI

File: AVC28B Mar 28, 2005 13:08

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	21.55	107.8
LEAD	6.0	5.15	85.8

SAMPLE: CRI

File: AVC28B Mar 28, 2005 14:23

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	17.10	85.5
LEAD	6.0	5.32	88.7

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CRI

File: AVC28B Mar 28, 2005 18:40

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	22.04	110.2
LEAD	6.0	8.01	133.5

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CRI

File: AVC29A Mar 29, 2005 12:47

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	18.65	93.2
LEAD	6.0	6.92	115.3

SAMPLE: CRI

File: AVC29A Mar 29, 2005 17:30

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	21.33	106.7
LEAD	6.0	7.14	119.0

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CRI

File: AVC29A Mar 29, 2005 21:43

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	20.99	104.9
LEAD	6.0	7.02	117.0

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CRI

File: BVC24A Mar 24, 2005 11:43

Analyte	TRUE	FOUND	% R
COPPER	50.0	48.16	96.3
VANADIUM	100.0	104.04	104.0

SAMPLE: CRI

File: BVC24A Mar 24, 2005 16:15

Analyte	TRUE	FOUND	% R
COPPER	50.0	44.13	88.3
VANADIUM	100.0	102.66	102.7

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CRI

File: BVC24A Mar 24, 2005 20:01

Analyte	TRUE	FOUND	% R
COPPER	50.0	43.83	87.7
VANADIUM	100.0	98.72	98.7

SAMPLE: CRI

File: BVC24A Mar 24, 2005 23:07

Analyte	TRUE	FOUND	% R
COPPER	50.0	42.09	84.2
VANADIUM	100.0	100.41	100.4

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CRI

File: BVC28A Mar 28, 2005 13:46

Analyte	TRUE	FOUND	% R
COPPER	50.0	48.30	96.6
VANADIUM	100.0	107.68	107.7

SAMPLE: CRI

File: BVC28A Mar 28, 2005 16:28

Analyte	TRUE	FOUND	% R
COPPER	50.0	48.68	97.4
VANADIUM	100.0	110.71	110.7

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CRI

File: BVC28A Mar 28, 2005 19:34

Analyte	TRUE	FOUND	% R
COPPER	50.0	48.43	96.9
VANADIUM	100.0	108.73	108.7

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

SAMPLE: PQL

File: AVC28B Mar 28, 2005 13:01 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	279.47	93.2
ARSENIC	8.0	5.65	70.6
CALCIUM	50.0	54.57	109.1
IRON	100.0	93.53	93.5
LEAD	5.0	4.96	99.2
MAGNESIUM	50.0	66.81	133.6

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

SAMPLE: PQL

File: AVC29A Mar 29, 2005 12:40 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	269.71	89.9
ARSENIC	8.0	7.49	93.6
CALCIUM	50.0	48.26	96.5
IRON	100.0	110.63	110.6
LEAD	5.0	5.36	107.2
MAGNESIUM	50.0	58.10	116.2

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

SAMPLE: PQL

File: BVC24A Mar 24, 2005 11:35 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	279.82	93.3
BARIUM	5.0	5.19	103.8
CALCIUM	50.0	51.06	102.1
COPPER	25.0	25.62	102.5
IRON	100.0	119.90	119.9
MAGNESIUM	50.0	60.53	121.1
VANADIUM	25.0	26.89	107.6

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

SAMPLE: PQL

File: BVC28A Mar 28, 2005 13:40 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	284.36	94.8
BARIUM	5.0	4.99	99.8
CALCIUM	50.0	41.63	83.3
COPPER	25.0	24.78	99.1
IRON	100.0	107.27	107.3
MAGNESIUM	50.0	46.20	92.4
VANADIUM	25.0	26.35	105.4

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3 RB sample only

Concentration Units: ug/L

SAMPLE: ICB

File: AVC28B Mar 28, 2005 12:54

Analyte	Result	C
ALUMINUM	34.04	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC28B Mar 28, 2005 13:36

Analyte	Result	C
ALUMINUM	61.59	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	10.98	I

SAMPLE: CCB

File: AVC28B Mar 28, 2005 14:15

Analyte	Result	C
ALUMINUM	103.59	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCB

File: AVC28B Mar 28, 2005 14:51

Analyte	Result	C
ALUMINUM	135.79	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	9.37	I

SAMPLE: CCB

File: AVC28B Mar 28, 2005 16:15

Analyte	Result	C
ALUMINUM	219.35	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	10.38	I

SAMPLE: CCB

File: AVC28B Mar 28, 2005 17:43

Analyte	Result	C
ALUMINUM	256.99	I
ARSENIC	-3.16	I
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	13.03	I

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCB

File: AVC28B Mar 28, 2005 19:08

Analyte	Result	C
ALUMINUM	308.01	
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.09	I
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICB

File: AVC29A Mar 29, 2005 12:33

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.60	I

SAMPLE: CCB

File: AVC29A Mar 29, 2005 13:15

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	-9.10	I
IRON	-39.10	I
LEAD	2.07	U
MAGNESIUM	-22.14	I

SAMPLE: CCB

File: AVC29A Mar 29, 2005 14:42

Analyte	Result	C
ALUMINUM	54.58	I
ARSENIC	2.81	U
CALCIUM	-15.12	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCB

File: AVC29A Mar 29, 2005 15:05

Analyte	Result	C
ALUMINUM	44.85	I
ARSENIC	2.81	U
CALCIUM	-10.50	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.89	I

SAMPLE: CCB

File: AVC29A Mar 29, 2005 16:33

Analyte	Result	C
ALUMINUM	57.73	I
ARSENIC	-3.16	I
CALCIUM	-12.59	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	9.73	I

SAMPLE: CCB

File: AVC29A Mar 29, 2005 17:58

Analyte	Result	C
ALUMINUM	64.38	I
ARSENIC	2.81	U
CALCIUM	-20.41	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCB

File: AVC29A Mar 29, 2005 19:22

Analyte	Result	C
ALUMINUM	87.47	I
ARSENIC	2.81	U
CALCIUM	-24.59	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 20:47

Analyte	Result	C
ALUMINUM	81.84	I
ARSENIC	2.81	U
CALCIUM	-21.02	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 22:11

Analyte	Result	C
ALUMINUM	82.82	I
ARSENIC	2.81	U
CALCIUM	-22.76	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICB

File: BVC24A Mar 24, 2005 11:29

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 12:05

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	22.13	I
COPPER	2.52	U
IRON	9.75	I
MAGNESIUM	38.35	I
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 13:18

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	2.04	I
CALCIUM	15.90	U
COPPER	2.52	U
IRON	20.36	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCB

File: BVC24A Mar 24, 2005 14:26

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	18.34	I
COPPER	2.52	U
IRON	9.52	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 15:30

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 16:37

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	61.57	
COPPER	2.52	U
IRON	18.56	I
MAGNESIUM	63.07	
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCB

File: BVC24A Mar 24, 2005 17:06

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	27.98	I
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 18:08

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	37.63	I
COPPER	2.52	U
IRON	12.90	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 19:16

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	29.43	I
COPPER	2.52	U
IRON	11.76	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCB

File: BVC24A Mar 24, 2005 20:24

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	30.06	I
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 21:31

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	26.41	I
COPPER	2.52	U
IRON	13.23	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 22:39

Analyte	Result	C
ALUMINUM	-25.10	I
BARIUM	0.50	U
CALCIUM	24.42	I
COPPER	2.52	U
IRON	8.73	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCB

File: BVC24A Mar 24, 2005 23:30

Analyte	Result	C
ALUMINUM	-24.78	I
BARIUM	0.50	U
CALCIUM	29.91	I
COPPER	2.52	U
IRON	22.46	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICB

File: BVC28A Mar 28, 2005 13:35

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 14:09

Analyte	Result	C
ALUMINUM	55.95	I
BARIUM	0.50	U
CALCIUM	53.97	
COPPER	2.52	U
IRON	29.09	I
MAGNESIUM	59.56	
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 14:48

Analyte	Result	C
ALUMINUM	33.07	I
BARIUM	0.50	U
CALCIUM	20.34	I
COPPER	2.52	U
IRON	16.83	I
MAGNESIUM	36.09	I
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCB

File: BVC28A Mar 28, 2005 15:35

Analyte	Result	C
ALUMINUM	22.28	I
BARIUM	0.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	12.65	I
MAGNESIUM	34.94	I
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 16:51

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	12.43	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 17:59

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	15.04	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: CCB

File: BVC28A Mar 28, 2005 19:06

Analyte	Result	C
ALUMINUM	25.84	I
BARIUM	0.51	I
CALCIUM	15.90	U
COPPER	2.52	U
IRON	24.09	I
MAGNESIUM	43.90	I
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 19:57

Analyte	Result	C
ALUMINUM	82.45	I
BARIUM	0.50	U
CALCIUM	73.04	
COPPER	2.52	U
IRON	40.60	I
MAGNESIUM	83.62	
VANADIUM	5.07	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWVC09ICW0

Matrix: WATER **SDG Name:** CTO355-3

QC Batch ID: VC09ICW0

Concentration Units : ug/L

Analyte	RESULT	C
ARSENIC	2.810	U
BARIUM	0.640	I
COPPER	2.520	U
LEAD	2.070	U
VANADIUM	5.070	U

RB sample only

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSVC22ICS0

Matrix: SOIL **SDG Name:** CTO355-3

QC Batch ID: VC22ICS0

Concentration Units : mg/Kg

Analyte	RESULT	C
ARSENIC	0.280	U
BARIUM	0.127	I
COPPER	0.250	U
LEAD	0.210	U
VANADIUM	0.510	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC28B Mar 28, 2005 13:15

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	503960	100.8
ARSENIC	0	1	
CALCIUM	500000	512816	102.6
IRON	200000	196783	98.4
LEAD	0	8	
MAGNESIUM	500000	497816	99.6

SAMPLE: ICSAB

File: AVC28B Mar 28, 2005 13:22

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	513810	102.8
ARSENIC	100	108	108.0
CALCIUM	500000	516895	103.4
IRON	200000	198734	99.4
LEAD	50	54	108.0
MAGNESIUM	500000	501603	100.3

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC28B Mar 28, 2005 14:30

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	503076	100.6
ARSENIC	0	2	
CALCIUM	500000	505490	101.1
IRON	200000	190939	95.5
LEAD	0	-1	
MAGNESIUM	500000	484454	96.9

SAMPLE: ICSAB

File: AVC28B Mar 28, 2005 14:37

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	507321	101.5
ARSENIC	100	106	106.0
CALCIUM	500000	507280	101.5
IRON	200000	191240	95.6
LEAD	50	44	88.0
MAGNESIUM	500000	485551	97.1

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC28B Mar 28, 2005 18:47

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	479448	95.9
ARSENIC	0	-5	
CALCIUM	500000	478106	95.6
IRON	200000	167029	83.5
LEAD	0	1	
MAGNESIUM	500000	449952	90.0

SAMPLE: ICSAB

File: AVC28B Mar 28, 2005 18:54

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	492496	98.5
ARSENIC	100	102	102.0
CALCIUM	500000	478691	95.7
IRON	200000	170288	85.1
LEAD	50	50	100.0
MAGNESIUM	500000	451827	90.4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC29A Mar 29, 2005 12:54

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	515961	103.2
ARSENIC	0	1	
CALCIUM	500000	539625	107.9
IRON	200000	206291	103.1
LEAD	0	5	
MAGNESIUM	500000	520473	104.1

SAMPLE: ICSAB

File: AVC29A Mar 29, 2005 13:01

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	510537	102.1
ARSENIC	100	110	110.0
CALCIUM	500000	528654	105.7
IRON	200000	202627	101.3
LEAD	50	55	110.0
MAGNESIUM	500000	510392	102.1

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC29A Mar 29, 2005 17:37

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	517239	103.4
ARSENIC	0	6	
CALCIUM	500000	536277	107.3
IRON	200000	207077	103.5
LEAD	0	6	
MAGNESIUM	500000	513881	102.8

SAMPLE: ICSAB

File: AVC29A Mar 29, 2005 17:44

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	508687	101.7
ARSENIC	100	107	107.0
CALCIUM	500000	522632	104.5
IRON	200000	202515	101.3
LEAD	50	52	104.0
MAGNESIUM	500000	501341	100.3

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC29A Mar 29, 2005 21:50

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	518660	103.7
ARSENIC	0	-2	
CALCIUM	500000	538466	107.7
IRON	200000	208225	104.1
LEAD	0	6	
MAGNESIUM	500000	515206	103.0

SAMPLE: ICSAB

File: AVC29A Mar 29, 2005 21:57

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	516556	103.3
ARSENIC	100	113	113.0
CALCIUM	500000	535863	107.2
IRON	200000	206933	103.5
LEAD	50	58	116.0
MAGNESIUM	500000	512309	102.5

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC24A Mar 24, 2005 11:48

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	539347	107.9
BARIUM	0	0	
CALCIUM	500000	492089	98.4
COPPER	0	-2	
IRON	200000	193143	96.6
MAGNESIUM	500000	537234	107.4
VANADIUM	0	-3	

SAMPLE: ICSAB

File: BVC24A Mar 24, 2005 11:54

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	536052	107.2
BARIUM	500	514	102.8
CALCIUM	500000	488238	97.6
COPPER	500	507	101.4
IRON	200000	191799	95.9
MAGNESIUM	500000	533514	106.7
VANADIUM	500	494	98.8

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC24A Mar 24, 2005 16:21

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	487671	97.5
BARIUM	0	0	
CALCIUM	500000	489104	97.8
COPPER	0	-3	
IRON	200000	183386	91.7
MAGNESIUM	500000	500263	100.1
VANADIUM	0	-5	

SAMPLE: ICSAB

File: BVC24A Mar 24, 2005 16:26

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	488343	97.7
BARIUM	500	469	93.8
CALCIUM	500000	493036	98.6
COPPER	500	450	90.0
IRON	200000	184495	92.2
MAGNESIUM	500000	501765	100.4
VANADIUM	500	472	94.4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC24A Mar 24, 2005 20:07

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	478979	95.8
BARIUM	0	0	
CALCIUM	500000	487675	97.5
COPPER	0	-4	
IRON	200000	181492	90.7
MAGNESIUM	500000	494987	99.0
VANADIUM	0	-4	

SAMPLE: ICSAB

File: BVC24A Mar 24, 2005 20:12

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	483762	96.8
BARIUM	500	465	93.0
CALCIUM	500000	493798	98.8
COPPER	500	445	89.0
IRON	200000	183618	91.8
MAGNESIUM	500000	499715	99.9
VANADIUM	500	466	93.2

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC24A Mar 24, 2005 23:13

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	483719	96.7
BARIUM	0	0	
CALCIUM	500000	498601	99.7
COPPER	0	-4	
IRON	200000	183817	91.9
MAGNESIUM	500000	501684	100.3
VANADIUM	0	-7	

SAMPLE: ICSAB

File: BVC24A Mar 24, 2005 23:19

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	476050	95.2
BARIUM	500	457	91.4
CALCIUM	500000	491003	98.2
COPPER	500	438	87.6
IRON	200000	181500	90.8
MAGNESIUM	500000	494278	98.9
VANADIUM	500	463	92.6

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC28A Mar 28, 2005 13:52

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	522778	104.6
BARIUM	0	0	
CALCIUM	500000	496391	99.3
COPPER	0	0	
IRON	200000	192892	96.4
MAGNESIUM	500000	528521	105.7
VANADIUM	0	-2	

SAMPLE: ICSAB

File: BVC28A Mar 28, 2005 13:57

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	518433	103.7
BARIUM	500	502	100.4
CALCIUM	500000	493596	98.7
COPPER	500	492	98.4
IRON	200000	192200	96.1
MAGNESIUM	500000	524752	105.0
VANADIUM	500	490	98.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC28A Mar 28, 2005 16:34

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	524972	105.0
BARIUM	0	0	
CALCIUM	500000	504833	101.0
COPPER	0	-1	
IRON	200000	194145	97.1
MAGNESIUM	500000	533079	106.6
VANADIUM	0	0	

SAMPLE: ICSAB

File: BVC28A Mar 28, 2005 16:40

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	519538	103.9
BARIUM	500	502	100.4
CALCIUM	500000	497162	99.4
COPPER	500	489	97.8
IRON	200000	191881	95.9
MAGNESIUM	500000	526405	105.3
VANADIUM	500	492	98.4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC28A Mar 28, 2005 19:40

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	535217	107.0
BARIUM	0	0	
CALCIUM	500000	511575	102.3
COPPER	0	-2	
IRON	200000	197456	98.7
MAGNESIUM	500000	543206	108.6
VANADIUM	0	-3	

SAMPLE: ICSAB

File: BVC28A Mar 28, 2005 19:46

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	524924	105.0
BARIUM	500	503	100.6
CALCIUM	500000	503293	100.7
COPPER	500	492	98.4
IRON	200000	193852	96.9
MAGNESIUM	500000	532400	106.5
VANADIUM	500	497	99.4

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services

Matrix: WATER

Percent Solids: 0.00

Client Field ID: PEN43RB0306S

SDG Name: CTO355-3

Lab Sample ID: WV0974-001P

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	% R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	534.8300		-0.6400	U	500	107.0		75	125	P
BARIUM, TOTAL	2018.6100		0.3700	U	2000	100.9		75	125	P
COPPER, TOTAL	239.7600		0.1400	U	250	95.9		75	125	P
LEAD, TOTAL	528.5000		2.2000	I	500	105.3		75	125	P
VANADIUM, TOTAL	519.3100		3.0300	U	500	103.9		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43RB0306S

Matrix: WATER | **SDG Name:** CTO355-3

Percent Solids: 0.00 | **Lab Sample ID:** WV0974-001S

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	% R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	530.5200		-0.6400	U	500	106.1		75	125	P
BARIUM, TOTAL	2027.0600		0.3700	U	2000	101.4		75	125	P
COPPER, TOTAL	243.8600		0.1400	U	250	97.5		75	125	P
LEAD, TOTAL	520.7600		2.2000	I	500	103.7		75	125	P
VANADIUM, TOTAL	522.2400		3.0300	U	500	104.4		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SS2101S

Matrix: SOIL | **SDG Name:** CTO355-3

Percent Solids: 93.7 | **Lab Sample ID:** WV0974-009P

Concentration Units : mg/Kg

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	% R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	51.1193		4.1588		44.09	106.5		75	125	P
BARIUM, TOTAL	289.4048		709.6782		176.37	-238.3	ok	75	125	P
COPPER, TOTAL	243.5484		239.5056		22.05	18.3	ok	75	125	P
LEAD, TOTAL	1202.2426		2075.0316		44.09	-1979.6	ok	75	125	P
VANADIUM, TOTAL	51.7886		5.7193		44.09	104.5		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SS2101S

Matrix: SOIL | **SDG Name:** CTO355-3

Percent Solids: 93.7 | **Lab Sample ID:** WV0974-009S

Concentration Units : mg/Kg

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	49.1668		4.1588		44.09	102.1		75	125	P
BARIUM, TOTAL	257.1387		709.6782		176.37	-256.6	ok	75	125	P
COPPER, TOTAL	183.4731		239.5056		22.05	-254.1	ok	75	125	P
LEAD, TOTAL	950.1094		2075.0316		44.09	-2551.4	ok	75	125	P
VANADIUM, TOTAL	47.2126		5.7193		44.09	94.1		75	125	P

Comments:

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43RB0306

Matrix: WATER | **SDG Name:** CTO355-3

Percent Solids: 0.00 | **Lab Sample ID:** WV0974-001

Concentration Units : ug/L

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ARSENIC, TOTAL		530.5200		534.8300		0.8		P
BARIUM, TOTAL		2027.0600		2018.6100		0.4		P
COPPER, TOTAL		243.8600		239.7600		1.7		P
LEAD, TOTAL		520.7600		528.5000		1.5		P
VANADIUM, TOTAL		522.2400		519.3100		0.6		P

Comments:

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SS2101

Matrix: SOIL | **SDG Name:** CTO355-3

Percent Solids: 93.7 | **Lab Sample ID:** WV0974-009

Concentration Units : mg/Kg

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ARSENIC, TOTAL		49.1668		51.1193		3.9		P
BARIUM, TOTAL		257.1387		289.4048		11.8		P
COPPER, TOTAL		183.4731		243.5484		28.1	J	P
LEAD, TOTAL		950.1094		1202.2426		23.4	J	P
VANADIUM, TOTAL		47.2126		51.7886		9.2		P

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOVC22ICS0

Matrix: SOIL **SDG Name:** CTO355-3

QC Batch ID: VC22ICS0

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ARSENIC	500.0	525.86	105.2	80	120
BARIUM	2000.0	1901.42	95.1	80	120
COPPER	250.0	222.67	89.1	80	120
LEAD	500.0	505.81	101.2	80	120
VANADIUM	500.0	505.33	101.1	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWVC09ICW0

Matrix: WATER **SDG Name:** CTO355-3

QC Batch ID: VC09ICW0

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ARSENIC	500.0	484.64	96.9	80	120
BARIUM	2000.0	2040.11	102.0	80	120
COPPER	250.0	243.37	97.3	80	120
LEAD	500.0	509.05	101.8	80	120
VANADIUM	500.0	526.56	105.3	80	120

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services

Matrix: WATER

Client Field ID: PEN43RB0306L

SDG Name: CTO355-3

Lab Sample ID: WV0974-001L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
ARSENIC, TOTAL	-0.64	U	-31.83	U			P
BARIUM, TOTAL	0.37	U	-0.62	U			P
COPPER, TOTAL	0.14	U	-6.56	U			P
LEAD, TOTAL	2.20	I	2.86	U	100.0	OK	P
VANADIUM, TOTAL	3.03	U	4.25	U			P

FORM IX - IN

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services

Matrix: SOIL

Client Field ID: PEN43SS2101L

SDG Name: CTO355-3

Lab Sample ID: WV0974-009L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
ARSENIC, TOTAL	23.39		17.80	I	23.9	OL	P
BARIUM, TOTAL	7981.07		7955.14		0.3		P
COPPER, TOTAL	1346.74		1353.65		0.5		P
LEAD, TOTAL	4667.18		4649.38		0.4		P
VANADIUM, TOTAL	32.16		43.19	I	34.3	OL	P

FORM IX - IN

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** A

Instrument Name: TJA TRACE ICP **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ARSENIC	8.0	2.81	P
LEAD	5.0	2.07	P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** B

Instrument Name: TJA 61 ICP **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
BARIUM	5.0	0.50	P
COPPER	25	2.52	P
VANADIUM	25	5.07	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** VC09ICW0

Matrix: WATER **SDG Name:** CTO355-3

Method: P **Prep Date:** 03/09/2005

Client ID	Lab Sample ID	Initial (L)	Final (L)
LCSWVC09ICW0	LCSWVC09ICW0	0.05	0.05
PBWVC09ICW0	PBWVC09ICW0	0.05	0.05
PEN43RB0306	WV0974-001	0.05	0.05
PEN43RB0306P	WV0974-001P	0.05	0.05
PEN43RB0306S	WV0974-001S	0.05	0.05

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** VC22ICS0

Matrix: SOIL **SDG Name:** CTO355-3

Method: P **Prep Date:** 03/22/2005

Client ID	Lab Sample ID	Initial (g)	Final (L)
LCSOVC22ICS0	LCSOVC22ICS0	1	0.1
PBSVC22ICS0	PBSVC22ICS0	1	0.1
PEN43SB2302	WV0952-001	1.69	0.1
PEN43SB2401	WV0974-003	1.32	0.1
PEN43SB2402	WV0974-004	1.24	0.1
PEN43SS1801	WV0974-005	1.34	0.1
PEN43SS1801D	WV0974-006	1.32	0.1
PEN43SS1901	WV0974-007	1.47	0.1
PEN43SS2001	WV0974-008	1.39	0.1
PEN43SS2101	WV0974-009	1.2	0.1
PEN43SS2101P	WV0974-009P	1.21	0.1
PEN43SS2101S	WV0974-009S	1.21	0.1
PEN43SS2201	WV0974-010	1.3	0.1
PEN43SS2301	WV0974-011	1.28	0.1
PEN43SS3501	WV0974-012	1.55	0.1
PEN43SS3601	WV0974-013	1.31	0.1
PEN43SS3701	WV0974-014	1.28	0.1
PEN43SS2701	WV0974-015	1.44	0.1
PEN43SS2801	WV0974-016	1.55	0.1
PEN43SS2901	WV0974-017	1.33	0.1
PEN43SS3001	WV0974-018	1.22	0.1
PEN43SS3101	WV0974-019	1.58	0.1
PEN43SS3201	WV0974-020	1.46	0.1

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Instrument ID: TJA TRACE ICP **File Name:** AVC28B

Date: 3/28/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	12:33	Al	As	Ca	Fe Pb Mg
S1		1	12:40	Al	As	Ca	Fe Pb Mg
ICV		1	12:47	Al	As	Ca	Fe Pb Mg
ICB		1	12:54	Al	As	Ca	Fe Pb Mg
PQL		1	13:01	Al	As	Ca	Fe Pb Mg
CRI		1	13:08	Al	As	Ca	Fe Pb Mg
ICSA		1	13:15	Al	As	Ca	Fe Pb Mg
ICSAB		1	13:22	Al	As	Ca	Fe Pb Mg
CCV		1	13:29	Al	As	Ca	Fe Pb Mg
CCB		1	13:36	Al	As	Ca	Fe Pb Mg
ZZZZZZ		2	13:46				
ZZZZZZ		5	13:54				
ZZZZZZ		1	14:01				
CCV		1	14:08	Al	As	Ca	Fe Pb Mg
CCB		1	14:15	Al	As	Ca	Fe Pb Mg
CRI		1	14:23	Al	As	Ca	Fe Pb Mg
ICSA		1	14:30	Al	As	Ca	Fe Pb Mg
ICSAB		1	14:37	Al	As	Ca	Fe Pb Mg
CCV		1	14:44	Al	As	Ca	Fe Pb Mg
CCB		1	14:51	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	14:58				
ZZZZZZ		5	15:05				
ZZZZZZ		1	15:12				
ZZZZZZ		1	15:19				
ZZZZZZ		1	15:26				
ZZZZZZ		1	15:33				
ZZZZZZ		1	15:40				
ZZZZZZ		1	15:47				
ZZZZZZ		1	15:54				
ZZZZZZ		1	16:01				
CCV		1	16:08	Al	As	Ca	Fe Pb Mg
CCB		1	16:15	Al	As	Ca	Fe Pb Mg
ZZZZZZ		5	16:22				
ZZZZZZ		5	16:29				
ZZZZZZ		2	16:36				
ZZZZZZ		5	16:47				
WV0974-001	PEN43RB0306	1	16:54		As		Pb
WV0974-001L	PEN43RB0306L	5	17:01		As		Pb
WV0974-001S	PEN43RB0306S	1	17:08		As		Pb
WV0974-001P	PEN43RB0306P	1	17:15		As		Pb
ZZZZZZ		1	17:22				
ZZZZZZ		1	17:29				
CCV		1	17:36	Al	As	Ca	Fe Pb Mg
CCB		1	17:43	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	17:50				
ZZZZZZ		10	17:57				
ZZZZZZ		1	18:04				
ZZZZZZ		1	18:11				
ZZZZZZ		1	18:18				
ZZZZZZ		1	18:25				

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Instrument ID: TJA TRACE ICP **File Name:** AVC28B

Date: 3/28/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		5	18:33				
CRI		1	18:40	Al	As	Ca	Fe Pb Mg
ICSA		1	18:47	Al	As	Ca	Fe Pb Mg
ICSAB		1	18:54	Al	As	Ca	Fe Pb Mg
CCV		1	19:01	Al	As	Ca	Fe Pb Mg
CCB		1	19:08	Al	As	Ca	Fe Pb Mg

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Instrument ID: TJA TRACE ICP **File Name:** AVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	11:40	Al	As	Ca	Fe Pb Mg
S1		1	11:47	Al	As	Ca	Fe Pb Mg
AL IEC		1	11:57	Al	As	Ca	Fe Pb Mg
FE IEC		1	12:04	Al	As	Ca	Fe Pb Mg
MN IEC		1	12:11	Al	As	Ca	Fe Pb Mg
IEC		1	12:18	Al	As	Ca	Fe Pb Mg
ICV		1	12:26	Al	As	Ca	Fe Pb Mg
ICB		1	12:33	Al	As	Ca	Fe Pb Mg
PQL		1	12:40	Al	As	Ca	Fe Pb Mg
CRI		1	12:47	Al	As	Ca	Fe Pb Mg
ICSA		1	12:54	Al	As	Ca	Fe Pb Mg
ICSAB		1	13:01	Al	As	Ca	Fe Pb Mg
CCV		1	13:08	Al	As	Ca	Fe Pb Mg
CCB		1	13:15	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	13:22				
ZZZZZZ		1	13:30				
ZZZZZZ		1	13:37				
ZZZZZZ		1	13:46				
ZZZZZZ		1	13:53				
ZZZZZZ		1	14:00				
ZZZZZZ		1	14:07				
ZZZZZZ		2	14:14				
ZZZZZZ		10	14:21				
ZZZZZZ		1	14:28				
CCV		1	14:35	Al	As	Ca	Fe Pb Mg
CCB		1	14:42	Al	As	Ca	Fe Pb Mg
ZZZZZZ		2	14:51				
CCV		1	14:58	Al	As	Ca	Fe Pb Mg
CCB		1	15:05	Al	As	Ca	Fe Pb Mg
ZZZZZZ		5	15:12				
ZZZZZZ		1	15:19				
PBSVC22ICS0		1	15:30				Pb
LCSOVC22ICS0		1	15:37		As		Pb
WV0952-001	PEN43SB2302	1	15:44		As		Pb
WV0974-003	PEN43SB2401	1	15:51		As		Pb
WV0974-004	PEN43SB2402	1	15:58		As		Pb
WV0974-005	PEN43SS1801	1	16:05		As		Pb
WV0974-006	PEN43SS1801D	1	16:12		As		Pb
WV0974-007	PEN43SS1901	1	16:19		As		Pb
CCV		1	16:26	Al	As	Ca	Fe Pb Mg
CCB		1	16:33	Al	As	Ca	Fe Pb Mg
WV0974-008	PEN43SS2001	1	16:41		As		Pb
WV0974-009	PEN43SS2101	2	16:48		As		
WV0974-009	PEN43SS2101	5	16:55				Pb
WV0974-009L	PEN43SS2101L	10	17:02		As		
WV0974-009L	PEN43SS2101L	25	17:09				Pb
WV0974-009S	PEN43SS2101S	2	17:16		As		Pb
WV0974-009P	PEN43SS2101P	2	17:23		As		Pb
CRI		1	17:30	Al	As	Ca	Fe Pb Mg
ICSA		1	17:37	Al	As	Ca	Fe Pb Mg

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Instrument ID: TJA TRACE ICP **File Name:** AVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ICSAB		1	17:44	Al	As	Ca	Fe Pb Mg
CCV		1	17:51	Al	As	Ca	Fe Pb Mg
CCB		1	17:58	Al	As	Ca	Fe Pb Mg
WV0974-010	PEN43SS2201	1	18:05		As		Pb
WV0974-011	PEN43SS2301	1	18:12		As		Pb
WV0974-015	PEN43SS2701	2	18:19		As		
WV0974-015	PEN43SS2701	10	18:26				Pb
WV0974-016	PEN43SS2801	2	18:33		As		
WV0974-016	PEN43SS2801	20	18:40				Pb
WV0974-017	PEN43SS2901	1	18:47		As		Pb
WV0974-018	PEN43SS3001	1	18:54				Pb
WV0974-019	PEN43SS3101	1	19:01				Pb
WV0974-020	PEN43SS3201	1	19:08				Pb
CCV		1	19:15	Al	As	Ca	Fe Pb Mg
CCB		1	19:22	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	19:29				
ZZZZZZ		1	19:36				
ZZZZZZ		1	19:44				
ZZZZZZ		1	19:51				
ZZZZZZ		1	19:58				
ZZZZZZ		1	20:05				
ZZZZZZ		1	20:12				
ZZZZZZ		1	20:19				
ZZZZZZ		1	20:26				
ZZZZZZ		3	20:33				
CCV		1	20:40	Al	As	Ca	Fe Pb Mg
CCB		1	20:47	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	20:54				
ZZZZZZ		1	21:01				
ZZZZZZ		1	21:08				
ZZZZZZ		1	21:15				
ZZZZZZ		1	21:22				
ZZZZZZ		1	21:29				
ZZZZZZ		1	21:36				
CRI		1	21:43	Al	As	Ca	Fe Pb Mg
ICSA		1	21:50	Al	As	Ca	Fe Pb Mg
ICSAB		1	21:57	Al	As	Ca	Fe Pb Mg
CCV		1	22:04	Al	As	Ca	Fe Pb Mg
CCB		1	22:11	Al	As	Ca	Fe Pb Mg

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Instrument ID: TJA 61 ICP **File Name:** BVC24A

Date: 3/24/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
S0		1	10:54	Al	Ba	Ca	Cu Fe	Mg	V
S1		1	11:00	Al	Ba	Ca	Cu Fe	Mg	V
AL IEC		1	11:05	Al	Ba	Ca	Cu Fe	Mg	V
FE IEC		1	11:14	Al	Ba	Ca	Cu Fe	Mg	V
ICV		1	11:23	Al	Ba	Ca	Cu Fe	Mg	V
ICB		1	11:29	Al	Ba	Ca	Cu Fe	Mg	V
PQL		1	11:35	Al	Ba	Ca	Cu Fe	Mg	V
CRI		1	11:43	Al	Ba	Ca	Cu Fe	Mg	V
ICSA		1	11:48	Al	Ba	Ca	Cu Fe	Mg	V
ICSAB		1	11:54	Al	Ba	Ca	Cu Fe	Mg	V
CCV		1	12:00	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	12:05	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1000	12:11						
ZZZZZZ		1	12:17						
ZZZZZZ		5	12:28						
ZZZZZZ		1	12:33						
ZZZZZZ		1	12:39						
ZZZZZZ		1	12:45						
ZZZZZZ		1	12:50						
ZZZZZZ		1	12:56						
ZZZZZZ		1	13:02						
ZZZZZZ		1	13:07						
CCV		1	13:13	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	13:18	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	13:24						
ZZZZZZ		1	13:30						
ZZZZZZ		1	13:35						
ZZZZZZ		1	13:41						
ZZZZZZ		1	13:47						
ZZZZZZ		1	13:52						
ZZZZZZ		1	13:58						
ZZZZZZ		5	14:04						
ZZZZZZ		5	14:09						
ZZZZZZ		1	14:15						
CCV		1	14:20	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	14:26	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	14:32						
ZZZZZZ		1	14:38						
ZZZZZZ		1	14:43						
ZZZZZZ		1	14:49						
ZZZZZZ		1	14:54						
ZZZZZZ		1	15:00						
ZZZZZZ		1	15:06						
ZZZZZZ		1	15:17						
CCV		1	15:24	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	15:30	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	15:35						
ZZZZZZ		1	15:41						
ZZZZZZ		1	15:47						
ZZZZZZ		1	15:52						

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Instrument ID: TJA 61 ICP **File Name:** BVC24A

Date: 3/24/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
ZZZZZZ		1	15:58						
ZZZZZZ		1	16:04						
ZZZZZZ		1	16:09						
CRI		1	16:15	Al	Ba	Ca	Cu Fe	Mg	V
ICSA		1	16:21	Al	Ba	Ca	Cu Fe	Mg	V
ICSAB		1	16:26	Al	Ba	Ca	Cu Fe	Mg	V
CCV		1	16:32	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	16:37	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	16:43						
ZZZZZZ		3	16:55						
CCV		1	17:01	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	17:06	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	17:12						
ZZZZZZ		1	17:18						
ZZZZZZ		1	17:23						
ZZZZZZ		1	17:29						
ZZZZZZ		1	17:35						
ZZZZZZ		1	17:40						
ZZZZZZ		5	17:46						
ZZZZZZ		1	17:51						
ZZZZZZ		1	17:57						
CCV		1	18:03	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	18:08	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	18:14						
ZZZZZZ		1	18:20						
ZZZZZZ		1	18:25						
ZZZZZZ		1	18:31						
ZZZZZZ		1	18:37						
ZZZZZZ		1	18:42						
ZZZZZZ		1	18:48						
ZZZZZZ		1	18:53						
ZZZZZZ		1	18:59						
ZZZZZZ		5	19:05						
CCV		1	19:10	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	19:16	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	19:22						
ZZZZZZ		1	19:27						
ZZZZZZ		1	19:33						
ZZZZZZ		1	19:39						
ZZZZZZ		1	19:44						
ZZZZZZ		1	19:50						
ZZZZZZ		1	19:55						
CRI		1	20:01	Al	Ba	Ca	Cu Fe	Mg	V
ICSA		1	20:07	Al	Ba	Ca	Cu Fe	Mg	V
ICSAB		1	20:12	Al	Ba	Ca	Cu Fe	Mg	V
CCV		1	20:18	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	20:24	Al	Ba	Ca	Cu Fe	Mg	V
LCSOVC22ICS0		1	20:29		Ba		Cu		V
PBSVC22ICS0		1	20:35		Ba		Cu		V
WV0952-001	PEN43SB2302	1	20:41		Ba		Cu		V
WV0974-003	PEN43SB2401	1	20:46		Ba		Cu		V

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Instrument ID: TJA 61 ICP **File Name:** BVC24A

Date: 3/24/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements						
WV0974-004	PEN43SB2402	1	20:52		Ba		Cu			V
WV0974-005	PEN43SS1801	1	20:58		Ba		Cu			V
WV0974-006	PEN43SS1801D	1	21:03		Ba		Cu			V
WV0974-007	PEN43SS1901	1	21:09		Ba		Cu			V
WV0974-008	PEN43SS2001	1	21:14		Ba		Cu			V
WV0974-009	PEN43SS2101	1	21:20		Ba					
CCV		1	21:26	Al	Ba	Ca	Cu Fe	Mg		V
CCB		1	21:31	Al	Ba	Ca	Cu Fe	Mg		V
WV0974-009L	PEN43SS2101L	5	21:37		Ba					
WV0974-009P	PEN43SS2101P	1	21:43		Ba					
WV0974-009S	PEN43SS2101S	1	21:48		Ba		Cu			V
WV0974-010	PEN43SS2201	1	21:54		Ba		Cu			V
WV0974-011	PEN43SS2301	1	22:00		Ba		Cu			V
WV0974-012	PEN43SS3501	1	22:05				Cu			
WV0974-013	PEN43SS3601	1	22:11				Cu			
WV0974-014	PEN43SS3701	1	22:17				Cu			
WV0974-015	PEN43SS2701	1	22:22		Ba					
WV0974-016	PEN43SS2801	1	22:28		Ba					
CCV		1	22:34	Al	Ba	Ca	Cu Fe	Mg		V
CCB		1	22:39	Al	Ba	Ca	Cu Fe	Mg		V
WV0974-017	PEN43SS2901	1	22:45		Ba					V
ZZZZZZ		1	22:50							
ZZZZZZ		1	22:56							
ZZZZZZ		1	23:02							
CRI		1	23:07	Al	Ba	Ca	Cu Fe	Mg		V
ICSA		1	23:13	Al	Ba	Ca	Cu Fe	Mg		V
ICSAB		1	23:19	Al	Ba	Ca	Cu Fe	Mg		V
CCV		1	23:24	Al	Ba	Ca	Cu Fe	Mg		V
CCB		1	23:30	Al	Ba	Ca	Cu Fe	Mg		V

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Instrument ID: TJA 61 ICP **File Name:** BVC28A

Date: 3/28/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
S0		1	13:01	Al	Ba	Ca	Cu Fe	Mg	V
S1		1	13:07	Al	Ba	Ca	Cu Fe	Mg	V
AL IEC		1	13:12	Al	Ba	Ca	Cu Fe	Mg	V
FE IEC		1	13:21	Al	Ba	Ca	Cu Fe	Mg	V
ICV		1	13:29	Al	Ba	Ca	Cu Fe	Mg	V
ICB		1	13:35	Al	Ba	Ca	Cu Fe	Mg	V
PQL		1	13:40	Al	Ba	Ca	Cu Fe	Mg	V
CRI		1	13:46	Al	Ba	Ca	Cu Fe	Mg	V
ICSA		1	13:52	Al	Ba	Ca	Cu Fe	Mg	V
ICSAB		1	13:57	Al	Ba	Ca	Cu Fe	Mg	V
CCV		1	14:03	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	14:09	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	14:14						
ZZZZZZ		1	14:20						
ZZZZZZ		1	14:26						
ZZZZZZ		1	14:31						
ZZZZZZ		1	14:37						
CCV		1	14:43	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	14:48	Al	Ba	Ca	Cu Fe	Mg	V
CCV		1	15:29	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	15:35	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	15:41						
ZZZZZZ		1	15:46						
ZZZZZZ		1	15:53						
ZZZZZZ		10	15:59						
ZZZZZZ		1	16:05						
ZZZZZZ		20	16:11						
ZZZZZZ		1	16:16						
CRI		1	16:28	Al	Ba	Ca	Cu Fe	Mg	V
ICSA		1	16:34	Al	Ba	Ca	Cu Fe	Mg	V
ICSAB		1	16:40	Al	Ba	Ca	Cu Fe	Mg	V
CCV		1	16:45	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	16:51	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		5	16:57						
ZZZZZZ		5	17:02						
ZZZZZZ		2	17:08						
ZZZZZZ		5	17:14						
WV0974-001	PEN43RB0306	1	17:19		Ba		Cu		V
WV0974-001L	PEN43RB0306L	5	17:25		Ba		Cu		V
WV0974-001P	PEN43RB0306P	1	17:30		Ba		Cu		V
WV0974-001S	PEN43RB0306S	1	17:36		Ba		Cu		V
ZZZZZZ		10	17:42						
ZZZZZZ		2	17:47						
CCV		1	17:53	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	17:59	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		2	18:04						
ZZZZZZ		10	18:10						
ZZZZZZ		2	18:16						
ZZZZZZ		2	18:21						
ZZZZZZ		5	18:27						

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-3

Instrument ID: TJA 61 ICP **File Name:** BVC28A

Date: 3/28/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
WV0974-009	PEN43SS2101	2	18:32				Cu		V
WV0974-009L	PEN43SS2101L	10	18:38				Cu		V
WV0974-009P	PEN43SS2101P	2	18:44				Cu		V
ZZZZZZ		2	18:49						
WV0974-015	PEN43SS2701	2	18:55						V
CCV		1	19:01	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	19:06	Al	Ba	Ca	Cu Fe	Mg	V
WV0974-016	PEN43SS2801	2	19:12						V
WV0974-018	PEN43SS3001	1	19:18				Cu		
WV0974-019	PEN43SS3101	1	19:23				Cu		
WV0974-020	PEN43SS3201	1	19:29				Cu		
CRI		1	19:34	Al	Ba	Ca	Cu Fe	Mg	V
ICSA		1	19:40	Al	Ba	Ca	Cu Fe	Mg	V
ICSAB		1	19:46	Al	Ba	Ca	Cu Fe	Mg	V
CCV		1	19:51	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	19:57	Al	Ba	Ca	Cu Fe	Mg	V

NAS PENSACOLA
SOIL DATA
3553

FRACTION	CHEMICAL	PEN43SS1801	UNITS	PEN43SS1801D	RPD	D
MISC	TOTAL SOLIDS	90	%	83	8.09	7.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAS PENSACOLA
SOIL DATA
3553

FRACTION	CHEMICAL	PEN43SS1801	UNITS	PEN43SS1801D	RPD	D
M	ARSENIC	1.3	MG/KG	1.2	8.00	0.10
M	BARIUM	9.3	MG/KG	10.4	11.17	1.10
M	COPPER	6.7	MG/KG	7.6	12.59	0.90
M	LEAD	32	MG/KG	37.7	16.36	5.70
M	VANADIUM	7	MG/KG	6.2	12.12	0.80

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

#1	32000	--	--	--	--	--	--
#2	32127	--	--	--	--	--	--

Method: NONAK Sample Name: WV0974-016 Operator:
Run Time: 03/29/05 18:40:37
Comment: PEN43SS2801 EMF 4/25/05
Mode: CONC Corr. Factor: 20

Elem	Al	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	47.992	.12586	10.283	-.00601	.02816	.03831	20.535
SDev	.074	.00530	.060	.00148	.00308	.00344	.041
%RSD	.15412	4.2102	.57917	24.689	10.928	8.9763	.20086
#1	48.044	.12961	10.326	-.00705	.02598	.03587	20.564
#2	47.939	.12211	10.241	-.00496	.03033	.04074	20.506

Elem	Cr	Co	Cu	Fe	Mg	Mn	Mo
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.35864	.02766	16.993	299.75	10.007	4.3424	-.01112
SDev	.00592	.01311	.069	.14	.067	.0130	.00266
%RSD	1.6499	47.399	.40747	.04678	.67272	.30033	23.923
#1	.36283	.03694	17.042	299.66	10.054	4.3516	-.01300
#2	.35446	.01839	16.944	299.85	9.9591	4.3331	-.00923

Elem	Ni	Ag	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.72132	.03131	.27615	-.03210	3.1748	.71653	.88253
SDev	.00333	.00230	.00179	.03559	.0171	.00793	.01320
%RSD	.46116	7.3330	.64847	110.85	.53809	1.1062	1.4961
#1	.71897	.02968	.27741	-.05727	3.1869	.71093	.89187
#2	.72367	.03293	.27488	-.00694	3.1627	.72214	.87320

Elem	Zn	Pb	Se	Sb	2068/1	2068/2	2203/1
Units	mg/L	mg/L	mg/L	mg/L			
Avge	46.886	101.88	.01369	.16407	.10447	.19382	101.97
SDev	.047	.22	.06257	.00011	.01757	.00861	.48
%RSD	.10031	.22031	457.00	.06606	16.814	4.4409	.46932
#1	46.919	102.04	.05793	.16399	.09205	.19990	102.31
#2	46.853	101.73	-.03055	.16414	.11689	.18773	101.63

Elem	2203/2	1960/1	1960/2
Units			
Avge	101.84	.04335	-.00112
SDev	.10	.13329	.02726
%RSD	.09585	307.44	2436.0
#1	101.91	.13760	.01816
#2	101.77	-.05089	-.02039

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED

Pb = 101.88 mg/L × 1L/1000mL × 100mL/1.55g × 1000g/1kg × 1/0.893 = 7360 mg/kg

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**G. WALKER**	**DATE:**	**MAY 27, 2005**
FROM:	**EDWARD SEDLMYER**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- SVOA/PAH**
NAS PENSACOLA
SDG 3553

SAMPLES: 1/Aqueous

PEN43RB0306

19/Soil

PEN43SB2302	PEN43SB2401	PEN43SB2402
PEN43SS1801	PEN43SS1801D	PEN43SS1901
PEN43SS2001	PEN43SS2101	PEN43SS2201
PEN43SS2301	PEN43SS2701	PEN43SS2801
PEN43SS2901	PEN43SS3001	PEN43SS3101
PEN43SS3201	PEN43SS3501	PEN43SS3601
PEN43SS3701		

OVERVIEW

The sample set for NAS Pensacola, SDG 3553 consists of one (1) rinse blank and nineteen (19) environmental soil samples. All samples were analyzed for Target Compound List (TCL) semivolitile organic compounds (SVOA) and polynuclear aromatic hydrocarbons (PAH). One (1) field duplicate pair was included with this SDG: PEN43SS1801 / PEN43SS1801D.

The samples were collected by TetraTech NUS on March 4 and 6, 2005 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with SW-846 Methods 8270C and 8270C SIM analysis and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

- * Data completeness
- * Holding times
- * GC/MS Tuning
- Initial and continuing calibration
- Blank results
- Surrogate spike recoveries
- * Internal standard recoveries
- Blank Spike/Blank Spike Duplicate Results
- Matrix Spike/Matrix Spike Duplicate Results
- Field Duplicate Results
- * Detection Limits
- * Compound Quantitation
- * Compound Identification

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Semivolatiles

The initial calibration analyzed on instrument "GCMS-U" on 4/5/05 had a percent relative standard deviation (%RSD) that exceeded the 30% quality control limit for 4-chlorophenyl-phenyl ether, 4,6-dinitro-2-methylphenol, and N-nitrososdiphenylamine. The non-detected results reported for the aforementioned compounds were qualified (UJ) in the affected samples.

The initial calibration relative response factor (RRF) was less than the 0.05 quality control limit for benzaldehyde on instrument "GCMS-U", on 4/5/05. The non-detected results reported for the aforementioned compounds were qualified (UJ) in the affected samples.

The initial calibration relative response factor (RRF) was less than the 0.05 quality control limit for benzaldehyde on instrument "GCMS-X", on 3/15/05. The non-detected results reported for benzaldehyde were rejected (UR) in the affected samples.

The initial calibration analyzed on instrument "GCMS-X" on 3/28/05 had a percent relative standard deviation (%RSD) that exceeded the 30% quality control limit for benzaldehyde and 2,4-dinitrophenol. The non-detected results reported for the aforementioned compounds were qualified (UJ) in the affected samples.

Calibration verification %Ds exceeded the 25% quality control limit for 4-nitrophenol, 4,6-dinitro-2-methylphenol, and 3,3'-dichlorobenzidine on instrument "GCMS-U", on 4/6/05 @09:18. The non-detected results reported for the aforementioned compounds were qualified (UJ) in the affected samples.

A continuing calibration relative response factor (RRF) fell below the 0.05 quality control limit for benzaldehyde on instrument "GCMS-U", on 4/6/05 @09:18. No action was taken on this basis because the associated samples were not used for validation.

Continuing calibration relative response factors (RRFs) fell below the 0.05 quality control limit for benzaldehyde, caprolactam, 4-nitrophenol, and pentachlorophenol on instrument "GCMS-U", on 4/8/05 @09:02. No action was taken on this basis because the associated samples were not used for validation.

A continuing calibration relative response factor (RRF) fell below the 0.05 quality control limit for benzaldehyde on instrument "GCMS-X", on 3/16/05 @10:53. The non-detected result reported for benzaldehyde was rejected (UR) in the rinse blank (PEN43RB0306).

Calibration verification %Ds exceeded the 25% quality control limit for benzaldehyde and 2,4-dinitrophenol on instrument "GCMS-X" on 3/18/05. No action was taken on this basis because the associated samples were QC samples that do not get qualified.

A calibration verification %D exceeded the 25% quality control limit for 4-nitroaniline on instrument "GCMS-X" on 3/29/05. The non-detected results reported for 4-nitroaniline were qualified (UJ) in the affected samples.

Continuing calibration relative response factors (RRFs) fell below the 0.05 quality control limit for caprolactam and 2,4-dinitrophenol on instrument "GCMS-X", on 3/30/05 @11:34. The non-detected results reported for caprolactam and 2,4-dinitrophenol were rejected (UR) in the affected samples.

Calibration verification %Ds exceeded the 25% quality control limit for benzaldehyde and hexachlorocyclopentadiene on instrument "GCMS-X" on 3/30/05 @11:34. The non-detected results reported for the aforementioned compounds were qualified (UJ) in the affected samples.

The following compounds were detected in the aqueous method blanks at the maximum concentrations indicated below:

Compound	Concentration (µg/L)	Action Level (µg/L)
Di-n-butylphthalate	5	50
Bis (2-ethylhexyl) phthalate	160	1600

Blank Actions

- Value < Reporting Limit (RL); report value followed by a U.
- Value > RL and < Action Level; report value followed by a U.
- Value > RL and > Action Level; report value unqualified.

An action level of 10X the maximum contaminant concentration was established for di-n-butylphthalate and bis (2-ethylhexyl)phthalate to evaluate laboratory contamination. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. No action was taken on this basis because only the rinse blank was associated with this blank and the aforementioned compounds were not detected in the rinse blank.

The surrogate terphenyl-d14 had recoveries less than the quality control limit for samples PEN43SS2201, PEN43SS2301, PEN43SS2901, PEN43SS2101, PEN43SS3601, PEN43SS2701, and PEN43SS3201. The samples were re-extracted and re-analyzed outside of the hold time with similar or worse recoveries. The original analyses were used for validation. No action was taken on this basis because all compounds were non-detected.

The surrogates 2,4,6-tribromophenol and terphenyl had recoveries greater than and less than their respective quality control limits for sample PEN43SS3001. The sample was re-extracted and re-analyzed outside of the hold time with worse recoveries. The original analysis was used for validation. No action was taken on this basis because all compounds were non-detected.

The following QC samples had one surrogate outside of the quality control limit for one surrogate recovery: WG15035-BLANK, WG15039-LCS, PEN43SS2101MS, and PEN43SS2101MSD. No action was taken on this basis because QC samples are not qualified.

The LCS associated with batch WG15035 had a recovery for N-nitrosodiphenylamine less than the quality control limit. The non-detected N-nitrosodiphenylamine results for the associated samples have been qualified as estimated (UJ).

The LCS associated with batch WG15039 had recoveries for 4-chloroaniline, 3-nitroaniline, and N-nitrosodiphenylamine less than the quality control limit. The non-detected 4-chloroaniline, 3-nitroaniline, and N-nitrosodiphenylamine results for the associated samples were qualified as estimated (UJ).

The LCS/LCSD associated with batch WG15045 had a high recovery for hexachlorobutadiene and low recoveries for N-nitrosodiphenylamine, and 2,4-dinitrophenol outside of the quality control limit. The non-detected hexachlorobutadiene, N-nitrosodiphenylamine, and 2,4-dinitrophenol results for the associated samples were qualified as estimated (UJ).

The MS/MSD performed on sample PEN43SS2101 had recoveries for 2,2'-oxybis(1-chloropropane), hexachloroethane, 4-methylphenol, 4-chloroaniline, hexachlorocyclopentadiene, 3-nitroaniline, 2,4-dinitrophenol, di-n-butylphthalate, and 3,3'-dichlorobenzidine less than the quality control limit. No action was taken on this basis because sample PEN43SS2101 did not have any detections for the aforementioned compounds.

PAHs

The LCS associated with batch WG15034 had recoveries for benzo(a)anthracene and benzo(b)fluoranthene greater than the quality control limit. No action was taken on this basis because the associated sample did not have any detections for the aforementioned compounds.

The MS/MSD performed on sample PEN43SS2101 had recoveries for benzo(a)anthracene and benzo(b)fluoranthene greater than the quality control limit in the MSD. No action was taken on this basis because the sample had acceptable MS recoveries and LCS recoveries.

The initial calibration analyzed on instrument "GCMS-K" on 3/17/05 had a percent relative standard deviation (%RSD) that exceeded the 15% quality control limit for 1-methylnaphthalene. The non-detected results reported for 1-methylnaphthalene were qualified (UJ) in the affected samples.

Calibration verification %Ds exceeded the 25% quality control limit for anthracene, pyrene, benzo(k)fluoranthene, indeno (1,2,3-cd) pyrene, and dibenzo (a,h) anthracene on instrument "GCMS-K", on 3/22/05 @11:03. No action was taken on this basis because the calibration was only associated with laboratory QC samples that do not receive qualifiers.

Calibration verification %Ds exceeded the 25% quality control limit for 2-methylnaphthalene, acenaphthylene, indeno (1,2,3-cd) pyrene, dibenzo (a,h) anthracene, benzo (g,h,i) perylene, and 1-methylnaphthalene on instrument "GCMS-K", on 3/28/05 @10:36. The positive and non-detected results for the aforementioned compounds were qualified as estimated (J) and (UJ), respectively, in the associated samples.

Calibration verification %Ds exceeded the 25% quality control limit for benzo(a)anthracene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene on instrument "GCMS-K", on 3/29/05 @11:23. The positive and non-detected results for the aforementioned compounds were qualified as estimated (J) and (UJ), respectively, in the associated samples.

Calibration verification %Ds exceeded the 25% quality control limit for benzo(a)anthracene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene on instrument "GCMS-K", on 3/30/05 @10:47. The positive and non-detected results for the aforementioned compounds were qualified as estimated (J) and (UJ), respectively, in the associated samples.

The field duplicate precision exceeded the 50% relative percent difference (RPD) quality control criteria for phenanthrene in the field duplicate pair PEN43SS1801 / PEN43SS1801D. The positive results for phenanthrene in the field duplicate pair were qualified as estimated (J).

Samples PEN43SS1801D and PEN43SS2801 required dilutions due to concentrations of PAHs greater than the calibration range of the instrument. The diluted results were used from samples that had PAHs that exceeded the calibration range of the instrument.

Additional Comments:

Positive results less than the reporting limit (RL) were qualified as estimated "J", due to uncertainty near the detection limit.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Qualifications were made on initial and continuing calibrations of several SVOCs and PAHs compounds which failed to comply with RRF or percent difference quality control criterion. Phthalates were detected in the SVOA aqueous method blank. LCS non-compliances were noted.

Other Factors Affecting Data Quality: Surrogate and matrix spike non-compliances were noted. Field duplicate imprecision with the PAH analyses resulted in qualification of the data.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS

Edward Sedlmyer
Chemist/Data Validator

TetraTech NUS

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	= Lab Blank Contamination
B	= Field Blank Contamination
C	= Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	= GC/MS Tuning Noncompliance
D	= MS/MSD Recovery Noncompliance
E	= LCS/LCSD Recovery Noncompliance
F	= Lab Duplicate Imprecision
G	= Field Duplicate Imprecision
H	= Holding Time Exceedance
I	= ICP Serial Dilution Noncompliance
J	= GFAA PDS - GFAA MSA's $r < 0.995$
K	= ICP Interference - includes ICS % R Noncompliance
L	= Instrument Calibration Range Exceedance
M	= Sample Preservation Noncompliance
N	= Internal Standard Noncompliance
N01	= Internal Standard Recovery Noncompliance Dioxins
N02	= Recovery Standard Noncompliance Dioxins
N03	= Clean-up Standard Noncompliance Dioxins
O	= Poor Instrument Performance (i.e., base-time drifting)
P	= Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	= Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	= Surrogate Recovery Noncompliance
S	= Pesticide/PCB Resolution
T	= % Breakdown Noncompliance for DDT and Endrin
U	= % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V	= Non-linear calibrations; correlation coefficient $r < 0.995$
W	= EMPC result
X	= Signal to noise response drop
Y	= Percent solids <30%
Z	= Uncertainty at 2 sigma deviation is less than sample activity

PROJ_NO: 4821

SDG: 3553 MEDIA: WATER DATA FRACTION: OS

nsample	PEN43RB0306	nsample	PEN43RB0306
samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-2	lab_id	WV0974-2
qc_type	NM	qc_type	NM
units	UG/L	units	UG/L
Pct_Solids		Pct_Solids	
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	5	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	2	U	
2,4,5-TRICHLOROPHENOL	7	U	
2,4,6-TRICHLOROPHENOL	7	U	
2,4-DICHLOROPHENOL	6	U	
2,4-DIMETHYLPHENOL	8	U	
2,4-DINITROPHENOL	5	U	
2,4-DINITROTOLUENE	4	U	
2,6-DINITROTOLUENE	3	U	
2-CHLORONAPHTHALENE	3	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	3	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	4	U	
3-NITROANILINE	3	U	
4,6-DINITRO-2-METHYLPHENOL	10	U	
4-BROMOPHENYL PHENYL ETHER	4	U	
4-CHLORO-3-METHYLPHENOL	6	U	
4-CHLOROANILINE	4	U	
4-CHLOROPHENYL PHENYL ETHER	3	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	5	U	
4-NITROPHENOL	5	U	
ACETOPHENONE	5	U	
ATRAZINE	5	U	
BENZALDEHYDE	5	UR	C
BIS(2-CHLOROETHOXY)METHANE	2	U	
BIS(2-CHLOROETHYL)ETHER	3	U	
BIS(2-ETHYLHEXYL)PHTHALATE	7	U	
BUTYL BENZYL PHTHALATE	3	U	
CAPROLACTAM	5	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	4	U	
DIBENZOFURAN	3	U	
DIETHYL PHTHALATE	2	U	
DIMETHYL PHTHALATE	3	U	
DI-N-BUTYL PHTHALATE	2	U	
DI-N-OCTYL PHTHALATE	3	U	
HEXACHLOROBENZENE	4	U	
HEXACHLOROBUTADIENE	4	U	
HEXACHLOROCYCLOPENTADIENE	2	U	
HEXACHLOROETHANE	2	U	
ISOPHORONE	2	U	
NITROBENZENE	2	U	
N-NITROSO-DI-N-PROPYLAMINE	2	U	
N-NITROSODIPHENYLAMINE	8	U	
PENTACHLOROPHENOL	9	U	
PHENOL	6	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: WATER DATA FRACTION: PAH

nsample	PEN43RB0306
samp_date	3/6/2005
lab_id	WV0974-1
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.1	UJ	C
2-METHYLNAPHTHALENE	0.06	U	
ACENAPHTHENE	0.08	U	
ACENAPHTHYLENE	0.04	U	
ANTHRACENE	0.07	U	
BENZO(A)ANTHRACENE	0.08	U	
BENZO(A)PYRENE	0.08	U	
BENZO(B)FLUORANTHENE	0.08	U	
BENZO(G,H,I)PERYLENE	0.1	U	
BENZO(K)FLUORANTHENE	0.1	U	
CHRYSENE	0.05	U	
DIBENZO(A,H)ANTHRACENE	0.1	U	
FLUORANTHENE	0.07	U	
FLUORENE	0.06	U	
INDENO(1,2,3-CD)PYRENE	0.07	U	
NAPHTHALENE	0.05	U	
PHENANTHRENE	0.08	U	
PYRENE	0.08	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB2302
samp_date	3/4/2005
lab_id	WV0952-4RA
qc_type	NM
units	UG/KG
Pct_Solids	94.5
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	U	
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

nsample	PEN43SB2302
samp_date	3/4/2005
lab_id	WV0952-4RA
qc_type	NM
units	UG/KG
Pct_Solids	94.5
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	1200		
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

nsample	PEN43SB2401
samp_date	3/6/2005
lab_id	WV0974-21
qc_type	NM
units	UG/KG
Pct_Solids	94.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	UJ	E
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UJ	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB2401
samp_date	3/6/2005
lab_id	WV0974-21
qc_type	NM
units	UG/KG
Pct_Solids	94.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

nsample	PEN43SB2402
samp_date	3/6/2005
lab_id	WV0974-22
qc_type	NM
units	UG/KG
Pct_Solids	94.4
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	UJ	E
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UJ	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

nsample	PEN43SB2402
samp_date	3/6/2005
lab_id	WV0974-22
qc_type	NM
units	UG/KG
Pct_Solids	94.4
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS1801	nsample	PEN43SS1801	nsample	PEN43SS1801D
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-23	lab_id	WV0974-23	lab_id	WV0974-24
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	90.5	Pct_Solids	90.5	Pct_Solids	82.8
DUP_OF:		DUP_OF:		DUP_OF:	PEN43SS1801

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	34	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	150	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	68	UR	C
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	85	U	
2-CHLORONAPHTHALENE	53	U	
2-CHLOROPHENOL	99	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	83	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	150	U	
3-NITROANILINE	79	UJ	E
4,6-DINITRO-2-METHYLPHENOL	230	U	
4-BROMOPHENYL PHENYL ETHER	62	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	59	UJ	E
4-CHLOROPHENYL PHENYL ETHER	56	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	95	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	62	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	58	U	
BIS(2-CHLOROETHYL)ETHER	36	U	
BIS(2-ETHYLHEXYL)PHTHALATE	82	U	
BUTYL BENZYL PHTHALATE	75	U	
CAPROLACTAM	180	UR	C

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	66	U	
DIBENZOFURAN	68	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	69	U	
DI-N-BUTYL PHTHALATE	93	U	
DI-N-OCTYL PHTHALATE	81	U	
HEXACHLOROBENZENE	260	U	
HEXACHLOROBUTADIENE	48	U	
HEXACHLOROCYCLOPENTADIENE	83	UJ	C
HEXACHLOROETHANE	67	U	
ISOPHORONE	57	U	
NITROBENZENE	82	U	
N-NITROSO-DI-N-PROPYLAMINE	62	U	
N-NITROSODIPHENYLAMINE	80	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	100	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	200	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	37	U	
2,4,5-TRICHLOROPHENOL	220	U	
2,4,6-TRICHLOROPHENOL	140	U	
2,4-DICHLOROPHENOL	160	U	
2,4-DIMETHYLPHENOL	140	U	
2,4-DINITROPHENOL	74	UR	C
2,4-DINITROTOLUENE	120	U	
2,6-DINITROTOLUENE	93	U	
2-CHLORONAPHTHALENE	58	U	
2-CHLOROPHENOL	110	U	
2-METHYLPHENOL	160	U	
2-NITROANILINE	90	U	
2-NITROPHENOL	130	U	
3,3'-DICHLOROBENZIDINE	160	U	
3-NITROANILINE	86	UJ	E
4,6-DINITRO-2-METHYLPHENOL	250	U	
4-BROMOPHENYL PHENYL ETHER	67	U	
4-CHLORO-3-METHYLPHENOL	140	U	
4-CHLOROANILINE	64	UJ	E
4-CHLOROPHENYL PHENYL ETHER	61	U	
4-METHYLPHENOL	180	U	
4-NITROANILINE	100	U	
4-NITROPHENOL	190	U	
ACETOPHENONE	68	U	
ATRAZINE	200	U	
BENZALDEHYDE	200	UJ	C
BIS(2-CHLOROETHOXY)METHANE	63	U	
BIS(2-CHLOROETHYL)ETHER	40	U	
BIS(2-ETHYLHEXYL)PHTHALATE	190	J	P
BUTYL BENZYL PHTHALATE	82	U	
CAPROLACTAM	200	UR	C

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS1801D
samp_date	3/6/2005
lab_id	WV0974-24
qc_type	NM
units	UG/KG
Pct_Solids	82.8
DUP_OF:	PEN43SS1801

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	72	U	
DIBENZOFURAN	75	U	
DIETHYL PHTHALATE	120	U	
DIMETHYL PHTHALATE	75	U	
DI-N-BUTYL PHTHALATE	100	U	
DI-N-OCTYL PHTHALATE	89	U	
HEXACHLOROBENZENE	280	U	
HEXACHLOROBUTADIENE	53	U	
HEXACHLOROCYCLOPENTADIENE	90	UJ	C
HEXACHLOROETHANE	73	U	
ISOPHORONE	63	U	
NITROBENZENE	90	U	
N-NITROSO-DI-N-PROPYLAMINE	68	U	
N-NITROSODIPHENYLAMINE	87	UJ	E
PENTACHLOROPHENOL	170	U	
PHENOL	110	U	

nsample	PEN43SS1901
samp_date	3/6/2005
lab_id	WV0974-25
qc_type	NM
units	UG/KG
Pct_Solids	94.1
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	66	UR	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	96	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	57	UJ	E
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	180	UR	C

nsample	PEN43SS1901
samp_date	3/6/2005
lab_id	WV0974-25
qc_type	NM
units	UG/KG
Pct_Solids	94.1
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	90	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	80	UJ	C
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS2001	nsample	PEN43SS2001	nsample	PEN43SS2101
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-26	lab_id	WV0974-26	lab_id	WV0974-27
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	88.8	Pct_Solids	88.8	Pct_Solids	93.7
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	34	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	150	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	69	UR	C
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	87	U	
2-CHLORONAPHTHALENE	54	U	
2-CHLOROPHENOL	100	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	84	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	150	U	
3-NITROANILINE	80	UJ	E
4,6-DINITRO-2-METHYLPHENOL	230	U	
4-BROMOPHENYL PHENYL ETHER	63	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	60	UJ	E
4-CHLOROPHENYL PHENYL ETHER	57	U	
4-METHYLPHENOL	170	U	
4-NITROANILINE	97	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	63	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	59	U	
BIS(2-CHLOROETHYL)ETHER	37	U	
BIS(2-ETHYLHEXYL)PHTHALATE	84	U	
BUTYL BENZYL PHTHALATE	76	U	
CAPROLACTAM	180	UR	C

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	68	U	
DIBENZOFURAN	70	U	
DIETHYL PHTHALATE	120	U	
DIMETHYL PHTHALATE	70	U	
DI-N-BUTYL PHTHALATE	1200		
DI-N-OCTYL PHTHALATE	83	U	
HEXACHLOROBENZENE	260	U	
HEXACHLOROBUTADIENE	49	U	
HEXACHLOROCYCLOPENTADIENE	84	UJ	C
HEXACHLOROETHANE	68	U	
ISOPHORONE	58	U	
NITROBENZENE	84	U	
N-NITROSO-DI-N-PROPYLAMINE	63	U	
N-NITROSODIPHENYLAMINE	81	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	100	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	66	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	96	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	UJ	E
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	UJ	C
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	180	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS2101
samp_date	3/6/2005
lab_id	WV0974-27
qc_type	NM
units	UG/KG
Pct_Solids	93.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	930		
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	80	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

nsample	PEN43SS2201
samp_date	3/6/2005
lab_id	WV0974-28
qc_type	NM
units	UG/KG
Pct_Solids	94.3
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	UJ	E
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	UJ	C
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UJ	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

nsample	PEN43SS2201
samp_date	3/6/2005
lab_id	WV0974-28
qc_type	NM
units	UG/KG
Pct_Solids	94.3
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	80	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS2301	nsample	PEN43SS2301	nsample	PEN43SS2701
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-29	lab_id	WV0974-29	lab_id	WV0974-33
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	89.9	Pct_Solids	89.9	Pct_Solids	92.2
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	34	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	150	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	69	UJ	C
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	86	U	
2-CHLORONAPHTHALENE	54	U	
2-CHLOROPHENOL	100	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	83	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	150	U	
3-NITROANILINE	79	UJ	E
4,6-DINITRO-2-METHYLPHENOL	230	U	
4-BROMOPHENYL PHENYL ETHER	62	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	59	UJ	E
4-CHLOROPHENYL PHENYL ETHER	56	U	
4-METHYLPHENOL	170	U	
4-NITROANILINE	96	UJ	C
4-NITROPHENOL	170	U	
ACETOPHENONE	63	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	58	U	
BIS(2-CHLOROETHYL)ETHER	37	U	
BIS(2-ETHYLHEXYL)PHTHALATE	83	U	
BUTYL BENZYL PHTHALATE	76	U	
CAPROLACTAM	180	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	67	U	
DIBENZOFURAN	69	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	69	U	
DI-N-BUTYL PHTHALATE	94	U	
DI-N-OCTYL PHTHALATE	82	U	
HEXACHLOROBENZENE	260	U	
HEXACHLOROBUTADIENE	48	U	
HEXACHLOROCYCLOPENTADIENE	83	U	
HEXACHLOROETHANE	68	U	
ISOPHORONE	58	U	
NITROBENZENE	83	U	
N-NITROSO-DI-N-PROPYLAMINE	63	U	
N-NITROSODIPHENYLAMINE	80	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	100	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	67	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	84	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	98	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	81	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	77	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	58	UJ	E
4-CHLOROPHENYL PHENYL ETHER	55	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	93	UJ	C
4-NITROPHENOL	170	U	
ACETOPHENONE	61	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	57	U	
BIS(2-CHLOROETHYL)ETHER	36	U	
BIS(2-ETHYLHEXYL)PHTHALATE	81	U	
BUTYL BENZYL PHTHALATE	74	U	
CAPROLACTAM	180	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS2701
samp_date	3/6/2005
lab_id	WV0974-33
qc_type	NM
units	UG/KG
Pct_Solids	92.2
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	65	U	
DIBENZOFURAN	67	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	68	U	
DI-N-BUTYL PHTHALATE	91	U	
DI-N-OCTYL PHTHALATE	80	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	81	U	
HEXACHLOROETHANE	66	U	
ISOPHORONE	56	U	
NITROBENZENE	81	U	
N-NITROSO-DI-N-PROPYLAMINE	61	U	
N-NITROSODIPHENYLAMINE	78	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	99	U	

nsample	PEN43SS2801
samp_date	3/6/2005
lab_id	WV0974-34
qc_type	NM
units	UG/KG
Pct_Solids	89.3
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	34	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	150	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	69	UR	C
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	86	U	
2-CHLORONAPHTHALENE	54	U	
2-CHLOROPHENOL	100	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	84	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	150	U	
3-NITROANILINE	80	UJ	E
4,6-DINITRO-2-METHYLPHENOL	230	U	
4-BROMOPHENYL PHENYL ETHER	62	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	60	UJ	E
4-CHLOROPHENYL PHENYL ETHER	56	U	
4-METHYLPHENOL	170	U	
4-NITROANILINE	96	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	63	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	58	U	
BIS(2-CHLOROETHYL)ETHER	37	U	
BIS(2-ETHYLHEXYL)PHTHALATE	83	U	
BUTYL BENZYL PHTHALATE	76	U	
CAPROLACTAM	180	UR	C

nsample	PEN43SS2801
samp_date	3/6/2005
lab_id	WV0974-34
qc_type	NM
units	UG/KG
Pct_Solids	89.3
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	67	U	
DIBENZOFURAN	69	U	
DIETHYL PHTHALATE	120	U	
DIMETHYL PHTHALATE	70	U	
DI-N-BUTYL PHTHALATE	94	U	
DI-N-OCTYL PHTHALATE	82	U	
HEXACHLOROBENZENE	260	U	
HEXACHLOROBUTADIENE	49	U	
HEXACHLOROCYCLOPENTADIENE	84	UJ	C
HEXACHLOROETHANE	68	U	
ISOPHORONE	58	U	
NITROBENZENE	83	U	
N-NITROSO-DI-N-PROPYLAMINE	63	U	
N-NITROSODIPHENYLAMINE	80	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	100	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS2901
samp_date	3/6/2005
lab_id	WV0974-35
qc_type	NM
units	UG/KG
Pct_Solids	92.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	66	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	97	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	81	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	77	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	58	UJ	E
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	93	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	61	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	36	U	
BIS(2-ETHYLHEXYL)PHTHALATE	80	U	
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	UJ	C

nsample	PEN43SS2901
samp_date	3/6/2005
lab_id	WV0974-35
qc_type	NM
units	UG/KG
Pct_Solids	92.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	65	U	
DIBENZOFURAN	67	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	91	U	
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	81	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	61	U	
N-NITROSODIPHENYLAMINE	78	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

nsample	PEN43SS3001
samp_date	3/6/2005
lab_id	WV0974-36
qc_type	NM
units	UG/KG
Pct_Solids	93.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	66	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	96	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	UJ	E
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	UJ	C
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	180	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS3001	nsample	PEN43SS3101	nsample	PEN43SS3101
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-36	lab_id	WV0974-37RA	lab_id	WV0974-37RA
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.7	Pct_Solids	92.5	Pct_Solids	92.5
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	90	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	80	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	67	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	84	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	97	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	81	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	140	UJ	C
3-NITROANILINE	77	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	UJ	C
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	58	UJ	E
4-CHLOROPHENYL PHENYL ETHER	54	UJ	C
4-METHYLPHENOL	160	U	
4-NITROANILINE	93	U	
4-NITROPHENOL	170	UJ	C
ACETOPHENONE	61	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	57	U	
BIS(2-CHLOROETHYL)ETHER	36	U	
BIS(2-ETHYLHEXYL)PHTHALATE	80	U	
BUTYL BENZYL PHTHALATE	74	U	
CAPROLACTAM	180	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	65	U	
DIBENZOFURAN	67	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	91	U	
DI-N-OCTYL PHTHALATE	80	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	81	U	
HEXACHLOROETHANE	66	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	61	U	
N-NITROSODIPHENYLAMINE	78	UJ	CE
PENTACHLOROPHENOL	150	U	
PHENOL	99	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS3201
samp_date	3/6/2005
lab_id	WV0974-38
qc_type	NM
units	UG/KG
Pct_Solids	93.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	66	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	96	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	UJ	E
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	UJ	C
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	180	U	

nsample	PEN43SS3201
samp_date	3/6/2005
lab_id	WV0974-38
qc_type	NM
units	UG/KG
Pct_Solids	93.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	90	U	
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	80	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

nsample	PEN43SS3501
samp_date	3/6/2005
lab_id	WV0974-30
qc_type	NM
units	UG/KG
Pct_Solids	93.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	66	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	97	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	81	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	77	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	UJ	E
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	UJ	C
4-NITROPHENOL	170	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	870		
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS3501
samp_date	3/6/2005
lab_id	WV0974-30
qc_type	NM
units	UG/KG
Pct_Solids	93.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	67	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	91	U	
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	81	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

nsample	PEN43SS3601
samp_date	3/6/2005
lab_id	WV0974-31
qc_type	NM
units	UG/KG
Pct_Solids	93.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	66	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	96	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	UJ	E
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	UJ	C
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	U	

nsample	PEN43SS3601
samp_date	3/6/2005
lab_id	WV0974-31
qc_type	NM
units	UG/KG
Pct_Solids	93.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	90	U	
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	80	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SS3701	nsample	PEN43SS3701
samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-32RA	lab_id	WV0974-32RA
qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG
Pct_Solids	92.3	Pct_Solids	92.3
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	67	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	84	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	98	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	81	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	140	UJ	C
3-NITROANILINE	77	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	UJ	C
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	58	UJ	E
4-CHLOROPHENYL PHENYL ETHER	54	UJ	C
4-METHYLPHENOL	160	U	
4-NITROANILINE	93	U	
4-NITROPHENOL	170	UJ	C
ACETOPHENONE	61	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	57	U	
BIS(2-CHLOROETHYL)ETHER	36	U	
BIS(2-ETHYLHEXYL)PHTHALATE	110	J	P
BUTYL BENZYL PHTHALATE	74	U	
CAPROLACTAM	180	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	65	U	
DIBENZOFURAN	67	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	68	U	
DI-N-BUTYL PHTHALATE	91	U	
DI-N-OCTYL PHTHALATE	80	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	81	U	
HEXACHLOROETHANE	66	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	61	U	
N-NITROSODIPHENYLAMINE	78	UJ	CE
PENTACHLOROPHENOL	150	U	
PHENOL	99	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB2302	nsample	PEN43SB2401	nsample	PEN43SB2402
samp_date	3/4/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0952-1	lab_id	WV0974-3	lab_id	WV0974-4
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	94.5	Pct_Solids	94.7	Pct_Solids	94.4
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	UJ	C
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	UJ	C
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	UJ	C
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	UJ	C
2-METHYLNAPHTHALENE	0.6	UJ	C
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	UJ	C
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	7	J	P
BENZO(A)PYRENE	2	J	P
BENZO(B)FLUORANTHENE	8	J	P
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	2	J	P
CHRYSENE	2	J	P
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	8	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	UJ	C
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	J	P
PYRENE	4	J	P

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	UJ	C
2-METHYLNAPHTHALENE	0.6	UJ	C
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	UJ	C
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	UJ	C
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SS1801	nsample	PEN43SS1801D	nsample	PEN43SS1801DL
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-5	lab_id	WV0974-6	lab_id	WV0974-5DL
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	90.5	Pct_Solids	82.8	Pct_Solids	90.5
DUP_OF:		DUP_OF:	PEN43SS1801	DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	4	J	P
ANTHRACENE	4	J	P
BENZO(A)ANTHRACENE	120	J	C
BENZO(A)PYRENE	95		
BENZO(G,H,I)PERYLENE	49	J	C
BENZO(K)FLUORANTHENE	61	J	C
CHRYSENE	86		
DIBENZO(A,H)ANTHRACENE	13	J	CP
FLUORANTHENE	160		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	49	J	C
NAPHTHALENE	1	J	P
PHENANTHRENE	43	J	G
PYRENE	130		

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	12	UJ	C
2-METHYLNAPHTHALENE	0.7	U	
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	4	J	P
ANTHRACENE	10	J	P
BENZO(A)ANTHRACENE	110	J	C
BENZO(A)PYRENE	78		
BENZO(B)FLUORANTHENE	180		
BENZO(G,H,I)PERYLENE	38	J	C
BENZO(K)FLUORANTHENE	48	J	C
CHRYSENE	72		
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	170		
FLUORENE	3	J	P
INDENO(1,2,3-CD)PYRENE	46	J	C
NAPHTHALENE	1	J	P
PHENANTHRENE	76	J	G
PYRENE	120		

Parameter	Result	Val Qual	Qual Code
BENZO(B)FLUORANTHENE	210		

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SS1901	nsample	PEN43SS2001	nsample	PEN43SS2101
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-7	lab_id	WV0974-8	lab_id	WV0974-9
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	94.1	Pct_Solids	88.8	Pct_Solids	93.7
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	7	J	P
ANTHRACENE	2	J	P
BENZO(A)ANTHRACENE	59	J	C
BENZO(A)PYRENE	46		
BENZO(B)FLUORANTHENE	100		
BENZO(G,H,I)PERYLENE	24	J	C
BENZO(K)FLUORANTHENE	29	J	C
CHRYSENE	35		
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	59		
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	27	J	C
NAPHTHALENE	1	J	P
PHENANTHRENE	9	J	P
PYRENE	46		

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	8	J	P
ANTHRACENE	2	J	P
BENZO(A)ANTHRACENE	66	J	C
BENZO(A)PYRENE	49		
BENZO(B)FLUORANTHENE	110		
BENZO(G,H,I)PERYLENE	19	J	CP
BENZO(K)FLUORANTHENE	34	J	C
CHRYSENE	41		
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	62		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	24	J	C
NAPHTHALENE	1	U	
PHENANTHRENE	10	J	P
PYRENE	57		

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	UJ	C
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	2	J	CP
ANTHRACENE	3	J	P
BENZO(A)ANTHRACENE	39		
BENZO(A)PYRENE	36		
BENZO(B)FLUORANTHENE	76		
BENZO(G,H,I)PERYLENE	17	J	CP
BENZO(K)FLUORANTHENE	24		
CHRYSENE	28		
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	57		
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	19	J	CP
NAPHTHALENE	1	J	P
PHENANTHRENE	17	J	P
PYRENE	39		

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SS2201	nsample	PEN43SS2301	nsample	PEN43SS2701
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-10	lab_id	WV0974-11	lab_id	WV0974-15
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	94.3	Pct_Solids	89.9	Pct_Solids	92.2
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	UJ	C
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	UJ	C
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	8	J	P
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	11	J	P
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	3	J	P
CHRYSENE	3	J	P
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	5	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	UJ	C
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	J	P
PYRENE	4	J	P

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	UJ	C
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	0.6	UJ	C
ANTHRACENE	1	J	P
BENZO(A)ANTHRACENE	19	J	P
BENZO(A)PYRENE	12	J	P
BENZO(B)FLUORANTHENE	33		
BENZO(G,H,I)PERYLENE	6	J	CP
BENZO(K)FLUORANTHENE	9	J	P
CHRYSENE	13	J	P
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	31		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	7	J	CP
NAPHTHALENE	1	U	
PHENANTHRENE	8	J	P
PYRENE	17	J	P

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	2	J	P
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	2	J	P
ANTHRACENE	5	J	P
BENZO(A)ANTHRACENE	58	J	C
BENZO(A)PYRENE	46		
BENZO(B)FLUORANTHENE	94		
BENZO(G,H,I)PERYLENE	30	J	C
BENZO(K)FLUORANTHENE	26	J	C
CHRYSENE	42		
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	75		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	30	J	C
NAPHTHALENE	3	J	P
PHENANTHRENE	33		
PYRENE	46		

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SS2801
samp_date	3/6/2005
lab_id	WV0974-16
qc_type	NM
units	UG/KG
Pct_Solids	89.3
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	3	J	P
ACENAPHTHENE	1	J	P
ACENAPHTHYLENE	7	J	P
ANTHRACENE	17	J	P
BENZO(A)PYRENE	180		
BENZO(G,H,I)PERYLENE	110	J	C
BENZO(K)FLUORANTHENE	92	J	C
CHRYSENE	150		
DIBENZO(A,H)ANTHRACENE	34	J	C
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	90	J	C
NAPHTHALENE	3	J	P
PHENANTHRENE	85		
PYRENE	180		

nsample	PEN43SS2801DL
samp_date	3/6/2005
lab_id	WV0974-16DL
qc_type	NM
units	UG/KG
Pct_Solids	89.3
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)ANTHRACENE	230	J	C
BENZO(B)FLUORANTHENE	410		
FLUORANTHENE	270		

nsample	PEN43SS2901
samp_date	3/6/2005
lab_id	WV0974-17
qc_type	NM
units	UG/KG
Pct_Solids	92.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	2	J	P
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	1	J	P
ANTHRACENE	3	J	P
BENZO(A)ANTHRACENE	31	J	C
BENZO(A)PYRENE	20	J	P
BENZO(B)FLUORANTHENE	44		
BENZO(G,H,I)PERYLENE	10	J	CP
BENZO(K)FLUORANTHENE	12	J	CP
CHRYSENE	18	J	P
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	44		
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	12	J	CP
NAPHTHALENE	2	J	P
PHENANTHRENE	18	J	P
PYRENE	24		

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SS3001	nsample	PEN43SS3101	nsample	PEN43SS3201
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-18	lab_id	WV0974-19	lab_id	WV0974-20
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.7	Pct_Solids	92.5	Pct_Solids	93.7
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	1	J	P
BENZO(A)ANTHRACENE	16	J	CP
BENZO(A)PYRENE	10	J	P
BENZO(B)FLUORANTHENE	24		
BENZO(G,H,I)PERYLENE	5	J	CP
BENZO(K)FLUORANTHENE	7	J	CP
CHRYSENE	8	J	P
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	22		
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	7	J	CP
NAPHTHALENE	1	J	P
PHENANTHRENE	7	J	P
PYRENE	11	J	P

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	UJ	C
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	0.6	UJ	C
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	13	J	P
BENZO(A)PYRENE	8	J	P
BENZO(B)FLUORANTHENE	22		
BENZO(G,H,I)PERYLENE	4	J	CP
BENZO(K)FLUORANTHENE	5	J	P
CHRYSENE	7	J	P
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	16	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	5	J	CP
NAPHTHALENE	1	J	P
PHENANTHRENE	5	J	P
PYRENE	9	J	P

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	J	P
BENZO(A)ANTHRACENE	13	J	CP
BENZO(A)PYRENE	8	J	P
BENZO(B)FLUORANTHENE	23		
BENZO(G,H,I)PERYLENE	4	J	CP
BENZO(K)FLUORANTHENE	6	J	CP
CHRYSENE	8	J	P
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	21	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	5	J	CP
NAPHTHALENE	0.9	U	
PHENANTHRENE	6	J	P
PYRENE	10	J	P

PROJ_NO: 4821

SDG: 3553 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SS3501	nsample	PEN43SS3601	nsample	PEN43SS3701
samp_date	3/6/2005	samp_date	3/6/2005	samp_date	3/6/2005
lab_id	WV0974-12	lab_id	WV0974-13	lab_id	WV0974-14
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.0	Pct_Solids	93.6	Pct_Solids	92.3
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	1	J	P
BENZO(A)ANTHRACENE	16	J	CP
BENZO(A)PYRENE	10	J	P
BENZO(B)FLUORANTHENE	27		
BENZO(G,H,I)PERYLENE	6	J	CP
BENZO(K)FLUORANTHENE	7	J	CP
CHRYSENE	9	J	P
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	21	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	6	J	CP
NAPHTHALENE	1	U	
PHENANTHRENE	6	J	P
PYRENE	12	J	P

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	12	J	CP
BENZO(A)PYRENE	6	J	P
BENZO(B)FLUORANTHENE	16	J	P
BENZO(G,H,I)PERYLENE	5	J	CP
BENZO(K)FLUORANTHENE	4	J	CP
CHRYSENE	6	J	P
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	15	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	4	J	CP
NAPHTHALENE	1	U	
PHENANTHRENE	6	J	P
PYRENE	7	J	P

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	2	J	P
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	4	J	P
BENZO(A)ANTHRACENE	22	J	C
BENZO(A)PYRENE	14	J	P
BENZO(B)FLUORANTHENE	32		
BENZO(G,H,I)PERYLENE	6	J	CP
BENZO(K)FLUORANTHENE	9	J	CP
CHRYSENE	13	J	P
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	38		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	6	J	CP
NAPHTHALENE	1	J	P
PHENANTHRENE	24		
PYRENE	23		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 16-MAR-2005 18:00
Report Date: 04/07/2005
Matrix: WATER
% Solids: NA

Lab ID: WV0974-2
Client ID: PEN43RB0306
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15045
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	5	1.0	10	10	5
108-95-2	Phenol	U	6	1.0	10	10	6
111-44-4	Bis(2-Chloroethyl)ether	U	3	1.0	10	10	3
95-57-8	2-Chlorophenol	U	5	1.0	10	10	5
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	2	1.0	10	10	2
95-48-7	2-Methylphenol	U	5	1.0	10	10	5
67-72-1	Hexachloroethane	U	2	1.0	10	10	2
621-64-7	N-Nitroso-di-n-propylamine	U	2	1.0	10	10	2
106-44-5	4-Methylphenol	U	5	1.0	10	10	5
98-95-3	Nitrobenzene	U	2	1.0	10	10	2
78-59-1	Isophorone	U	2	1.0	10	10	2
88-75-5	2-Nitrophenol	U	5	1.0	10	10	5
105-67-9	2,4-Dimethylphenol	U	8	1.0	10	10	8
105-60-2	Caprolactam	U	5	1.0	10	10	5
111-91-1	Bis(2-Chloroethoxy)methane	U	2	1.0	10	10	2
120-83-2	2,4-Dichlorophenol	U	6	1.0	10	10	6
92-52-4	1,1'-Biphenyl	U	5	1.0	10	10	5
106-47-8	4-Chloroaniline	U	4	1.0	10	10	4
87-68-3	Hexachlorobutadiene	U	4	1.0	10	10	4
59-50-7	4-Chloro-3-Methylphenol	U	6	1.0	10	10	6
77-47-4	Hexachlorocyclopentadiene	U	2	1.0	10	10	2
88-06-2	2,4,6-Trichlorophenol	U	7	1.0	10	10	7
95-95-4	2,4,5-Trichlorophenol	U	7	1.0	25	25	7
91-58-7	2-Chloronaphthalene	U	3	1.0	10	10	3
88-74-4	2-Nitroaniline	U	3	1.0	25	25	3
131-11-3	Dimethyl Phthalate	U	3	1.0	10	10	3
606-20-2	2,6-Dinitrotoluene	U	3	1.0	10	10	3
99-09-2	3-Nitroaniline	U	3	1.0	25	25	3
51-28-5	2,4-Dinitrophenol	U	5	1.0	25	25	5
132-64-9	Dibenzofuran	U	3	1.0	10	10	3
100-02-7	4-Nitrophenol	U	5	1.0	25	25	5
121-14-2	2,4-Dinitrotoluene	U	4	1.0	10	10	4
1912-24-9	Atrazine	U	5	1.0	10	10	5
84-66-2	Diethylphthalate	U	2	1.0	10	10	2
7005-72-3	4-Chlorophenyl-phenylether	U	3	1.0	10	10	3
100-01-6	4-Nitroaniline	U	5	1.0	25	25	5
534-52-1	4,6-Dinitro-2-Methylphenol	U	10	1.0	25	25	10
86-30-6	N-Nitrosodiphenylamine	U	8	1.0	10	10	8
101-55-3	4-Bromophenyl-phenylether	U	4	1.0	10	10	4
118-74-1	Hexachlorobenzene	U	4	1.0	10	10	4
87-86-5	Pentachlorophenol	U	9	1.0	25	25	9
86-74-8	Carbazole	U	4	1.0	10	10	4
84-74-2	Di-n-butylphthalate	U	2	1.0	10	10	2

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 16-MAR-2005 18:00
Report Date: 04/07/2005
Matrix: WATER
% Solids: NA

Lab ID: WV0974-2
Client ID: PEN43RB0306
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15045
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	3	1.0	10	10	3
91-94-1	3,3'-Dichlorobenzidine	U	4	1.0	10	10	4
117-81-7	bis(2-Ethylhexyl)phthalate	U	7	1.0	10	10	7
117-84-0	Di-n-octylphthalate	U	3	1.0	10	10	3
98-96-2	Acetophenone	U	5	1.0	10	10	5
367-12-4	2-Fluorophenol		62%				
13127-88-3	Phenol-D6		41%				
4165-60-0	Nitrobenzene-D5		71%				
321-60-8	2-Fluorobiphenyl		88%				
118-79-6	2,4,6-Tribromophenol		108%				
1718-51-0	Terphenyl-D14		100%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 28-MAR-2005 20:05
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.4

Lab ID: WV0952-4RA
Client ID: PEN43SB2302
SDG: CTO355-3
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate		1200	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 28-MAR-2005 20:05
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.4

Lab ID: WV0952-4RA
Client ID: PEN43SB2302
SDG: CTO355-3
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		87%				
13127-88-3	Phenol-D6		79%				
4165-60-0	Nitrobenzene-D5		65%				
321-60-8	2-Fluorobiphenyl		69%				
118-79-6	2,4,6-Tribromophenol		88%				
1718-51-0	Terphenyl-D14		81%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 22:13
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.7

Lab ID: WV0974-21
Client ID: PEN43SB2401
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 22:13
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.7

Lab ID: WV0974-21
Client ID: PEN43SB2401
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	59	1.0	330	350	59
367-12-4	2-Fluorophenol		79%				
13127-88-3	Phenol-D6		68%				
4165-60-0	Nitrobenzene-D5		73%				
321-60-8	2-Fluorobiphenyl		74%				
118-79-6	2,4,6-Tribromophenol		83%				
1718-51-0	Terphenyl-D14		76%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 22:55
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.4

Lab ID: WV0974-22
Client ID: PEN43SB2402
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 22:55
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.4

Lab ID: WV0974-22
Client ID: PEN43SB2402
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		82%				
13127-88-3	Phenol-D6		68%				
4165-60-0	Nitrobenzene-D5		77%				
321-60-8	2-Fluorobiphenyl		88%				
118-79-6	2,4,6-Tribromophenol		80%				
1718-51-0	Terphenyl-D14		86%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 18:01
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 90.5

Lab ID: WV0974-23
Client ID: PEN43SS1801
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	100	1.0	330	360	100
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	99	1.0	330	360	99
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	34	1.0	330	360	34
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	67	1.0	330	360	67
621-64-7	N-Nitroso-di-n-propylamine	U	62	1.0	330	360	62
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	82	1.0	330	360	82
78-59-1	Isophorone	U	57	1.0	330	360	57
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	58	1.0	330	360	58
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	360	150
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	59	1.0	330	360	59
87-68-3	Hexachlorobutadiene	U	48	1.0	330	360	48
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	83	1.0	330	360	83
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	360	200
91-58-7	2-Chloronaphthalene	U	53	1.0	330	360	53
88-74-4	2-Nitroaniline	U	83	1.0	330	360	83
131-11-3	Dimethyl Phthalate	U	69	1.0	330	360	69
606-20-2	2,6-Dinitrotoluene	U	85	1.0	330	360	85
99-09-2	3-Nitroaniline	U	79	1.0	330	360	79
51-28-5	2,4-Dinitrophenol	U	68	1.0	330	360	68
132-64-9	Dibenzofuran	U	68	1.0	330	360	68
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	360	110
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	56	1.0	330	360	56
100-01-6	4-Nitroaniline	U	95	1.0	330	360	95
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	360	230
86-30-6	N-Nitrosodiphenylamine	U	80	1.0	330	360	80
101-55-3	4-Bromophenyl-phenylether	U	62	1.0	330	360	62
118-74-1	Hexachlorobenzene	U	260	1.0	330	360	260
87-86-5	Pentachlorophenol	U	160	1.0	330	360	160
86-74-8	Carbazole	U	66	1.0	330	360	66
84-74-2	Di-n-butylphthalate	U	93	1.0	330	360	93

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 18:01
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 90.5

Lab ID: WV0974-23
Client ID: PEN43SS1801
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	75	1.0	330	360	75
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	360	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	82	1.0	330	360	82
117-84-0	Di-n-octylphthalate	U	81	1.0	330	360	81
98-96-2	Acetophenone	U	62	1.0	330	360	62
367-12-4	2-Fluorophenol		84%				
13127-88-3	Phenol-D6		75%				
4165-60-0	Nitrobenzene-D5		67%				
321-60-8	2-Fluorobiphenyl		67%				
118-79-6	2,4,6-Tribromophenol		79%				
1718-51-0	Terphenyl-D14		85%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 14:29
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 82.8

Lab ID: WV0974-24
Client ID: PEN43SS1801D
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	200	1.0	330	400	200
108-95-2	Phenol	U	110	1.0	330	400	110
111-44-4	Bis(2-Chloroethyl)ether	U	40	1.0	330	400	40
95-57-8	2-Chlorophenol	U	110	1.0	330	400	110
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	37	1.0	330	400	37
95-48-7	2-Methylphenol	U	160	1.0	330	400	160
67-72-1	Hexachloroethane	U	73	1.0	330	400	73
621-64-7	N-Nitroso-di-n-propylamine	U	68	1.0	330	400	68
106-44-5	4-Methylphenol	U	180	1.0	330	400	180
98-95-3	Nitrobenzene	U	90	1.0	330	400	90
78-59-1	Isophorone	U	63	1.0	330	400	63
88-75-5	2-Nitrophenol	U	130	1.0	330	400	130
105-67-9	2,4-Dimethylphenol	U	140	1.0	330	400	140
105-60-2	Caprolactam	U	200	1.0	330	400	200
111-91-1	Bis(2-Chloroethoxy)methane	U	63	1.0	330	400	63
120-83-2	2,4-Dichlorophenol	U	160	1.0	330	400	160
92-52-4	1,1'-Biphenyl	U	200	1.0	330	400	200
106-47-8	4-Chloroaniline	U	64	1.0	330	400	64
87-68-3	Hexachlorobutadiene	U	53	1.0	330	400	53
59-50-7	4-Chloro-3-Methylphenol	U	140	1.0	330	400	140
77-47-4	Hexachlorocyclopentadiene	U	90	1.0	330	400	90
88-06-2	2,4,6-Trichlorophenol	U	140	1.0	330	400	140
95-95-4	2,4,5-Trichlorophenol	U	220	1.0	330	400	220
91-58-7	2-Chloronaphthalene	U	58	1.0	330	400	58
88-74-4	2-Nitroaniline	U	90	1.0	330	400	90
131-11-3	Dimethyl Phthalate	U	75	1.0	330	400	75
606-20-2	2,6-Dinitrotoluene	U	93	1.0	330	400	93
99-09-2	3-Nitroaniline	U	86	1.0	330	400	86
51-28-5	2,4-Dinitrophenol	U	74	1.0	330	400	74
132-64-9	Dibenzofuran	U	75	1.0	330	400	75
100-02-7	4-Nitrophenol	U	190	1.0	330	400	190
121-14-2	2,4-Dinitrotoluene	U	120	1.0	330	400	120
1912-24-9	Atrazine	U	200	1.0	330	400	200
84-66-2	Diethylphthalate	U	120	1.0	330	400	120
7005-72-3	4-Chlorophenyl-phenylether	U	61	1.0	330	400	61
100-01-6	4-Nitroaniline	U	100	1.0	330	400	100
534-52-1	4,6-Dinitro-2-Methylphenol	U	250	1.0	330	400	250
86-30-6	N-Nitrosodiphenylamine	U	87	1.0	330	400	87
101-55-3	4-Bromophenyl-phenylether	U	67	1.0	330	400	67
118-74-1	Hexachlorobenzene	U	280	1.0	330	400	280
87-86-5	Pentachlorophenol	U	170	1.0	330	400	170
86-74-8	Carbazole	U	72	1.0	330	400	72
84-74-2	Di-n-butylphthalate	U	100	1.0	330	400	100

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 14:29
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 82.8

Lab ID: WV0974-24
Client ID: PEN43SS1801D
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	82	1.0	330	400	82
91-94-1	3,3'-Dichlorobenzidine	U	160	1.0	330	400	160
117-81-7	bis(2-Ethylhexyl)phthalate	I	190	1.0	330	400	90
117-84-0	Di-n-octylphthalate	U	89	1.0	330	400	89
98-96-2	Acetophenone	U	68	1.0	330	400	68
367-12-4	2-Fluorophenol		64%				
13127-88-3	Phenol-D6		60%				
4165-60-0	Nitrobenzene-D5		57%				
321-60-8	2-Fluorobiphenyl		61%				
118-79-6	2,4,6-Tribromophenol		71%				
1718-51-0	Terphenyl-D14		78%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 13:47
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.1

Lab ID: WV0974-25
Client ID: PEN43SS1901
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 13:47
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.1

Lab ID: WV0974-25
Client ID: PEN43SS1901
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		76%				
13127-88-3	Phenol-D6		66%				
4165-60-0	Nitrobenzene-D5		62%				
321-60-8	2-Fluorobiphenyl		68%				
118-79-6	2,4,6-Tribromophenol		66%				
1718-51-0	Terphenyl-D14		75%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 18:44
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 88.8

Lab ID: WV0974-26
Client ID: PEN43SS2001
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	370	180
108-95-2	Phenol	U	100	1.0	330	370	100
111-44-4	Bis(2-Chloroethyl)ether	U	37	1.0	330	370	37
95-57-8	2-Chlorophenol	U	100	1.0	330	370	100
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	34	1.0	330	370	34
95-48-7	2-Methylphenol	U	150	1.0	330	370	150
67-72-1	Hexachloroethane	U	68	1.0	330	370	68
621-64-7	N-Nitroso-di-n-propylamine	U	63	1.0	330	370	63
106-44-5	4-Methylphenol	U	170	1.0	330	370	170
98-95-3	Nitrobenzene	U	84	1.0	330	370	84
78-59-1	Isophorone	U	58	1.0	330	370	58
88-75-5	2-Nitrophenol	U	120	1.0	330	370	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	370	130
105-60-2	Caprolactam	U	180	1.0	330	370	180
111-91-1	Bis(2-Chloroethoxy)methane	U	59	1.0	330	370	59
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	370	150
92-52-4	1,1'-Biphenyl	U	180	1.0	330	370	180
106-47-8	4-Chloroaniline	U	60	1.0	330	370	60
87-68-3	Hexachlorobutadiene	U	49	1.0	330	370	49
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	370	130
77-47-4	Hexachlorocyclopentadiene	U	84	1.0	330	370	84
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	370	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	370	200
91-58-7	2-Chloronaphthalene	U	54	1.0	330	370	54
88-74-4	2-Nitroaniline	U	84	1.0	330	370	84
131-11-3	Dimethyl Phthalate	U	70	1.0	330	370	70
606-20-2	2,6-Dinitrotoluene	U	87	1.0	330	370	87
99-09-2	3-Nitroaniline	U	80	1.0	330	370	80
51-28-5	2,4-Dinitrophenol	U	69	1.0	330	370	69
132-64-9	Dibenzofuran	U	70	1.0	330	370	70
100-02-7	4-Nitrophenol	U	170	1.0	330	370	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	370	110
1912-24-9	Atrazine	U	180	1.0	330	370	180
84-66-2	Diethylphthalate	U	120	1.0	330	370	120
7005-72-3	4-Chlorophenyl-phenylether	U	57	1.0	330	370	57
100-01-6	4-Nitroaniline	U	97	1.0	330	370	97
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	370	230
86-30-6	N-Nitrosodiphenylamine	U	81	1.0	330	370	81
101-55-3	4-Bromophenyl-phenylether	U	63	1.0	330	370	63
118-74-1	Hexachlorobenzene	U	260	1.0	330	370	260
87-86-5	Pentachlorophenol	U	160	1.0	330	370	160
86-74-8	Carbazole	U	68	1.0	330	370	68
84-74-2	Di-n-butylphthalate		1200	1.0	330	370	95

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 18:44
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 88.8

Lab ID: WV0974-26
Client ID: PEN43SS2001
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	76	1.0	330	370	76
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	370	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	84	1.0	330	370	84
117-84-0	Di-n-octylphthalate	U	83	1.0	330	370	83
98-96-2	Acetophenone	U	63	1.0	330	370	63
367-12-4	2-Fluorophenol		81%				
13127-88-3	Phenol-D6		76%				
4165-60-0	Nitrobenzene-D5		67%				
321-60-8	2-Fluorobiphenyl		71%				
118-79-6	2,4,6-Tribromophenol		75%				
1718-51-0	Terphenyl-D14		90%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 20:57
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-27
Client ID: PEN43SS2101
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate		930	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 20:57
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-27
Client ID: PEN43SS2101
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		73%				
13127-88-3	Phenol-D6		66%				
4165-60-0	Nitrobenzene-D5		62%				
321-60-8	2-Fluorobiphenyl		74%				
118-79-6	2,4,6-Tribromophenol		71%				
1718-51-0	Terphenyl-D14		J 71%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 17:13
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-27RE
Client ID: PEN43SS2101
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 17:13
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-27RE
Client ID: PEN43SS2101
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		83%				
13127-88-3	Phenol-D6		103%				
4165-60-0	Nitrobenzene-D5		97%				
321-60-8	2-Fluorobiphenyl		J120%				
118-79-6	2,4,6-Tribromophenol		J100%				
1718-51-0	Terphenyl-D14		J142%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 18:05
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.3

Lab ID: WV0974-28
Client ID: PEN43SS2201
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 18:05
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.3

Lab ID: WV0974-28
Client ID: PEN43SS2201
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		73%				
13127-88-3	Phenol-D6		63%				
4165-60-0	Nitrobenzene-D5		57%				
321-60-8	2-Fluorobiphenyl		62%				
118-79-6	2,4,6-Tribromophenol		78%				
1718-51-0	Terphenyl-D14		J 69%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 17:56
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.3

Lab ID: WV0974-28RE
Client ID: PEN43SS2201
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 17:56
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.3

Lab ID: WV0974-28RE
Client ID: PEN43SS2201
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		81%				
13127-88-3	Phenol-D6		101%				
4165-60-0	Nitrobenzene-D5		95%				
321-60-8	2-Fluorobiphenyl		J112%				
118-79-6	2,4,6-Tribromophenol		J108%				
1718-51-0	Terphenyl-D14		J134%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 18:48
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 89.9

Lab ID: WV0974-29
Client ID: PEN43SS2301
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	370	180
108-95-2	Phenol	U	100	1.0	330	370	100
111-44-4	Bis(2-Chloroethyl)ether	U	37	1.0	330	370	37
95-57-8	2-Chlorophenol	U	100	1.0	330	370	100
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	34	1.0	330	370	34
95-48-7	2-Methylphenol	U	150	1.0	330	370	150
67-72-1	Hexachloroethane	U	68	1.0	330	370	68
621-64-7	N-Nitroso-di-n-propylamine	U	63	1.0	330	370	63
106-44-5	4-Methylphenol	U	170	1.0	330	370	170
98-95-3	Nitrobenzene	U	83	1.0	330	370	83
78-59-1	Isophorone	U	58	1.0	330	370	58
88-75-5	2-Nitrophenol	U	120	1.0	330	370	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	370	130
105-60-2	Caprolactam	U	180	1.0	330	370	180
111-91-1	Bis(2-Chloroethoxy)methane	U	58	1.0	330	370	58
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	370	150
92-52-4	1,1'-Biphenyl	U	180	1.0	330	370	180
106-47-8	4-Chloroaniline	U	59	1.0	330	370	59
87-68-3	Hexachlorobutadiene	U	48	1.0	330	370	48
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	370	130
77-47-4	Hexachlorocyclopentadiene	U	83	1.0	330	370	83
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	370	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	370	200
91-58-7	2-Chloronaphthalene	U	54	1.0	330	370	54
88-74-4	2-Nitroaniline	U	83	1.0	330	370	83
131-11-3	Dimethyl Phthalate	U	69	1.0	330	370	69
606-20-2	2,6-Dinitrotoluene	U	86	1.0	330	370	86
99-09-2	3-Nitroaniline	U	79	1.0	330	370	79
51-28-5	2,4-Dinitrophenol	U	69	1.0	330	370	69
132-64-9	Dibenzofuran	U	69	1.0	330	370	69
100-02-7	4-Nitrophenol	U	170	1.0	330	370	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	370	110
1912-24-9	Atrazine	U	180	1.0	330	370	180
84-66-2	Diethylphthalate	U	110	1.0	330	370	110
7005-72-3	4-Chlorophenyl-phenylether	U	56	1.0	330	370	56
100-01-6	4-Nitroaniline	U	96	1.0	330	370	96
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	370	230
86-30-6	N-Nitrosodiphenylamine	U	80	1.0	330	370	80
101-55-3	4-Bromophenyl-phenylether	U	62	1.0	330	370	62
118-74-1	Hexachlorobenzene	U	260	1.0	330	370	260
87-86-5	Pentachlorophenol	U	160	1.0	330	370	160
86-74-8	Carbazole	U	67	1.0	330	370	67
84-74-2	Di-n-butylphthalate	U	94	1.0	330	370	94

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 18:48
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 89.9

Lab ID: WV0974-29
Client ID: PEN43SS2301
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	76	1.0	330	370	76
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	370	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	83	1.0	330	370	83
117-84-0	Di-n-octylphthalate	U	82	1.0	330	370	82
98-96-2	Acetophenone	U	63	1.0	330	370	63
367-12-4	2-Fluorophenol		74%				
13127-88-3	Phenol-D6		64%				
4165-60-0	Nitrobenzene-D5		58%				
321-60-8	2-Fluorobiphenyl		64%				
118-79-6	2,4,6-Tribromophenol		85%				
1718-51-0	Terphenyl-D14		J 67%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 18:41
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 89.9

Lab ID: WV0974-29RE
Client ID: PEN43SS2301
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	370	180
108-95-2	Phenol	U	100	1.0	330	370	100
111-44-4	Bis(2-Chloroethyl)ether	U	37	1.0	330	370	37
95-57-8	2-Chlorophenol	U	100	1.0	330	370	100
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	34	1.0	330	370	34
95-48-7	2-Methylphenol	U	150	1.0	330	370	150
67-72-1	Hexachloroethane	U	68	1.0	330	370	68
621-64-7	N-Nitroso-di-n-propylamine	U	63	1.0	330	370	63
106-44-5	4-Methylphenol	U	170	1.0	330	370	170
98-95-3	Nitrobenzene	U	83	1.0	330	370	83
78-59-1	Isophorone	U	58	1.0	330	370	58
88-75-5	2-Nitrophenol	U	120	1.0	330	370	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	370	130
105-60-2	Caprolactam	U	180	1.0	330	370	180
111-91-1	Bis(2-Chloroethoxy)methane	U	58	1.0	330	370	58
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	370	150
92-52-4	1,1'-Biphenyl	U	180	1.0	330	370	180
106-47-8	4-Chloroaniline	U	59	1.0	330	370	59
87-68-3	Hexachlorobutadiene	U	48	1.0	330	370	48
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	370	130
77-47-4	Hexachlorocyclopentadiene	U	83	1.0	330	370	83
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	370	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	370	200
91-58-7	2-Chloronaphthalene	U	54	1.0	330	370	54
88-74-4	2-Nitroaniline	U	83	1.0	330	370	83
131-11-3	Dimethyl Phthalate	U	69	1.0	330	370	69
606-20-2	2,6-Dinitrotoluene	U	86	1.0	330	370	86
99-09-2	3-Nitroaniline	U	79	1.0	330	370	79
51-28-5	2,4-Dinitrophenol	U	69	1.0	330	370	69
132-64-9	Dibenzofuran	U	69	1.0	330	370	69
100-02-7	4-Nitrophenol	U	170	1.0	330	370	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	370	110
1912-24-9	Atrazine	U	180	1.0	330	370	180
84-66-2	Diethylphthalate	U	110	1.0	330	370	110
7005-72-3	4-Chlorophenyl-phenylether	U	56	1.0	330	370	56
100-01-6	4-Nitroaniline	U	96	1.0	330	370	96
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	370	230
86-30-6	N-Nitrosodiphenylamine	U	80	1.0	330	370	80
101-55-3	4-Bromophenyl-phenylether	U	62	1.0	330	370	62
118-74-1	Hexachlorobenzene	U	260	1.0	330	370	260
87-86-5	Pentachlorophenol	U	160	1.0	330	370	160
86-74-8	Carbazole	U	67	1.0	330	370	67
84-74-2	Di-n-butylphthalate	U	94	1.0	330	370	94

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 18:41
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 89.9

Lab ID: WV0974-29RE
Client ID: PEN43SS2301
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	76	1.0	330	370	76
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	370	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	83	1.0	330	370	83
117-84-0	Di-n-octylphthalate	U	82	1.0	330	370	82
98-96-2	Acetophenone	U	63	1.0	330	370	63
367-12-4	2-Fluorophenol		74%				
13127-88-3	Phenol-D6		86%				
4165-60-0	Nitrobenzene-D5		85%				
321-60-8	2-Fluorobiphenyl		97%				
118-79-6	2,4,6-Tribromophenol		96%				
1718-51-0	Terphenyl-D14		J127%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 23:06
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.2

Lab ID: WV0974-33
Client ID: PEN43SS2701
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	99	1.0	330	360	99
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	98	1.0	330	360	98
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	360	33
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	66	1.0	330	360	66
621-64-7	N-Nitroso-di-n-propylamine	U	61	1.0	330	360	61
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	81	1.0	330	360	81
78-59-1	Isophorone	U	56	1.0	330	360	56
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	57	1.0	330	360	57
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	360	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	58	1.0	330	360	58
87-68-3	Hexachlorobutadiene	U	47	1.0	330	360	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	81	1.0	330	360	81
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	360	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	360	52
88-74-4	2-Nitroaniline	U	81	1.0	330	360	81
131-11-3	Dimethyl Phthalate	U	68	1.0	330	360	68
606-20-2	2,6-Dinitrotoluene	U	84	1.0	330	360	84
99-09-2	3-Nitroaniline	U	77	1.0	330	360	77
51-28-5	2,4-Dinitrophenol	U	67	1.0	330	360	67
132-64-9	Dibenzofuran	U	67	1.0	330	360	67
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	360	100
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	55	1.0	330	360	55
100-01-6	4-Nitroaniline	U	93	1.0	330	360	93
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	360	220
86-30-6	N-Nitrosodiphenylamine	U	78	1.0	330	360	78
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	360	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	360	250
87-86-5	Pentachlorophenol	U	150	1.0	330	360	150
86-74-8	Carbazole	U	65	1.0	330	360	65
84-74-2	Di-n-butylphthalate	U	91	1.0	330	360	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 23:06
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.2

Lab ID: WV0974-33
Client ID: PEN43SS2701
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	74	1.0	330	360	74
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	360	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	81	1.0	330	360	81
117-84-0	Di-n-octylphthalate	U	80	1.0	330	360	80
98-96-2	Acetophenone	U	61	1.0	330	360	61
367-12-4	2-Fluorophenol		71%				
13127-88-3	Phenol-D6		54%				
4165-60-0	Nitrobenzene-D5		57%				
321-60-8	2-Fluorobiphenyl		75%				
118-79-6	2,4,6-Tribromophenol		69%				
1718-51-0	Terphenyl-D14		J 69%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 20:07
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.2

Lab ID: WV0974-33RE
Client ID: PEN43SS2701
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	99	1.0	330	360	99
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	98	1.0	330	360	98
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	360	33
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	66	1.0	330	360	66
621-64-7	N-Nitroso-di-n-propylamine	U	61	1.0	330	360	61
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	81	1.0	330	360	81
78-59-1	Isophorone	U	56	1.0	330	360	56
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	57	1.0	330	360	57
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	360	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	58	1.0	330	360	58
87-68-3	Hexachlorobutadiene	U	47	1.0	330	360	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	81	1.0	330	360	81
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	360	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	360	52
88-74-4	2-Nitroaniline	U	81	1.0	330	360	81
131-11-3	Dimethyl Phthalate	U	68	1.0	330	360	68
606-20-2	2,6-Dinitrotoluene	U	84	1.0	330	360	84
99-09-2	3-Nitroaniline	U	77	1.0	330	360	77
51-28-5	2,4-Dinitrophenol	U	67	1.0	330	360	67
132-64-9	Dibenzofuran	U	67	1.0	330	360	67
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	360	100
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	55	1.0	330	360	55
100-01-6	4-Nitroaniline	U	93	1.0	330	360	93
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	360	220
86-30-6	N-Nitrosodiphenylamine	U	78	1.0	330	360	78
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	360	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	360	250
87-86-5	Pentachlorophenol	U	150	1.0	330	360	150
86-74-8	Carbazole	U	65	1.0	330	360	65
84-74-2	Di-n-butylphthalate	I	120	1.0	330	360	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 20:07
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.2

Lab ID: WV0974-33RE
Client ID: PEN43SS2701
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	74	1.0	330	360	74
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	360	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	81	1.0	330	360	81
117-84-0	Di-n-octylphthalate	U	80	1.0	330	360	80
98-96-2	Acetophenone	U	61	1.0	330	360	61
367-12-4	2-Fluorophenol		82%				
13127-88-3	Phenol-D6		103%				
4165-60-0	Nitrobenzene-D5		97%				
321-60-8	2-Fluorobiphenyl		J118%				
118-79-6	2,4,6-Tribromophenol		J100%				
1718-51-0	Terphenyl-D14		J136%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 15:12
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 89.3

Lab ID: WV0974-34
Client ID: PEN43SS2801
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	370	180
108-95-2	Phenol	U	100	1.0	330	370	100
111-44-4	Bis(2-Chloroethyl)ether	U	37	1.0	330	370	37
95-57-8	2-Chlorophenol	U	100	1.0	330	370	100
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	34	1.0	330	370	34
95-48-7	2-Methylphenol	U	150	1.0	330	370	150
67-72-1	Hexachloroethane	U	68	1.0	330	370	68
621-64-7	N-Nitroso-di-n-propylamine	U	63	1.0	330	370	63
106-44-5	4-Methylphenol	U	170	1.0	330	370	170
98-95-3	Nitrobenzene	U	83	1.0	330	370	83
78-59-1	Isophorone	U	58	1.0	330	370	58
88-75-5	2-Nitrophenol	U	120	1.0	330	370	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	370	130
105-60-2	Caprolactam	U	180	1.0	330	370	180
111-91-1	Bis(2-Chloroethoxy)methane	U	58	1.0	330	370	58
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	370	150
92-52-4	1,1'-Biphenyl	U	180	1.0	330	370	180
106-47-8	4-Chloroaniline	U	60	1.0	330	370	60
87-68-3	Hexachlorobutadiene	U	49	1.0	330	370	49
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	370	130
77-47-4	Hexachlorocyclopentadiene	U	84	1.0	330	370	84
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	370	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	370	200
91-58-7	2-Chloronaphthalene	U	54	1.0	330	370	54
88-74-4	2-Nitroaniline	U	84	1.0	330	370	84
131-11-3	Dimethyl Phthalate	U	70	1.0	330	370	70
606-20-2	2,6-Dinitrotoluene	U	86	1.0	330	370	86
99-09-2	3-Nitroaniline	U	80	1.0	330	370	80
51-28-5	2,4-Dinitrophenol	U	69	1.0	330	370	69
132-64-9	Dibenzofuran	U	69	1.0	330	370	69
100-02-7	4-Nitrophenol	U	170	1.0	330	370	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	370	110
1912-24-9	Atrazine	U	180	1.0	330	370	180
84-66-2	Diethylphthalate	U	120	1.0	330	370	120
7005-72-3	4-Chlorophenyl-phenylether	U	56	1.0	330	370	56
100-01-6	4-Nitroaniline	U	96	1.0	330	370	96
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	370	230
86-30-6	N-Nitrosodiphenylamine	U	80	1.0	330	370	80
101-55-3	4-Bromophenyl-phenylether	U	62	1.0	330	370	62
118-74-1	Hexachlorobenzene	U	260	1.0	330	370	260
87-86-5	Pentachlorophenol	U	160	1.0	330	370	160
86-74-8	Carbazole	U	67	1.0	330	370	67
84-74-2	Di-n-butylphthalate	U	94	1.0	330	370	94

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 15:12
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 89.3

Lab ID: WV0974-34
Client ID: PEN43SS2801
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	76	1.0	330	370	76
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	370	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	83	1.0	330	370	83
117-84-0	Di-n-octylphthalate	U	82	1.0	330	370	82
98-96-2	Acetophenone	U	63	1.0	330	370	63
367-12-4	2-Fluorophenol		79%				
13127-88-3	Phenol-D6		68%				
4165-60-0	Nitrobenzene-D5		62%				
321-60-8	2-Fluorobiphenyl		62%				
118-79-6	2,4,6-Tribromophenol		72%				
1718-51-0	Terphenyl-D14		95%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 19:31
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.7

Lab ID: WV0974-35
Client ID: PEN43SS2901
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	98	1.0	330	360	98
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	97	1.0	330	360	97
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	360	33
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	65	1.0	330	360	65
621-64-7	N-Nitroso-di-n-propylamine	U	61	1.0	330	360	61
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	80	1.0	330	360	80
78-59-1	Isophorone	U	56	1.0	330	360	56
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	360	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	360	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	58	1.0	330	360	58
87-68-3	Hexachlorobutadiene	U	47	1.0	330	360	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	81	1.0	330	360	81
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	360	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	360	52
88-74-4	2-Nitroaniline	U	81	1.0	330	360	81
131-11-3	Dimethyl Phthalate	U	67	1.0	330	360	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	360	83
99-09-2	3-Nitroaniline	U	77	1.0	330	360	77
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	360	66
132-64-9	Dibenzofuran	U	67	1.0	330	360	67
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	360	100
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	360	54
100-01-6	4-Nitroaniline	U	93	1.0	330	360	93
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	360	220
86-30-6	N-Nitrosodiphenylamine	U	78	1.0	330	360	78
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	360	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	360	250
87-86-5	Pentachlorophenol	U	150	1.0	330	360	150
86-74-8	Carbazole	U	65	1.0	330	360	65
84-74-2	Di-n-butylphthalate	U	91	1.0	330	360	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 19:31
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.7

Lab ID: WV0974-35
Client ID: PEN43SS2901
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	360	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	360	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	80	1.0	330	360	80
117-84-0	Di-n-octylphthalate	U	79	1.0	330	360	79
98-96-2	Acetophenone	U	61	1.0	330	360	61
367-12-4	2-Fluorophenol		72%				
13127-88-3	Phenol-D6		59%				
4165-60-0	Nitrobenzene-D5		58%				
321-60-8	2-Fluorobiphenyl		71%				
118-79-6	2,4,6-Tribromophenol		86%				
1718-51-0	Terphenyl-D14		J 68%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 20:51
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.7

Lab ID: WV0974-35RE
Client ID: PEN43SS2901
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	98	1.0	330	360	98
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	97	1.0	330	360	97
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	360	33
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	65	1.0	330	360	65
621-64-7	N-Nitroso-di-n-propylamine	U	61	1.0	330	360	61
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	80	1.0	330	360	80
78-59-1	Isophorone	U	56	1.0	330	360	56
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	360	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	360	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	58	1.0	330	360	58
87-68-3	Hexachlorobutadiene	U	47	1.0	330	360	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	81	1.0	330	360	81
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	360	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	360	52
88-74-4	2-Nitroaniline	U	81	1.0	330	360	81
131-11-3	Dimethyl Phthalate	U	67	1.0	330	360	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	360	83
99-09-2	3-Nitroaniline	U	77	1.0	330	360	77
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	360	66
132-64-9	Dibenzofuran	U	67	1.0	330	360	67
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	360	100
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	360	54
100-01-6	4-Nitroaniline	U	93	1.0	330	360	93
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	360	220
86-30-6	N-Nitrosodiphenylamine	U	78	1.0	330	360	78
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	360	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	360	250
87-86-5	Pentachlorophenol	U	150	1.0	330	360	150
86-74-8	Carbazole	U	65	1.0	330	360	65
84-74-2	Di-n-butylphthalate	U	91	1.0	330	360	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 20:51
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.7

Lab ID: WV0974-35RE
Client ID: PEN43SS2901
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	360	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	360	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	80	1.0	330	360	80
117-84-0	Di-n-octylphthalate	U	79	1.0	330	360	79
98-96-2	Acetophenone	U	61	1.0	330	360	61
367-12-4	2-Fluorophenol		83%				
13127-88-3	Phenol-D6		100%				
4165-60-0	Nitrobenzene-D5		95%				
321-60-8	2-Fluorobiphenyl		J113%				
118-79-6	2,4,6-Tribromophenol		J108%				
1718-51-0	Terphenyl-D14		J152%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 20:14
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-36
Client ID: PEN43SS3001
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 20:14
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-36
Client ID: PEN43SS3001
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		80%				
13127-88-3	Phenol-D6		69%				
4165-60-0	Nitrobenzene-D5		60%				
321-60-8	2-Fluorobiphenyl		74%				
118-79-6	2,4,6-Tribromophenol		J103%				
1718-51-0	Terphenyl-D14		J 71%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 21:34
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-36RE
Client ID: PEN43SS3001
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 21:34
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-36RE
Client ID: PEN43SS3001
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		83%				
13127-88-3	Phenol-D6		99%				
4165-60-0	Nitrobenzene-D5		93%				
321-60-8	2-Fluorobiphenyl		J115%				
118-79-6	2,4,6-Tribromophenol		J108%				
1718-51-0	Terphenyl-D14		J137%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 06-APR-2005 11:23
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.5

Lab ID: WV0974-37RA
Client ID: PEN43SS3101
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	99	1.0	330	360	99
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	97	1.0	330	360	97
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	360	33
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	66	1.0	330	360	66
621-64-7	N-Nitroso-di-n-propylamine	U	61	1.0	330	360	61
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	80	1.0	330	360	80
78-59-1	Isophorone	U	56	1.0	330	360	56
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	57	1.0	330	360	57
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	360	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	58	1.0	330	360	58
87-68-3	Hexachlorobutadiene	U	47	1.0	330	360	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	81	1.0	330	360	81
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	360	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	360	52
88-74-4	2-Nitroaniline	U	81	1.0	330	360	81
131-11-3	Dimethyl Phthalate	U	67	1.0	330	360	67
606-20-2	2,6-Dinitrotoluene	U	84	1.0	330	360	84
99-09-2	3-Nitroaniline	U	77	1.0	330	360	77
51-28-5	2,4-Dinitrophenol	U	67	1.0	330	360	67
132-64-9	Dibenzofuran	U	67	1.0	330	360	67
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	360	100
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	360	54
100-01-6	4-Nitroaniline	U	93	1.0	330	360	93
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	360	220
86-30-6	N-Nitrosodiphenylamine	U	78	1.0	330	360	78
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	360	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	360	250
87-86-5	Pentachlorophenol	U	150	1.0	330	360	150
86-74-8	Carbazole	U	65	1.0	330	360	65
84-74-2	Di-n-butylphthalate	U	91	1.0	330	360	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 06-APR-2005 11:23
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.5

Lab ID: WV0974-37RA
Client ID: PEN43SS3101
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	74	1.0	330	360	74
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	360	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	80	1.0	330	360	80
117-84-0	Di-n-octylphthalate	U	80	1.0	330	360	80
98-96-2	Acetophenone	U	61	1.0	330	360	61
367-12-4	2-Fluorophenol		79%				
13127-88-3	Phenol-D6		88%				
4165-60-0	Nitrobenzene-D5		64%				
321-60-8	2-Fluorobiphenyl		76%				
118-79-6	2,4,6-Tribromophenol		96%				
1718-51-0	Terphenyl-D14		J 69%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 06-APR-2005 12:07
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.5

Lab ID: WV0974-37RE
Client ID: PEN43SS3101
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	99	1.0	330	360	99
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	97	1.0	330	360	97
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	360	33
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	66	1.0	330	360	66
621-64-7	N-Nitroso-di-n-propylamine	U	61	1.0	330	360	61
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	80	1.0	330	360	80
78-59-1	Isophorone	U	56	1.0	330	360	56
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	57	1.0	330	360	57
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	360	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	58	1.0	330	360	58
87-68-3	Hexachlorobutadiene	U	47	1.0	330	360	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	81	1.0	330	360	81
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	360	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	360	52
88-74-4	2-Nitroaniline	U	81	1.0	330	360	81
131-11-3	Dimethyl Phthalate	U	67	1.0	330	360	67
606-20-2	2,6-Dinitrotoluene	U	84	1.0	330	360	84
99-09-2	3-Nitroaniline	U	77	1.0	330	360	77
51-28-5	2,4-Dinitrophenol	U	67	1.0	330	360	67
132-64-9	Dibenzofuran	U	67	1.0	330	360	67
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	360	100
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	360	54
100-01-6	4-Nitroaniline	U	93	1.0	330	360	93
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	360	220
86-30-6	N-Nitrosodiphenylamine	U	78	1.0	330	360	78
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	360	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	360	250
87-86-5	Pentachlorophenol	U	150	1.0	330	360	150
86-74-8	Carbazole	U	65	1.0	330	360	65
84-74-2	Di-n-butylphthalate	U	91	1.0	330	360	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 06-APR-2005 12:07
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.5

Lab ID: WV0974-37RE
Client ID: PEN43SS3101
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	74	1.0	330	360	74
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	360	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	80	1.0	330	360	80
117-84-0	Di-n-octylphthalate	U	80	1.0	330	360	80
98-96-2	Acetophenone	U	61	1.0	330	360	61
367-12-4	2-Fluorophenol		78%				
13127-88-3	Phenol-D6		88%				
4165-60-0	Nitrobenzene-D5		84%				
321-60-8	2-Fluorobiphenyl		102%				
118-79-6	2,4,6-Tribromophenol		95%				
1718-51-0	Terphenyl-D14		93%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 23:48
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-38
Client ID: PEN43SS3201
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 23:48
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-38
Client ID: PEN43SS3201
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		77%				
13127-88-3	Phenol-D6		64%				
4165-60-0	Nitrobenzene-D5		63%				
321-60-8	2-Fluorobiphenyl		71%				
118-79-6	2,4,6-Tribromophenol		82%				
1718-51-0	Terphenyl-D14		J 72%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 06-APR-2005 12:50
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-38RE
Client ID: PEN43SS3201
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 06-APR-2005 12:50
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-38RE
Client ID: PEN43SS3201
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		78%				
13127-88-3	Phenol-D6		90%				
4165-60-0	Nitrobenzene-D5		84%				
321-60-8	2-Fluorobiphenyl		104%				
118-79-6	2,4,6-Tribromophenol		J103%				
1718-51-0	Terphenyl-D14		99%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 00:31
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.0

Lab ID: WV0974-30
Client ID: PEN43SS3501
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	98	1.0	330	350	98
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	97	1.0	330	350	97
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	150	1.0	330	350	150
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	80	1.0	330	350	80
78-59-1	Isophorone	U	56	1.0	330	350	56
88-75-5	2-Nitrophenol	U	120	1.0	330	350	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	350	130
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	81	1.0	330	350	81
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	350	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	81	1.0	330	350	81
131-11-3	Dimethyl Phthalate	U	67	1.0	330	350	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	350	83
99-09-2	3-Nitroaniline	U	77	1.0	330	350	77
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	67	1.0	330	350	67
100-02-7	4-Nitrophenol	U	170	1.0	330	350	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	350	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	91	1.0	330	350	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 00:31
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.0

Lab ID: WV0974-30
Client ID: PEN43SS3501
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	350	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate		870	1.0	330	350	80
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		70%				
13127-88-3	Phenol-D6		61%				
4165-60-0	Nitrobenzene-D5		57%				
321-60-8	2-Fluorobiphenyl		71%				
118-79-6	2,4,6-Tribromophenol		70%				
1718-51-0	Terphenyl-D14		78%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 22:23
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.6

Lab ID: WV0974-31
Client ID: PEN43SS3601
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	98	1.0	330	350	98
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	56	1.0	330	350	56
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	67	1.0	330	350	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	350	83
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 22:23
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.6

Lab ID: WV0974-31
Client ID: PEN43SS3601
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	350	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		72%				
13127-88-3	Phenol-D6		58%				
4165-60-0	Nitrobenzene-D5		57%				
321-60-8	2-Fluorobiphenyl		69%				
118-79-6	2,4,6-Tribromophenol		66%				
1718-51-0	Terphenyl-D14		J 68%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 19:24
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.6

Lab ID: WV0974-31RE
Client ID: PEN43SS3601
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	98	1.0	330	350	98
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	56	1.0	330	350	56
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	67	1.0	330	350	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	350	83
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	I	120	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 19:24
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.6

Lab ID: WV0974-31RE
Client ID: PEN43SS3601
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	350	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		88%				
13127-88-3	Phenol-D6		113%				
4165-60-0	Nitrobenzene-D5		103%				
321-60-8	2-Fluorobiphenyl		J120%				
118-79-6	2,4,6-Tribromophenol		J108%				
1718-51-0	Terphenyl-D14		J146%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 06-APR-2005 13:32
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.3

Lab ID: WV0974-32RA
Client ID: PEN43SS3701
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	99	1.0	330	360	99
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	98	1.0	330	360	98
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	360	33
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	66	1.0	330	360	66
621-64-7	N-Nitroso-di-n-propylamine	U	61	1.0	330	360	61
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	80	1.0	330	360	80
78-59-1	Isophorone	U	56	1.0	330	360	56
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	57	1.0	330	360	57
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	360	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	58	1.0	330	360	58
87-68-3	Hexachlorobutadiene	U	47	1.0	330	360	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	81	1.0	330	360	81
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	360	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	360	52
88-74-4	2-Nitroaniline	U	81	1.0	330	360	81
131-11-3	Dimethyl Phthalate	U	68	1.0	330	360	68
606-20-2	2,6-Dinitrotoluene	U	84	1.0	330	360	84
99-09-2	3-Nitroaniline	U	77	1.0	330	360	77
51-28-5	2,4-Dinitrophenol	U	67	1.0	330	360	67
132-64-9	Dibenzofuran	U	67	1.0	330	360	67
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	360	100
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	360	54
100-01-6	4-Nitroaniline	U	93	1.0	330	360	93
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	360	220
86-30-6	N-Nitrosodiphenylamine	U	78	1.0	330	360	78
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	360	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	360	250
87-86-5	Pentachlorophenol	U	150	1.0	330	360	150
86-74-8	Carbazole	U	65	1.0	330	360	65
84-74-2	Di-n-butylphthalate	U	91	1.0	330	360	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 06-APR-2005 13:32
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.3

Lab ID: WV0974-32RA
Client ID: PEN43SS3701
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	74	1.0	330	360	74
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	360	140
117-81-7	bis(2-Ethylhexyl)phthalate	I	110	1.0	330	360	80
117-84-0	Di-n-octylphthalate	U	80	1.0	330	360	80
98-96-2	Acetophenone	U	61	1.0	330	360	61
367-12-4	2-Fluorophenol		75%				
13127-88-3	Phenol-D6		90%				
4165-60-0	Nitrobenzene-D5		59%				
321-60-8	2-Fluorobiphenyl		76%				
118-79-6	2,4,6-Tribromophenol		98%				
1718-51-0	Terphenyl-D14		77%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 18-MAR-2005 00:25
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WV0974-1
Client ID: PEN43RB0306
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15046
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.05	1.0	0.2	0.2	0.05
91-57-6	2-Methylnaphthalene	U	0.06	1.0	0.2	0.2	0.06
208-96-8	Acenaphthylene	U	0.04	1.0	0.2	0.2	0.04
83-32-9	Acenaphthene	U	0.08	1.0	0.2	0.2	0.08
86-73-7	Fluorene	U	0.06	1.0	0.2	0.2	0.06
85-01-8	Phenanthrene	U	0.08	1.0	0.2	0.2	0.08
120-12-7	Anthracene	U	0.07	1.0	0.2	0.2	0.07
206-44-0	Fluoranthene	U	0.07	1.0	0.2	0.2	0.07
129-00-0	Pyrene	U	0.08	1.0	0.2	0.2	0.08
56-55-3	Benzo(a)anthracene	U	0.08	1.0	0.2	0.2	0.08
218-01-9	Chrysene	U	0.05	1.0	0.2	0.2	0.05
205-99-2	Benzo(b)fluoranthene	U	0.08	1.0	0.2	0.2	0.08
207-08-9	Benzo(k)fluoranthene	U	0.10	1.0	0.2	0.2	0.10
50-32-8	Benzo(a)pyrene	U	0.08	1.0	0.2	0.2	0.08
193-39-5	Indeno(1,2,3-cd)pyrene	U	0.07	1.0	0.2	0.2	0.07
53-70-3	Dibenzo(a,h)anthracene	U	0.1	1.0	0.2	0.2	0.1
191-24-2	Benzo(g,h,i)perylene	U	0.1	1.0	0.2	0.2	0.1
90-12-0	1-Methylnaphthalene	U	0.10	1.0	0.2	0.2	0.10
7297-45-2	2-Methylnaphthalene-d10		92%				
81103-79-9	Fluorene-d10		83%				
1718-52-1	Pyrene-d10		103%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 29-MAR-2005 21:08
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 94.4

Lab ID: WV0952-1
Client ID: PEN43SB2302
SDG: CTO355-3
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		83%				
81103-79-9	Fluorene-d10		89%				
1718-52-1	Pyrene-d10		92%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 16:22
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 94.7

Lab ID: WV0974-3
Client ID: PEN43SB2401
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	I	8	1.0	20	21	2
129-00-0	Pyrene	I	4	1.0	20	21	2
56-55-3	Benzo(a)anthracene	I	7	1.0	20	21	1
218-01-9	Chrysene	I	2	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	I	8	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	I	2	1.0	20	21	1
50-32-8	Benzo(a)pyrene	I	2	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		98%				
81103-79-9	Fluorene-d10		76%				
1718-52-1	Pyrene-d10		76%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 17:10
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 94.4

Lab ID: WV0974-4
Client ID: PEN43SB2402
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		96%				
81103-79-9	Fluorene-d10		99%				
1718-52-1	Pyrene-d10		95%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 19:31
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 90.5

Lab ID: WV0974-5
Client ID: PEN43SS1801
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	1	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	22	0.6
208-96-8	Acenaphthylene	I	4	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene		43	1.0	20	22	2
120-12-7	Anthracene	I	4	1.0	20	22	0.9
206-44-0	Fluoranthene		160	1.0	20	22	2
129-00-0	Pyrene		130	1.0	20	22	2
56-55-3	Benzo(a)anthracene		120	1.0	20	22	1
218-01-9	Chrysene		86	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene	L	210	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene		61	1.0	20	22	1
50-32-8	Benzo(a)pyrene		95	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		49	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	I	13	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene		49	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		84%				
81103-79-9	Fluorene-d10		73%				
1718-52-1	Pyrene-d10		98%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 12:27
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 90.5

Lab ID: WV0974-5DL
Client ID: PEN43SS1801
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	2	2.0	20	44	2
91-57-6	2-Methylnaphthalene	U	1	2.0	20	44	1
208-96-8	Acenaphthylene	I	5	2.0	20	44	1
83-32-9	Acenaphthene	U	2	2.0	20	44	2
86-73-7	Fluorene	U	1	2.0	20	44	1
85-01-8	Phenanthrene		45	2.0	20	44	3
120-12-7	Anthracene	I	7	2.0	20	44	2
206-44-0	Fluoranthene		210	2.0	20	44	4
129-00-0	Pyrene		110	2.0	20	44	4
56-55-3	Benzo(a)anthracene		120	2.0	20	44	2
218-01-9	Chrysene		83	2.0	20	44	3
205-99-2	Benzo(b)fluoranthene		210	2.0	20	44	4
207-08-9	Benzo(k)fluoranthene		57	2.0	20	44	3
50-32-8	Benzo(a)pyrene		94	2.0	20	44	2
193-39-5	Indeno(1,2,3-cd)pyrene		51	2.0	20	44	4
53-70-3	Dibenzo(a,h)anthracene	U	4	2.0	20	44	4
191-24-2	Benzo(g,h,i)perylene	I	41	2.0	20	44	4
90-12-0	1-Methylnaphthalene	U	22	2.0	20	44	22
7297-45-2	2-Methylnaphthalene-d10		91%				
81103-79-9	Fluorene-d10		103%				
1718-52-1	Pyrene-d10		80%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 17:03
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 82.8

Lab ID: WV0974-6
Client ID: PEN43SS1801D
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	1	1.0	20	24	1
91-57-6	2-Methylnaphthalene	U	0.7	1.0	20	24	0.7
208-96-8	Acenaphthylene	I	4	1.0	20	24	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	24	0.8
86-73-7	Fluorene	I	3	1.0	20	24	0.7
85-01-8	Phenanthrene		76	1.0	20	24	2
120-12-7	Anthracene	I	10	1.0	20	24	1.0
206-44-0	Fluoranthene		170	1.0	20	24	2
129-00-0	Pyrene		120	1.0	20	24	2
56-55-3	Benzo(a)anthracene		110	1.0	20	24	1
218-01-9	Chrysene		72	1.0	20	24	1
205-99-2	Benzo(b)fluoranthene		180	1.0	20	24	2
207-08-9	Benzo(k)fluoranthene		48	1.0	20	24	2
50-32-8	Benzo(a)pyrene		78	1.0	20	24	0.9
193-39-5	Indeno(1,2,3-cd)pyrene		46	1.0	20	24	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	24	2
191-24-2	Benzo(g,h,i)perylene		38	1.0	20	24	2
90-12-0	1-Methylnaphthalene	U	12	1.0	20	24	12
7297-45-2	2-Methylnaphthalene-d10		76%				
81103-79-9	Fluorene-d10		67%				
1718-52-1	Pyrene-d10		79%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 18:41
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 94.1

Lab ID: WV0974-7
Client ID: PEN43SS1901
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	1.0	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	I	7	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	9	1.0	20	21	2
120-12-7	Anthracene	I	2	1.0	20	21	0.9
206-44-0	Fluoranthene		59	1.0	20	21	2
129-00-0	Pyrene		46	1.0	20	21	2
56-55-3	Benzo(a)anthracene		59	1.0	20	21	1
218-01-9	Chrysene		35	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene		100	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene		29	1.0	20	21	1
50-32-8	Benzo(a)pyrene		46	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		27	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene		24	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		82%				
81103-79-9	Fluorene-d10		88%				
1718-52-1	Pyrene-d10		93%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 13:16
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 88.8

Lab ID: WV0974-8
Client ID: PEN43SS2001
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1	1.0	20	22	1
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	22	0.6
208-96-8	Acenaphthylene	I	8	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene	I	10	1.0	20	22	2
120-12-7	Anthracene	I	2	1.0	20	22	0.9
206-44-0	Fluoranthene		62	1.0	20	22	2
129-00-0	Pyrene		57	1.0	20	22	2
56-55-3	Benzo(a)anthracene		66	1.0	20	22	1
218-01-9	Chrysene		41	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene		110	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene		34	1.0	20	22	2
50-32-8	Benzo(a)pyrene		49	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		24	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene	I	19	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		73%				
81103-79-9	Fluorene-d10		87%				
1718-52-1	Pyrene-d10		100%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 18:49
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-9
Client ID: PEN43SS2101
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	1	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	I	2	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	17	1.0	20	21	2
120-12-7	Anthracene	I	3	1.0	20	21	0.9
206-44-0	Fluoranthene		57	1.0	20	21	2
129-00-0	Pyrene		39	1.0	20	21	2
56-55-3	Benzo(a)anthracene		39	1.0	20	21	1
218-01-9	Chrysene		28	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene		76	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene		24	1.0	20	21	1
50-32-8	Benzo(a)pyrene		36	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	19	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	I	17	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		88%				
81103-79-9	Fluorene-d10		77%				
1718-52-1	Pyrene-d10		80%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 19:38
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 94.3

Lab ID: WV0974-10
Client ID: PEN43SS2201
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	I	5	1.0	20	21	2
129-00-0	Pyrene	I	4	1.0	20	21	2
56-55-3	Benzo(a)anthracene	I	8	1.0	20	21	1
218-01-9	Chrysene	I	3	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	I	11	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	I	3	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		91%				
81103-79-9	Fluorene-d10		85%				
1718-52-1	Pyrene-d10		82%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 20:29
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 89.9

Lab ID: WV0974-11
Client ID: PEN43SS2301
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	22	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene	I	8	1.0	20	22	2
120-12-7	Anthracene	I	1	1.0	20	22	0.9
206-44-0	Fluoranthene		31	1.0	20	22	2
129-00-0	Pyrene	I	17	1.0	20	22	2
56-55-3	Benzo(a)anthracene	I	19	1.0	20	22	1
218-01-9	Chrysene	I	13	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene		33	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene	I	9	1.0	20	22	2
50-32-8	Benzo(a)pyrene	I	12	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	7	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene	I	6	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		86%				
81103-79-9	Fluorene-d10		84%				
1718-52-1	Pyrene-d10		75%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 13:00
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 92.2

Lab ID: WV0974-15
Client ID: PEN43SS2701
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	3	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	I	2	1.0	20	22	0.6
208-96-8	Acenaphthylene	I	2	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene		33	1.0	20	22	2
120-12-7	Anthracene	I	5	1.0	20	22	0.9
206-44-0	Fluoranthene		75	1.0	20	22	2
129-00-0	Pyrene		46	1.0	20	22	2
56-55-3	Benzo(a)anthracene		58	1.0	20	22	1
218-01-9	Chrysene		42	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene		94	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene		26	1.0	20	22	1
50-32-8	Benzo(a)pyrene		46	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		30	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene		30	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		78%				
81103-79-9	Fluorene-d10		70%				
1718-52-1	Pyrene-d10		78%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 17:51
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 89.3

Lab ID: WV0974-16
Client ID: PEN43SS2801
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	3	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	I	3	1.0	20	22	0.6
208-96-8	Acenaphthylene	I	7	1.0	20	22	0.6
83-32-9	Acenaphthene	I	1	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene		85	1.0	20	22	2
120-12-7	Anthracene	I	17	1.0	20	22	0.9
206-44-0	Fluoranthene	L	240	1.0	20	22	2
129-00-0	Pyrene		180	1.0	20	22	2
56-55-3	Benzo(a)anthracene	L	230	1.0	20	22	1
218-01-9	Chrysene		150	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene	L	350	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene		92	1.0	20	22	2
50-32-8	Benzo(a)pyrene		180	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		90	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene		34	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene		110	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		77%				
81103-79-9	Fluorene-d10		81%				
1718-52-1	Pyrene-d10		84%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 11:39
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 89.3

Lab ID: WV0974-16DL
Client ID: PEN43SS2801
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	3	3.0	20	67	3
91-57-6	2-Methylnaphthalene	U	2	3.0	20	67	2
208-96-8	Acenaphthylene	I	8	3.0	20	67	2
83-32-9	Acenaphthene	U	2	3.0	20	67	2
86-73-7	Fluorene	U	2	3.0	20	67	2
85-01-8	Phenanthrene		82	3.0	20	67	5
120-12-7	Anthracene	I	20	3.0	20	67	3
206-44-0	Fluoranthene		270	3.0	20	67	6
129-00-0	Pyrene		230	3.0	20	67	6
56-55-3	Benzo(a)anthracene		230	3.0	20	67	3
218-01-9	Chrysene		150	3.0	20	67	4
205-99-2	Benzo(b)fluoranthene		410	3.0	20	67	7
207-08-9	Benzo(k)fluoranthene		110	3.0	20	67	4
50-32-8	Benzo(a)pyrene		180	3.0	20	67	2
193-39-5	Indeno(1,2,3-cd)pyrene		83	3.0	20	67	7
53-70-3	Dibenzo(a,h)anthracene	U	7	3.0	20	67	7
191-24-2	Benzo(g,h,i)perylene		83	3.0	20	67	6
90-12-0	1-Methylnaphthalene	U	34	3.0	20	67	34
7297-45-2	2-Methylnaphthalene-d10		100%				
81103-79-9	Fluorene-d10		101%				
1718-52-1	Pyrene-d10		96%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 13:48
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 92.7

Lab ID: WV0974-17
Client ID: PEN43SS2901
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	2	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	I	2	1.0	20	22	0.6
208-96-8	Acenaphthylene	I	1	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.6	1.0	20	22	0.6
85-01-8	Phenanthrene	I	18	1.0	20	22	2
120-12-7	Anthracene	I	3	1.0	20	22	0.9
206-44-0	Fluoranthene		44	1.0	20	22	2
129-00-0	Pyrene		24	1.0	20	22	2
56-55-3	Benzo(a)anthracene		31	1.0	20	22	1
218-01-9	Chrysene	I	18	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene		44	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene	I	12	1.0	20	22	1
50-32-8	Benzo(a)pyrene	I	20	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	12	1.0	20	22	.2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene	I	10	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		83%				
81103-79-9	Fluorene-d10		84%				
1718-52-1	Pyrene-d10		75%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 14:36
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-18
Client ID: PEN43SS3001
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	1	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	7	1.0	20	21	2
120-12-7	Anthracene	I	1	1.0	20	21	0.9
206-44-0	Fluoranthene		22	1.0	20	21	2
129-00-0	Pyrene	I	11	1.0	20	21	2
56-55-3	Benzo(a)anthracene	I	16	1.0	20	21	1
218-01-9	Chrysene	I	8	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene		24	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	I	7	1.0	20	21	1
50-32-8	Benzo(a)pyrene	I	10	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	7	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	I	5	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		84%				
81103-79-9	Fluorene-d10		82%				
1718-52-1	Pyrene-d10		70%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 21:19
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 92.5

Lab ID: WV0974-19
Client ID: PEN43SS3101
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	1	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	22	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.6	1.0	20	22	0.6
85-01-8	Phenanthrene	I	5	1.0	20	22	2
120-12-7	Anthracene	U	0.9	1.0	20	22	0.9
206-44-0	Fluoranthene	I	16	1.0	20	22	2
129-00-0	Pyrene	I	9	1.0	20	22	2
56-55-3	Benzo(a)anthracene	I	13	1.0	20	22	1
218-01-9	Chrysene	I	7	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene		22	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene	I	5	1.0	20	22	1
50-32-8	Benzo(a)pyrene	I	8	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	5	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene	I	4	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		91%				
81103-79-9	Fluorene-d10		88%				
1718-52-1	Pyrene-d10		78%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 15:26
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 93.7

Lab ID: WV0974-20
Client ID: PEN43SS3201
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	6	1.0	20	21	2
120-12-7	Anthracene	I	0.9	1.0	20	21	0.9
206-44-0	Fluoranthene	I	21	1.0	20	21	2
129-00-0	Pyrene	I	10	1.0	20	21	2
56-55-3	Benzo(a)anthracene	I	13	1.0	20	21	1
218-01-9	Chrysene	I	8	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene		23	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	I	6	1.0	20	21	1
50-32-8	Benzo(a)pyrene	I	8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	5	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	I	4	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		84%				
81103-79-9	Fluorene-d10		72%				
1718-52-1	Pyrene-d10		75%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 16:15
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 93.0

Lab ID: WV0974-12
Client ID: PEN43SS3501
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	22	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.6	1.0	20	22	0.6
85-01-8	Phenanthrene	I	6	1.0	20	22	2
120-12-7	Anthracene	I	1	1.0	20	22	0.9
206-44-0	Fluoranthene	I	21	1.0	20	22	2
129-00-0	Pyrene	I	12	1.0	20	22	2
56-55-3	Benzo(a)anthracene	I	16	1.0	20	22	1
218-01-9	Chrysene	I	9	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene		27	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene	I	7	1.0	20	22	1
50-32-8	Benzo(a)pyrene	I	10	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	6	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene	I	6	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		70%				
81103-79-9	Fluorene-d10		71%				
1718-52-1	Pyrene-d10		72%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 12:11
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 93.6

Lab ID: WV0974-13
Client ID: PEN43SS3601
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	21	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	6	1.0	20	21	2
120-12-7	Anthracene	U	0.9	1.0	20	21	0.9
206-44-0	Fluoranthene	I	15	1.0	20	21	2
129-00-0	Pyrene	I	7	1.0	20	21	2
56-55-3	Benzo(a)anthracene	I	12	1.0	20	21	1
218-01-9	Chrysene	I	6	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	I	16	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	I	4	1.0	20	21	1
50-32-8	Benzo(a)pyrene	I	6	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	4	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	I	5	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		78%				
81103-79-9	Fluorene-d10		70%				
1718-52-1	Pyrene-d10		77%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 29-MAR-2005 20:20
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 92.3

Lab ID: WV0974-14
Client ID: PEN43SS3701
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	1	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	22	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	22	0.6
83-32-9	Acenaphthene	I	2	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene		24	1.0	20	22	2
120-12-7	Anthracene	I	4	1.0	20	22	0.9
206-44-0	Fluoranthene		38	1.0	20	22	2
129-00-0	Pyrene		23	1.0	20	22	2
56-55-3	Benzo(a)anthracene		22	1.0	20	22	1
218-01-9	Chrysene	I	13	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene		32	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene	I	9	1.0	20	22	1
50-32-8	Benzo(a)pyrene	I	14	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	6	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene	I	6	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		68%				
81103-79-9	Fluorene-d10		70%				
1718-52-1	Pyrene-d10		84%				

APPENDIX C

SUPPORT DOCUMENTATION

FIELD DUPLICATE PRECISION

ANALYTE	PEN43SS1801	QUAL	PEN43SS1801D	QUAL	RPD	DIFFERENCE	
Bis (2-ethylhexyl)phthalated	82	U	190	J	79.41	108	OK
Chloromethane	0.3	J	0.4	J	28.57	0.1	
Naphthalene	1	J	1	J	0.00	0	
Acenaphthylene	4	J	4	J	0.00	0	
Phenanthrene	43		76		55.46	33	J
Anthracene	4	J	10	J	85.71	6	OK
Fluoranthene	160		170		6.06	10	
Pyrene	130		120		8.00	10	
Benzo(a)anthracene	120		110		8.70	10	
Chrysene	86		72		17.72	14	
Benzo(b)fluoranthene	210		180		15.38	30	
Benzo(k)fluoranthene	61		48		23.85	13	
Benzo(a)pyrene	95		78		19.65	17	
Indeno(1,2,3-cd)pyrene	49		46		6.32	3	
Dibenzo(a,h)anthracene	13	J	2	U	146.67	11	OK
Benzo(g,h,i)perylene	49		38		25.29	11	

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CTO 355 NAS PENSACOLA
SDG: CTO355-3

Sample Receipt

The following samples were received on March 5 and March 8, 2005 and were logged in under Katahdin Analytical Services work order numbers WV0952 and WV0974 for a hardcopy due date of April 3, 2005.

KATAHDIN Sample No.	TTNUS Sample Identification
WV0952-1	PEN43SB2302
WV0952-4	PEN43SB2302
WV0974-1	PEN43RB0306
WV0974-2	PEN43RB0306
WV0974-3	PEN43SB2401
WV0974-4	PEN43SB2402
WV0974-5	PEN43SS1801
WV0974-6	PEN43SS1801D
WV0974-7	PEN43SS1901
WV0974-8	PEN43SS2001
WV0974-9	PEN43SS2101
WV0974-10	PEN43SS2201
WV0974-11	PEN43SS2301
WV0974-12	PEN43SS3501
WV0974-13	PEN43SS3601
WV0974-14	PEN43SS3701
WV0974-15	PEN43SS2701
WV0974-16	PEN43SS2801
WV0974-17	PEN43SS2901
WV0974-18	PEN43SS3001
WV0974-19	PEN43SS3101
WV0974-20	PEN43SS3201
WV0974-21	PEN43SB2401
WV0974-22	PEN43SB2402
WV0974-23	PEN43SS1801
WV0974-24	PEN43SS1801D
WV0974-25	PEN43SS1901
WV0974-26	PEN43SS2001
WV0974-27	PEN43SS2101
WV0974-28	PEN43SS2201
WV0974-29	PEN43SS2301
WV0974-30	PEN43SS3501
WV0974-31	PEN43SS3601
WV0974-32	PEN43SS3701

WV0974-33	PEN43SS2701
WV0974-34	PEN43SS2801
WV0974-35	PEN43SS2901
WV0974-36	PEN43SS3001
WV0974-37	PEN43SS3101
WV0974-38	PEN43SS3201

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Andrea J. Colby**. This narrative is an integral part of the Report of Analysis.

Organics Laboratory

The samples of SDG CTO355-3 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, and III 1996, Office of Solid Waste and Emergency Response, U.S. EPA, for the specific methods listed below or on the Report of Analysis. Sample WV0974-9/27 was selected for matrix spike and matrix spike analysis, as per client request. Some manual integrations may have been performed due to split peaks and/or corrected baselines. All have been flagged with a "M" (software-generated) on the pertinent quantitation reports.

8270C SCAN Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The acceptance limits for the MS/MSD are for a short list of the spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

One or more target analytes may have been detected above the MDL in some method blanks. Any of these analytes that were also detected in any of the associated samples were flagged with a "V" qualifier indicating that the analyte was detected in the method blank analyzed and/or extracted concurrently with the sample.

The initial calibration analyzed on the U instrument on 04/05/05 had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. Also, there were six target analytes and one surrogate that failed for both the linear and quadratic models in the initial

calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the average model.

The initial calibration analyzed on the X instrument on 03/15/05 had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. Also, there were two target analytes (benzaldehyde and phenol) that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the average model.

The initial calibration analyzed on the X instrument on 03/28/05 had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. Also, there were three target analytes (2,4-dinitrophenol, benzaldehyde, and 4-nitrophenol) that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the average model.

The calibration verification standard (CV) (file X7512) had a low response for the CCC analyte pentachlorophenol, which resulted in a %D that was outside the method acceptance limit of 20%.

The CV (file U0652) had low responses for the CCC analytes hexachlorobutadiene, pentachlorophenol and di-n-octylphthalate, which resulted in %D's that were outside the method acceptance limit of 20%. Since the associated method blank WG15039-1RA was analyzed on the X instrument with acceptable criteria, the sample was not reanalyzed.

Samples WV0974-27, 28, 29, 31, 33, 35, 36, 37RA and 38 had low recoveries for one surrogate, which were outside the method established limits. These samples were reextracted twelve days out of hold time and analyzed. Results for both analyses are reported.

Samples WV0974-27RE, 28RE, 29RE, 31RE, 33RE, 35RE, 36RE and 38RE, and the laboratory method blank WG15035-1RA had high recoveries for one or more surrogates, which were outside the laboratory established acceptance limits. Since a high recovery would indicate a high bias and there were no target analytes detected above the PQL in the samples, the samples were not reanalyzed.

The laboratory method blank WG15039-1RA had a low recovery for one surrogate, which was outside the laboratory established acceptance limits. Since this blank was also analyzed on the X instrument with acceptable criteria, the sample was not reanalyzed.

The matrix spike (MS) WG15039-3 and matrix spike duplicate (MSD) WG15039-4 had several target analytes with low spike recoveries that were outside of the laboratory established acceptance limits. The MS had one low surrogate recovery while the MSD had one high surrogate recovery. Since the associated LCS was acceptable, the samples were not reanalyzed.

The laboratory control sample WG15659-2 had a high recovery for one surrogate while the LCS WG150039-2 had a low recovery for one surrogate, which were outside the laboratory established

acceptance limits. Since the recoveries of the spiked analytes were acceptable, the samples were not reanalyzed.

8270C SIM Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The acceptance limits for the MS/MSD are for a short list of the spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

The initial calibration analyzed on the K instrument on 03/17/05 had %RSD values for three analytes that exceeded the method acceptance limit of 15%. For these analytes, a linear model was used for quantitation instead of an average response factor. The target analyte 1-methylnaphthalene that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. This compound was calibrated using the average model.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of Katahdin SDG CTO355-3 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Waste", SW-846, November 1986, Third Edition.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample No. WV0974-1 was digested for ICP analysis on 03/09/05 (QC Batch VC09ICW0) in accordance with USEPA Method 3010A. Katahdin Sample No. WV0974-1 was prepared with duplicate matrix-spiked aliquots.

Solid-matrix Katahdin Sample Nos. WV0952-1 and WV974-(3-20) were digested for ICP analysis on 03/22/05 (QC Batch VC22ICS0) in accordance with USEPA Method 3050B. Katahdin Sample No. WV0974-9 was prepared with duplicate matrix-spiked aliquots.

ICP analyses of SDG CTO355-3 sample digestates were performed using a Thermo Jarrell Ash (TJA) Trace ICP spectrometer and a TJA ICAP 61E ICP spectrometer. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following comments or exceptions:

Some of the results for run QC samples (ICV, ICB, CCV, CCB, ICSA, and ICSAB) included in the accompanying data package may have exceeded acceptance limits for some elements. Please note that all client samples and batch QC samples associated with out-of-control results for run QC samples were subsequently reanalyzed for the analytes in question.

Matrix QC Summary

The matrix-spike recoveries for all analytes for Katahdin Sample Nos. WV0974-(1 and 9) are within the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix spike duplicate analysis of Katahdin Sample No. WV0974-1 is within the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for all analytes.

The serial dilution analyses of Katahdin Sample Nos. WV0974-(1 and 9) are within the laboratory's ICP serial dilution acceptance limit (<10% difference between the original sample result and the result for a 5-fold dilution of the sample, if the result for the dilution is at least ten times the instrument detection limit) for all analytes.

The matrix spike duplicate analysis of Katahdin Sample No. WV0974-9 is outside the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for copper and lead.

Wet Chemistry Analysis

The samples of SDG CTO355-3 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total solids were performed according to "U.S. EPA Contract Laboratory Program Statement of Work for Inorganic Analysis", SOW 7/88.

All analyses were performed within analytical hold time. All quality control criteria were met.

No deviations were noted by the Wet Chemistry group.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Deborah J. Nadeau 4.8.05

Deborah Nadeau
Operations Manager

WU0974

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2603 | PAGE 1 OF 3

PROJECT NO: N4821	FACILITY: PENSACOLA 43	PROJECT MANAGER: G. Walker	PHONE NUMBER: 850 385 9899
LABORATORY NAME AND CONTACT: Katahdin Andrea Colby	SAMPLERS (SIGNATURE): William D. Olson	FIELD OPERATIONS LEADER: Bill Olson	PHONE NUMBER: 850 385 9899
ADDRESS: 340 County Rd #5	CARRIER/WAYBILL NUMBER: FEDEX	CITY, STATE: Westbrook ME	

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P G G

PRESERVATIVE USED: 4° 4° HNO3 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TCL 5 VOC	8270 PAHS	8270 SIM	6010B As/Ba/Cu/Pb/Va	6010B As/Ba/Cu/Pb/Va	8270/SIM TCL SVOC/PAHS		COMMENTS
3/6	0705	PEN43RB0306	RB	–	–	QC	G	5	2	2	1	—	—	—	—	
	0730	PEN43SB2401	SB24	2	3	SO	G	2	—	—	—	1	1	—	—	
	0735	PEN43SB2402	SB24	5	6	SO	G	2	—	—	—	1	1	—	—	
	0825	PEN43SS1801	SS18	0	1	SO	G	2	—	—	—	1	1	—	—	
	0825	PEN43SS1801D	SS18	0	1	SO	G	2	—	—	—	1	1	—	—	
	0835	PEN43SS1901	SS19	0	1	SO	G	2	—	—	—	1	1	—	—	
	0845	PEN43SS2001	SS20	0	1	SO	G	2	—	—	—	1	1	—	—	
	0855	PEN43SS2101	SS21	0	1	SO	G	2	—	—	—	1	1	—	—	
	0855	PEN43SS2101MS	SS21	0	1	SO	G	2	—	—	—	1	1	—	—	
	0855	PEN43SS2101MSD	SS21	0	1	SO	G	2	—	—	—	1	1	—	—	
	0910	PEN43SS2201	SS22	0	1	SO	G	2	—	—	—	1	1	—	—	
	0920	PEN43SS2301	SS23	0	1	SO	G	2	—	—	—	1	1	—	—	

1. RELINQUISHED BY: William D. Olson	DATE: 3/7/05	TIME: 1215	1. RECEIVED BY: [signature]	DATE: 3/8/05	TIME: 0850
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

000001a

TETRA TECH NUS, INC.

CHAIN OF CUSTODY

WU0974, WU0975

NUMBER 2604

PROJECT NO: N4821	FACILITY: PENSACOLA 43	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: KATAHDIN Andrea Colby
SAMPLERS (SIGNATURE) Walter D. Olson		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX		CITY, STATE Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G G G

PRESERVATIVE USED: 4° 4° 4° 4°

TYPE OF ANALYSIS

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	8270 Sim TCL SVOC	6010B Cu	6010 As/Ba/Pb/Ua	6010 Cu/Pb					COMMENTS
3/6	0930	PEW43SS3501	SS35	0	1	SO	G	2	1	1	—	—	—	—	—	—	
	0940	PEW43SS3601	SS36	0	1	SO	G	2	1	1	—	—	—	—	—	—	
	0950	PEW43SS3701	SS37	0	1	SO	G	2	1	1	—	—	—	—	—	—	
	1000	PEW43SS2701	SS27	0	1	SO	G	2	1	—	1	—	—	—	—	—	
	1010	PEW43SS2801	SS28	0	1	SO	G	2	1	—	1	—	—	—	—	—	
	1020	PEW43SS2901	SS29	0	1	SO	G	2	1	—	1	—	—	—	—	—	
	1025	PEW43SS3001	SS30	0	1	SO	G	2	1	—	—	1	—	—	—	—	
	1035	PEW43SS3101	SS31	0	1	SO	G	2	1	—	—	1	—	—	—	—	
	1045	PEW43SS3201	SS32	0	1	SO	G	2	1	—	—	1	—	—	—	—	
	1055	PEW43SS3301	SS33	0	1	SO	G	2	1	—	—	1	—	—	—	—	
	1100	PEW43SS3401	SS34	0	1	SO	G	2	1	—	—	1	—	—	—	—	

1. RELINQUISHED BY Walter D. Olson	DATE 3/7/05	TIME 1215	1. RECEIVED BY [signature]	DATE 3/8/05	TIME 0855
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

000013

WW0975

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2605 | PAGE 3 OF 3

PROJECT NO: N4821	FACILITY: PENSACOLA 43	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX		CITY, STATE West Brook Me

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 8270/SIM TCL SVOC / PAH	6010B As/Ba/Cu/Pb							COMMENTS
3/6	1115	PEW4355 2401	SS24	0	1	SO	G	2	1	1							
3/6	1125	PEW4355 2501	SS25	0	1	SO	G	2	1	1							
3/6	1135	PEW4355 2601	SS26	0	1	SO	G	2	1	1							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	3/7/05	1215	1. RECEIVED BY	3/8/05	0850
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

0000014

WV0943

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 2602 PAGE 1 OF 3

PROJECT NO: 4821	FACILITY: NAS PEN	PROJECT MANAGER: G. Walker	PHONE NUMBER: 850 385 9899
LABORATORY NAME AND CONTACT: Katahdin Analytical Ai Coby			
SAMPLERS (SIGNATURE): Matt A. Olson		FIELD OPERATIONS LEADER: Bill Olson	PHONE NUMBER: 850 385 9899
ADDRESS: 340 County Rd #5			
CARRIER/WAYBILL NUMBER: FEDEX 8428 7247 7090		CITY, STATE: Westbrook Me	

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	6010B As/Ba/Cu/Pb/UA	8270 TCL SVOC	8270 SIM PAHs	6010B As/Ba/Cu/Pb/UA	8270 TCL SVOC/PAH	COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									P	G	G	G	G	
PRESERVATIVE USED									HNO3	4°	4°	4°	4°	
3/4	0800	PEN43 RB0304	—	—	—	QC	G	5	1	2	2	—	—	
	0805	PEN43 SB1101		2	3	SO	G	2	—	—	—	1	1	
	0805	PEN43 SB1101D		2	3	SO	G	2	—	—	—	1	1	
	0810	PEN43 SB1102		5	7	SO	G	2	—	—	—	1	1	
	0830	PEN43 SB1201		2	3	SO	G	2	—	—	—	1	1	
	0835	PEN43 SB1202		7	8	SO	G	2	—	—	—	1	1	
	0835	PEN43 SB1202MS		7	8	SO	G	2	—	—	—	1	1	
	0835	PEN43 SB1202MSD		7	8	SO	G	2	—	—	—	1	1	
	0855	PEN43 SB1301		2	3	SO	G	2	—	—	—	1	1	
	0900	PEN43 SB1302		5	7	SO	G	2	—	—	—	1	1	
	0920	PEN43 SB1501		2	3	SO	G	2	—	—	—	1	1	
	0925	PEN43 SB1502		7	8	SO	G	2	—	—	—	1	1	
	0940	PEN43 SB1401		2	3	SO	G	2	—	—	—	1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY Matt Olson	3/4/05	1630	1. RECEIVED BY [illegible]	3/5/05	1235
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TINUS 001

000009

WW0943, WW0951

TETRA TECH NUS, INC.

CHAIN OF CUSTODY | NUMBER 2601 | PAGE 2 OF 3

PROJECT NO: 4821	FACILITY: PEW 43	PROJECT MANAGER: G. Walker	PHONE NUMBER: 850 385 9899
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER: Bill Olson	PHONE NUMBER: 850 385 9899
		CARRIER/WAYBILL NUMBER: FEDEX 8428 7247 7090	

LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
ADDRESS: 340 County Rd #5
CITY, STATE: Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, WD, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 6010B As/Ba/Cu/Pb/Va	8270TCL SVOC/PAHS								COMMENTS
3/4	0945	PEW43SB1402		4	6	SO	G	2	1	1								
3/4	1010	PEW43SB1601		2	3	SO	G	2	1	1								
3/4	1015	PEW43SB1602		7	7	SO	G	2	1	1								
3/4	1025	PEW43SB1701		2	3	SO	G	2	1	1								
3/4	1025	PEW43SB1701MS		2	3	SO	G	2	1	1								
3/4	1025	PEW43SB1701MSD		2	3	SO	G	2	1	1								
3/4	1030	PEW43SB1702		5	7	SO	G	2	1	1								
3/4	1050	PEW43SB1801		2	3	SO	G	2	1	1								
3/4	1055	PEW43SB1802		7	9	SO	G	2	1	1								
3/4	1120	PEW43SB1901		2	3	SO	G	2	1	1								
3/4	1125	PEW43SB1902		6	8	SO	G	2	1	1								
3/4	1225	PEW43SB2501		2	3	SO	G	2	1	1								
3/4	1225	PEW43SB2501D		2	3	SO	G	2	1	1								

1. RELINQUISHED BY: [signature]	DATE 3/4/05	TIME 1630	1. RECEIVED BY: [signature]	DATE 3/5/05	TIME 1235
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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0100000

WV0951, WV0952

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2610 | PAGE 3 OF 3

PROJECT NO: 4821	FACILITY: PEN 43	PROJECT MANAGER: G. Walker	PHONE NUMBER: 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE): Matt D. Olson		FIELD OPERATIONS LEADER: Bill Olson	PHONE NUMBER: 850 385 9899	ADDRESS: 340 County Rd #5
		CARRIER/WAYBILL NUMBER: FEDEX 8428 7247 7090		CITY, STATE: Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 6010B Pb/Ba/Cu/Pb/Na	8270/SIM TCL SVOC PAHs							COMMENTS
3/4	1230	PEN 43 SB2502		4	5	SO	G	2	1	1							
3/4	1240	PEN 43SB2001		2	3	SO	G	2	1	1							
3/4	1245	PEN 43 SB2002		5	7	SO	G	2	1	1							
3/4	1305	PEN 43 SB 2101		2	3	SO	G	2	1	1							
3/4	1310	PEN43SB2102		5	7	SO	G	2	1	1							
3/4	1320	PEN 43SB2201		2	3	SO	G	2	1	1							
3/4	1325	PEN 43SB2202		7	8	SO	G	2	1	1							
3/4	1335	PEN 43 SB 2301		2	3	SO	G	2	1	1							
3/4	1340	PEN43 SB2302		6	7	SO	G	2	1	1							
3/4		PEN43SB 2401		6	7	SO	G	2	1	1	Compositing 3/7/05						
3/4		PEN 43 SB 2402				SO	G	2	1	1							

1. RELINQUISHED BY: Matt D. Olson	DATE 3/4/05	TIME 1630	1. RECEIVED BY: [signature]	DATE 3/5/05	TIME 1235
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TNUS-001

1100000

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 18-MAR-2005 17:51
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15035-1RA
Client ID: WG15035-Blank
SDG: CTO355-3
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 18-MAR-2005 17:51
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15035-1RA
Client ID: WG15035-Blank
SDG: CTO355-3
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	U	74	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-96-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		96%				
13127-88-3	Phenol-D6		104%				
4165-60-0	Nitrobenzene-D5		82%				
321-60-8	2-Fluorobiphenyl		95%				
118-79-6	2,4,6-Tribromophenol		53%				
1718-51-0	Terphenyl-D14		J130%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 17:13
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15039-1
Client ID: WG15039-Blank
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 17:13
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15039-1
Client ID: WG15039-Blank
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	U	74	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-96-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		66%				
13127-88-3	Phenol-D6		68%				
4165-60-0	Nitrobenzene-D5		59%				
321-60-8	2-Fluorobiphenyl		70%				
118-79-6	2,4,6-Tribromophenol		44%				
1718-51-0	Terphenyl-D14		79%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 08-APR-2005 10:35
Report Date: 04/08/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15039-1RA
Client ID: WG15039-Blank
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 08-APR-2005 10:35
Report Date: 04/08/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15039-1RA
Client ID: WG15039-Blank
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	U	74	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-96-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		62%				
13127-88-3	Phenol-D6		76%				
4165-60-0	Nitrobenzene-D5		55%				
321-60-8	2-Fluorobiphenyl		68%				
118-79-6	2,4,6-Tribromophenol		53%				
1718-51-0	Terphenyl-D14		J 62%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 16-MAR-2005 15:10
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15045-1
Client ID: WG15045-Blank
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15045
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	5	1.0	10	10	5
108-95-2	Phenol	U	6	1.0	10	10	6
111-44-4	Bis(2-Chloroethyl)ether	U	3	1.0	10	10	3
95-57-8	2-Chlorophenol	U	5	1.0	10	10	5
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	2	1.0	10	10	2
95-48-7	2-Methylphenol	U	5	1.0	10	10	5
67-72-1	Hexachloroethane	U	2	1.0	10	10	2
621-64-7	N-Nitroso-di-n-propylamine	U	2	1.0	10	10	2
106-44-5	4-Methylphenol	U	5	1.0	10	10	5
98-95-3	Nitrobenzene	U	3	1.0	10	10	3
78-59-1	Isophorone	U	2	1.0	10	10	2
88-75-5	2-Nitrophenol	U	6	1.0	10	10	6
105-67-9	2,4-Dimethylphenol	U	8	1.0	10	10	8
105-60-2	Caprolactam	U	5	1.0	10	10	5
111-91-1	Bis(2-Chloroethoxy)methane	U	3	1.0	10	10	3
120-83-2	2,4-Dichlorophenol	U	6	1.0	10	10	6
92-52-4	1,1'-Biphenyl	U	5	1.0	10	10	5
106-47-8	4-Chloroaniline	U	4	1.0	10	10	4
87-68-3	Hexachlorobutadiene	U	4	1.0	10	10	4
59-50-7	4-Chloro-3-Methylphenol	U	6	1.0	10	10	6
77-47-4	Hexachlorocyclopentadiene	U	2	1.0	10	10	2
88-06-2	2,4,6-Trichlorophenol	U	8	1.0	10	10	8
95-95-4	2,4,5-Trichlorophenol	U	7	1.0	25	25	7
91-58-7	2-Chloronaphthalene	U	3	1.0	10	10	3
88-74-4	2-Nitroaniline	U	3	1.0	25	25	3
131-11-3	Dimethyl Phthalate	U	3	1.0	10	10	3
606-20-2	2,6-Dinitrotoluene	U	3	1.0	10	10	3
99-09-2	3-Nitroaniline	U	3	1.0	25	25	3
51-28-5	2,4-Dinitrophenol	U	5	1.0	25	25	5
132-64-9	Dibenzofuran	U	4	1.0	10	10	4
100-02-7	4-Nitrophenol	U	6	1.0	25	25	6
121-14-2	2,4-Dinitrotoluene	U	4	1.0	10	10	4
1912-24-9	Atrazine	U	5	1.0	10	10	5
84-66-2	Diethylphthalate	U	2	1.0	10	10	2
7005-72-3	4-Chlorophenyl-phenylether	U	3	1.0	10	10	3
100-01-6	4-Nitroaniline	U	5	1.0	25	25	5
534-52-1	4,6-Dinitro-2-Methylphenol	U	10	1.0	25	25	10
86-30-6	N-Nitrosodiphenylamine	U	8	1.0	10	10	8
101-55-3	4-Bromophenyl-phenylether	U	5	1.0	10	10	5
118-74-1	Hexachlorobenzene	U	4	1.0	10	10	4
87-86-5	Pentachlorophenol	U	9	1.0	25	25	9
86-74-8	Carbazole	U	4	1.0	10	10	4
84-74-2	Di-n-butylphthalate	I	5	1.0	10	10	2

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 16-MAR-2005 15:10
Report Date: 04/06/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15045-1
Client ID: WG15045-Blank
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15045
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	3	1.0	10	10	3
91-94-1	3,3'-Dichlorobenzidine	U	4	1.0	10	10	4
117-81-7	bis(2-Ethylhexyl)phthalate	U	8	1.0	10	10	8
117-84-0	Di-n-octylphthalate	U	3	1.0	10	10	3
98-96-2	Acetophenone	U	5	1.0	10	10	5
367-12-4	2-Fluorophenol		68%				
13127-88-3	Phenol-D6		45%				
4165-60-0	Nitrobenzene-D5		70%				
321-60-8	2-Fluorobiphenyl		83%				
118-79-6	2,4,6-Tribromophenol		112%				
1718-51-0	Terphenyl-D14		90%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 15:04
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15659-1
Client ID: WG15659-Blank
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 15:04
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15659-1
Client ID: WG15659-Blank
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	I	160	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-96-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		74%				
13127-88-3	Phenol-D6		88%				
4165-60-0	Nitrobenzene-D5		89%				
321-60-8	2-Fluorobiphenyl		103%				
118-79-6	2,4,6-Tribromophenol		69%				
1718-51-0	Terphenyl-D14		103%				

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: XD446 DFTPP Injection Date: 03/15/05

Instrument ID: GCMS-X DFTPP Injection Time: 1435

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	60.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	41.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	22.0
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	4.8 (35.0)2
442	40.0 - 100.0% of mass 198	71.5
443	17.0 - 23.0% of mass 442	13.8 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0315	X7466	03/15/05	1455
02		SSTD200X0315	X7467	03/15/05	1545
03		SSTD150X0315	X7468	03/15/05	1628
04		SSTD100X0315	X7469	03/15/05	1710
05		SSTD025X0315	X7470	03/15/05	1753
06		SSTD010X0315	X7471	03/15/05	1835
07					
08					
09					
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15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date(s): 03/15/05 03/15/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1455 1835

LAB FILE ID: RF10: X7471 RF25: X7470 RF50: X7466
RF100: X7469 RF150: X7468 RF200: X7467

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.023	0.018	0.030	0.049	0.077	0.055	AVRG		4.204e-002		53.339	15.000	<
Phenol	1.206	1.244	1.302	1.122	0.917	0.706	AVRG		1.08296486		21.060	15.000	<
Bis(2-Chloroethyl)ether	195060	467530	1035100	1455400	2193100	2741900	2ORDR	0.14973440	0.12576519	0.50013151	0.99207	0.99000	
2-Chlorophenol	1.053	1.009	1.100	0.978	0.864	0.765	AVRG		0.96149802		12.994	15.000	
2,2'-Oxybis(1-Chloropropa	2.980	2.913	3.120	2.997	2.714	2.539	AVRG		2.87734127		7.386	15.000	
2-Methylphenol	0.732	0.738	0.850	0.751	0.699	0.654	AVRG		0.73743574		8.844	15.000	
Hexachloroethane	0.504	0.504	0.542	0.489	0.435	0.391	AVRG		0.47761044		11.405	15.000	
N-Nitroso-di-n-propylamin	0.848	0.822	0.886	0.807	0.744	0.691	AVRG		0.79955338		8.908	15.000	
4-Methylphenol	0.687	0.810	0.909	0.836	0.753	0.717	AVRG		0.78525417		10.503	15.000	
Nitrobenzene	0.350	0.349	0.364	0.347	0.307	0.295	AVRG		0.33555281		8.185	15.000	
Isophorone	0.583	0.572	0.621	0.577	0.553	0.537	AVRG		0.57378620		4.991	15.000	
2-Nitrophenol	0.149	0.174	0.181	0.167	0.167	0.156	AVRG		0.16581372		7.091	15.000	
2,4-Dimethylphenol	0.234	0.252	0.286	0.269	0.260	0.222	AVRG		0.25387360		9.212	15.000	
Caprolactam	0.053	0.066	0.070	0.069	0.058	0.060	AVRG		6.281e-002		10.818	15.000	
Bis(2-Chloroethoxy)methan	0.369	0.370	0.392	0.358	0.331	0.309	AVRG		0.35468405		8.412	15.000	
2,4-Dichlorophenol	0.223	0.232	0.263	0.230	0.233	0.207	AVRG		0.23129040		7.917	15.000	
1,1'-Biphenyl	303980	793750	1745000	2602500	4488000	5566700	2ORDR	9.954e-002	0.35755052	0.23934715	0.99738	0.99000	
4-Chloroaniline	0.268	0.323	0.330	0.317	0.324	0.292	AVRG		0.30887040		7.868	15.000	
Hexachlorobutadiene	0.193	0.206	0.198	0.188	0.175	0.153	AVRG		0.18565853		10.276	15.000	
4-Chloro-3-Methylphenol	0.186	0.203	0.216	0.217	0.207	0.188	AVRG		0.20267751		6.652	15.000	
Hexachlorocyclopentadiene	27936	140060	428640	767580	1692300	2249600	LINR	0.10914853	3.10561830		0.99688	0.99000	
2,4,6-Trichlorophenol	0.295	0.342	0.350	0.330	0.310	0.296	AVRG		0.32066683		7.272	15.000	
2,4,5-Trichlorophenol	0.243	0.322	0.366	0.348	0.339	0.319	AVRG		0.32306234		13.206	15.000	
2-Chloronaphthalene	0.938	0.987	0.988	0.896	0.817	0.754	AVRG		0.89671807		10.556	15.000	
2-Nitroaniline	0.303	0.331	0.361	0.360	0.341	0.348	AVRG		0.34079174		6.344	15.000	
Dimethyl Phthalate	1.082	1.138	1.138	1.003	0.955	0.899	AVRG		1.03590447		9.578	15.000	
2,6-Dinitrotoluene	0.228	0.257	0.273	0.263	0.256	0.246	AVRG		0.25404788		6.055	15.000	
3-Nitroaniline	0.184	0.235	0.246	0.238	0.220	0.230	AVRG		0.22536410		9.776	15.000	
2,4-Dinitrophenol	5820	47762	152320	296710	781430	1132700	2ORDR	0.16948183	8.25114486	-2.7481004	0.99501	0.99000	
Dibenzofuran	1.178	1.321	1.310	1.216	1.148	1.105	AVRG		1.21279322		7.214	15.000	
4-Nitrophenol	23267	35709	129150	222460	539180	803010	LINR	0.19276240	9.04102107		0.99118	0.99000	
2,4-Dinitrotoluene	0.243	0.316	0.330	0.334	0.333	0.316	AVRG		0.31187212		11.145	15.000	
Atrazine	0.147	0.172	0.170	0.171	0.162	0.154	AVRG		0.16260903		6.483	15.000	
Diethylphthalate	1.040	1.110	1.072	0.948	0.824	0.783	AVRG		0.96286630		14.024	15.000	
4-Chlorophenyl-phenylethe	0.463	0.512	0.493	0.455	0.382	0.365	AVRG		0.44507940		13.265	15.000	
4-Nitroaniline	37013	112890	343830	601740	1285700	1870800	LINR	0.11256233	3.87077072		0.99862	0.99000	
4,6-Dinitro-2-Methylpheno	18268	76770	232950	468880	979480	1312200	LINR	8.384e-002	8.39263420		0.99634	0.99000	
N-Nitrosodiphenylamine	176690	539760	1164000	1882000	3417300	4256600	2ORDR	9.93e-002	0.91798533	0.92247165	0.99761	0.99000	
4-Bromophenyl-phenylether	0.182	0.213	0.220	0.202	0.187	0.184	AVRG		0.19815140		8.057	15.000	
Hexachlorobenzene	0.237	0.270	0.254	0.252	0.235	0.227	AVRG		0.24598763		6.400	15.000	
Pentachlorophenol	7995	70831	220660	403080	1005500	1485000	LINR	0.22179315	7.63202419		0.99352	0.99000	
Carbazole	0.710	0.801	0.806	0.783	0.721	0.726	AVRG		0.75769108		5.742	15.000	
Di-n-butylphthalate	0.951	1.120	1.175	1.170	1.047	1.008	AVRG		1.07842886		8.455	15.000	
Butylbenzylphthalate	0.398	0.483	0.532	0.502	0.510	0.530	AVRG		0.49241492		10.096	15.000	

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date(s): 03/15/05 03/15/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1455 1835

LAB FILE ID: RF10: X7471 RF25: X7470 RF50: X7466
RF100: X7469 RF150: X7468 RF200: X7467

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dichlorobenzidine	0.238	0.263	0.232	0.215	0.207	0.202	AVRG		0.22621530		10.129	15.000
bis(2-Ethylhexyl)phthalat	0.553	0.698	0.754	0.713	0.712	0.727	AVRG		0.69302415		10.270	15.000
Di-n-octylphthalate	277910	1090500	2274700	4810300	7852000	1.e+007	LINR	0.14430876	0.41857713		0.99702	0.99000
Acetophenone	1.197	1.267	1.349	1.224	1.162	1.086	AVRG		1.21427333		7.395	15.000
2-Fluorophenol	0.901	0.908	1.038	0.908	0.843	0.739	AVRG		0.88956540		10.993	15.000
Phenol-D6	0.990	1.043	1.197	1.054	0.941	0.857	AVRG		1.01370088		11.376	15.000
Nitrobenzene-D5	0.348	0.357	0.394	0.370	0.351	0.334	AVRG		0.35898591		5.874	15.000
2-Fluorobiphenyl	1.296	1.309	1.287	1.178	1.030	0.957	AVRG		1.17621578		12.820	15.000
2,4,6-Tribromophenol	0.151	0.213	0.202	0.208	0.223	0.221	AVRG		0.20299016		13.167	15.000
Terphenyl-D14	0.668	0.784	0.815	0.763	0.783	0.797	AVRG		0.76823603		6.786	15.000

Average %RSD test result.

Calculate Average %RSD: 10.80202770
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: XD447 DFTPP Injection Date: 03/16/05

Instrument ID: GCMS-X DFTPP Injection Time: 1030

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.1
70	Less than 2.0% of mass 69	0.2 (0.3)1
127	40.0 - 60.0% of mass 198	41.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	21.7
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	13.2 (92.5)2
442	40.0 - 100.0% of mass 198	71.0
443	17.0 - 23.0% of mass 442	14.2 (20.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0316	X7477	03/16/05	1053
02	WG15045-BLANK	WG15045-1	X7483	03/16/05	1510
03	WG15045-LCS	WG15045-2	X7484	03/16/05	1552
04	WG15045-LCSD	WG15045-3	X7485	03/16/05	1634
05	PEN43RB0306	WV0974-2	X7487	03/16/05	1800
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date: 03/16/05 Time: 1053

Lab File ID: X7477 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzaldehyde	4.2e-002	4.28e-002	4.28e-002	0.01	1.90	100.00	AVRG
Phenol	1.0830000	1.1978000	1.1978000	0.01	10.60	20.00	AVRG
Bis(2-Chloroethyl)ether	39.851000	50.000000	0.9450700	0.01	-20.30	100.00	2RDR
2-Chlorophenol	0.9620000	1.0524000	1.0524000	0.01	9.40	100.00	AVRG
2,2'-Oxybis(1-Chloropropane)	2.8770000	2.5365000	2.5365000	0.01	-11.84	100.00	AVRG
2-Methylphenol	0.7370000	0.7699600	0.7699600	0.01	4.47	100.00	AVRG
Hexachloroethane	0.4780000	0.4755300	0.4755300	0.01	-0.52	100.00	AVRG
N-Nitroso-di-n-propylamine	0.8000000	0.7856300	0.7856300	0.05	-1.80	100.00	AVRG
4-Methylphenol	0.7850000	0.7278800	0.7278800	0.01	-7.28	100.00	AVRG
Nitrobenzene	0.3350000	0.3317700	0.3317700	0.01	-0.96	100.00	AVRG
Isophorone	0.5740000	0.5795200	0.5795200	0.01	0.96	100.00	AVRG
2-Nitrophenol	0.1660000	0.1846300	0.1846300	0.01	11.22	20.00	AVRG
2,4-Dimethylphenol	0.2540000	0.2801500	0.2801500	0.01	10.30	100.00	AVRG
Caprolactam	6.3e-002	7.49e-002	7.49e-002	0.01	18.89	100.00	AVRG
Bis(2-Chloroethoxy)methane	0.3550000	0.3650400	0.3650400	0.01	2.83	100.00	AVRG
2,4-Dichlorophenol	0.2310000	0.2728200	0.2728200	0.01	18.10	20.00	AVRG
1,1'-Biphenyl	42.731000	50.000000	1.1193000	0.01	-14.54	100.00	2RDR
4-Chloroaniline	0.3090000	0.3433000	0.3433000	0.01	11.10	100.00	AVRG
Hexachlorobutadiene	0.1860000	0.2056400	0.2056400	0.01	10.56	20.00	AVRG
4-Chloro-3-Methylphenol	0.2030000	0.2205400	0.2205400	0.01	8.64	20.00	AVRG
Hexachlorocyclopentadiene	50.382000	50.000000	0.2963400	0.05	-0.76	100.00	LINR
2,4,6-Trichlorophenol	0.3200000	0.3431800	0.3431800	0.01	7.24	20.00	AVRG
2,4,5-Trichlorophenol	0.3230000	0.3381200	0.3381200	0.01	4.68	100.00	AVRG
2-Chloronaphthalene	0.8970000	0.9566700	0.9566700	0.01	6.65	100.00	AVRG
2-Nitroaniline	0.3410000	0.3057500	0.3057500	0.01	-10.34	100.00	AVRG
Dimethyl Phthalate	1.0360000	1.1042000	1.1042000	0.01	6.58	100.00	AVRG
2,6-Dinitrotoluene	0.2540000	0.2581300	0.2581300	0.01	1.63	100.00	AVRG
3-Nitroaniline	0.2260000	0.2426000	0.2426000	0.01	7.34	100.00	AVRG
2,4-Dinitrophenol	49.750000	50.000000	0.1091100	0.05	-0.50	100.00	2RDR

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date: 03/16/05 Time: 1053

Lab File ID: X7477 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dibenzofuran	1.2130000	1.2694000	1.2694000	0.01	4.65	100.00	AVRG
4-Nitrophenol	38.446000	50.000000	6.8e-002	0.05	-23.11	100.00	LINR
2,4-Dinitrotoluene	0.3120000	0.3420100	0.3420100	0.01	9.62	100.00	AVRG
Atrazine	0.1630000	0.1694300	0.1694300	0.01	3.94	100.00	AVRG
Diethylphthalate	0.9630000	1.0541000	1.0541000	0.01	9.46	100.00	AVRG
4-Chlorophenyl-phenylether	0.4450000	0.5135400	0.5135400	0.01	15.40	100.00	AVRG
4-Nitroaniline	51.205000	50.000000	0.2413100	0.01	2.41	100.00	LINR
4,6-Dinitro-2-Methylphenol	48.556000	50.000000	0.1077200	0.01	-2.89	100.00	LINR
N-Nitrosodiphenylamine	42.995000	50.000000	0.5158900	0.01	-14.01	20.00	2RDR
4-Bromophenyl-phenylether	0.1980000	0.2164000	0.2164000	0.01	9.29	100.00	AVRG
Hexachlorobenzene	0.2460000	0.2644200	0.2644200	0.01	7.49	100.00	AVRG
Pentachlorophenol	42.674000	50.000000	8.86e-002	0.01	-14.65	20.00	LINR
Carbazole	0.7580000	0.7852000	0.7852000	0.01	3.59	100.00	AVRG
Di-n-butylphthalate	1.0780000	1.0893000	1.0893000	0.01	1.05	100.00	AVRG
Butylbenzylphthalate	0.4920000	0.4731700	0.4731700	0.01	-3.83	100.00	AVRG
3,3'-Dichlorobenzidine	0.2260000	0.2423700	0.2423700	0.01	7.24	100.00	AVRG
bis(2-Ethylhexyl)phthalate	0.6930000	0.6812500	0.6812500	0.01	-1.70	100.00	AVRG
Di-n-octylphthalate	40.576000	50.000000	1.6629000	0.01	-18.85	20.00	LINR
Acetophenone	1.2140000	1.2713000	1.2713000	0.01	4.72	100.00	AVRG
2-Fluorophenol	0.8900000	0.8909100	0.8909100	0.01	0.10	100.00	AVRG
Phenol-D6	1.0140000	1.0496000	1.0496000	0.01	3.51	100.00	AVRG
Nitrobenzene-D5	0.3590000	0.3426100	0.3426100	0.01	-4.56	100.00	AVRG
2-Fluorobiphenyl	1.1760000	1.2332000	1.2332000	0.01	4.86	100.00	AVRG
2,4,6-Tribromophenol	0.2030000	0.2192800	0.2192800	0.01	8.02	100.00	AVRG
Terphenyl-D14	0.7680000	0.7576600	0.7576600	0.01	-1.35	100.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: XD449 DFTPP Injection Date: 03/18/05

Instrument ID: GCMS-X DFTPP Injection Time: 0855

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	49.7
68	Less than 2.0% of mass 69	0.3 (0.6)1
69	Less than 100.0% of mass 198	55.0
70	Less than 2.0% of mass 69	0.2 (0.3)1
127	40.0 - 60.0% of mass 198	40.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 30.0% of mass 198	21.4
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	11.4 (90.2)2
442	40.0 - 100.0% of mass 198	66.9
443	17.0 - 23.0% of mass 442	12.7 (19.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0318	X7512	03/18/05	1002
02	WG15035-BLANK	WG15035-1RA	X7523	03/18/05	1751
03					
04					
05					
06					
07					
08					
09					
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11					
12					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date: 03/18/05 Time: 1002

Lab File ID: X7512 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzaldehyde	4.2e-002	7.66e-002	7.66e-002	0.01	-82.38	100.00	AVRG
Phenol	1.0830000	1.1821000	1.1821000	0.01	9.15	20.00	AVRG
Bis(2-Chloroethyl)ether	39.093000	50.000000	0.9334100	0.01	-21.81	100.00	2RDR
2-Chlorophenol	0.9620000	1.0166000	1.0166000	0.01	5.68	100.00	AVRG
2,2'-Oxybis(1-Chloropropane)	2.8770000	2.7531000	2.7531000	0.01	-4.31	100.00	AVRG
2-Methylphenol	0.7370000	0.7526700	0.7526700	0.01	2.13	100.00	AVRG
Hexachloroethane	0.4780000	0.4738900	0.4738900	0.01	-0.86	100.00	AVRG
N-Nitroso-di-n-propylamine	0.8000000	0.8008000	0.8008000	0.05	0.10	100.00	AVRG
4-Methylphenol	0.7850000	0.7171900	0.7171900	0.01	-8.64	100.00	AVRG
Nitrobenzene	0.3350000	0.3476800	0.3476800	0.01	3.78	100.00	AVRG
Isophorone	0.5740000	0.5845200	0.5845200	0.01	1.83	100.00	AVRG
2-Nitrophenol	0.1660000	0.1757200	0.1757200	0.01	5.86	20.00	AVRG
2,4-Dimethylphenol	0.2540000	0.2716500	0.2716500	0.01	6.95	100.00	AVRG
Caprolactam	6.3e-002	6.79e-002	6.79e-002	0.01	7.78	100.00	AVRG
Bis(2-Chloroethoxy)methane	0.3550000	0.3723200	0.3723200	0.01	4.88	100.00	AVRG
2,4-Dichlorophenol	0.2310000	0.2238300	0.2238300	0.01	-3.10	20.00	AVRG
1,1'-Biphenyl	43.459000	50.000000	1.1334000	0.01	-13.08	100.00	2RDR
4-Chloroaniline	0.3090000	0.3113500	0.3113500	0.01	0.76	100.00	AVRG
Hexachlorobutadiene	0.1860000	0.1931100	0.1931100	0.01	3.82	20.00	AVRG
4-Chloro-3-Methylphenol	0.2030000	0.1882700	0.1882700	0.01	-7.26	20.00	AVRG
Hexachlorocyclopentadiene	41.610000	50.000000	0.2398500	0.05	-16.78	100.00	LINR
2,4,6-Trichlorophenol	0.3200000	0.3217900	0.3217900	0.01	0.56	20.00	AVRG
2,4,5-Trichlorophenol	0.3230000	0.3174100	0.3174100	0.01	-1.73	100.00	AVRG
2-Chloronaphthalene	0.8970000	0.9354800	0.9354800	0.01	4.29	100.00	AVRG
2-Nitroaniline	0.3410000	0.3330300	0.3330300	0.01	-2.34	100.00	AVRG
Dimethyl Phthalate	1.0360000	1.0757000	1.0757000	0.01	3.83	100.00	AVRG
2,6-Dinitrotoluene	0.2540000	0.2523900	0.2523900	0.01	-0.63	100.00	AVRG
3-Nitroaniline	0.2260000	0.2230100	0.2230100	0.01	-1.32	100.00	AVRG
2,4-Dinitrophenol	35.820000	50.000000	7.26e-002	0.05	-28.36	100.00	2RDR

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date: 03/18/05 Time: 1002

Lab File ID: X7512 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	1.2130000	1.2456000	1.2456000	0.01	2.69	100.00	AVRG	
4-Nitrophenol	43.337000	50.000000	7.88e-002	0.05	-13.33	100.00	LINR	
2,4-Dinitrotoluene	0.3120000	0.3049400	0.3049400	0.01	-2.26	100.00	AVRG	
Atrazine	0.1630000	0.1632800	0.1632800	0.01	0.17	100.00	AVRG	
Diethylphthalate	0.9630000	1.0306000	1.0306000	0.01	7.02	100.00	AVRG	
4-Chlorophenyl-phenylether	0.4450000	0.4704400	0.4704400	0.01	5.72	100.00	AVRG	
4-Nitroaniline	40.006000	50.000000	0.1834500	0.01	-19.99	100.00	LINR	
4,6-Dinitro-2-Methylphenol	42.378000	50.000000	9.3e-002	0.01	-15.24	100.00	LINR	
N-Nitrosodiphenylamine	43.721000	50.000000	0.5227500	0.01	-12.56	20.00	2RDR	
4-Bromophenyl-phenylether	0.1980000	0.2004600	0.2004600	0.01	1.24	100.00	AVRG	
Hexachlorobenzene	0.2460000	0.2398900	0.2398900	0.01	-2.48	100.00	AVRG	
Pentachlorophenol	38.843000	50.000000	7.85e-002	0.01	-22.31	20.00	LINR	<-
Carbazole	0.7580000	0.7539800	0.7539800	0.01	-0.53	100.00	AVRG	
Di-n-butylphthalate	1.0780000	1.1075000	1.1075000	0.01	2.74	100.00	AVRG	
Butylbenzylphthalate	0.4920000	0.5356800	0.5356800	0.01	8.88	100.00	AVRG	
3,3'-Dichlorobenzidine	0.2260000	0.2488300	0.2488300	0.01	10.10	100.00	AVRG	
bis(2-Ethylhexyl)phthalate	0.6930000	0.7722400	0.7722400	0.01	11.43	100.00	AVRG	
Di-n-octylphthalate	58.008000	50.000000	2.4959000	0.01	16.02	20.00	LINR	
Acetophenone	1.2140000	1.2368000	1.2368000	0.01	1.88	100.00	AVRG	
2-Fluorophenol	0.8900000	0.9011200	0.9011200	0.01	1.25	100.00	AVRG	
Phenol-D6	1.0140000	1.0240000	1.0240000	0.01	0.99	100.00	AVRG	
Nitrobenzene-D5	0.3590000	0.3541600	0.3541600	0.01	-1.35	100.00	AVRG	
2-Fluorobiphenyl	1.1760000	1.2241000	1.2241000	0.01	4.09	100.00	AVRG	
2,4,6-Tribromophenol	0.2030000	0.1734500	0.1734500	0.01	-14.56	100.00	AVRG	
Terphenyl-D14	0.7680000	0.8094000	0.8094000	0.01	5.39	100.00	AVRG	

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: XD455 DFTPP Injection Date: 03/28/05

Instrument ID: GCMS-X DFTPP Injection Time: 1101

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	62.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	45.4
197	Less than 1.0% of mass 198	0.9
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.5
275	10.0 - 30.0% of mass 198	21.5
365	1.0 - 100.0% of mass 198	2.6
441	0.0 - 100.0% of mass 443	12.7 (92.6)2
442	40.0 - 100.0% of mass 198	62.7
443	17.0 - 23.0% of mass 442	13.7 (21.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0328	X7606	03/28/05	1206
02		SSTD200X0328	X7607	03/28/05	1258
03		SSTD150X0328	X7608	03/28/05	1341
04		SSTD100X0328	X7609	03/28/05	1423
05		SSTD025X0328	X7610	03/28/05	1505
06		SSTD010X0328	X7611	03/28/05	1548
07	WG15035-LCS	WG15035-2RA	X7612	03/28/05	1631
08	WG15039-BLANK	WG15039-1	X7613	03/28/05	1713
09	WG15039-LCS	WG15039-2	X7614	03/28/05	1757
10	PEN43SB2302	WV0952-4RA	X7617	03/28/05	2005
11	PEN43SB2401	WV0974-21	X7620	03/28/05	2213
12	PEN43SB2402	WV0974-22	X7621	03/28/05	2255
13					
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FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date(s): 03/28/05 03/28/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1206 1548

LAB FILE ID: RF10: X7611 RF25: X7610 RF50: X7606
RF100: X7609 RF150: X7608 RF200: X7607

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.089	0.108	0.053	0.042	0.024	0.011	AVRG		5.464e-002		68.593	15.000	<
Phenol	1.168	1.203	1.116	1.066	0.876	0.841	AVRG		1.04495955		14.549	15.000	
Bis(2-Chloroethyl)ether	0.983	0.984	0.913	0.837	0.738	0.689	AVRG		0.85722886		14.554	15.000	
2-Chlorophenol	0.968	1.019	0.929	0.898	0.750	0.758	AVRG		0.88715331		12.494	15.000	
2,2'-Oxybis(1-Chloropropa	2.908	3.181	2.907	2.741	2.579	2.493	AVRG		2.80145951		8.953	15.000	
2-Methylphenol	0.669	0.770	0.747	0.712	0.574	0.590	AVRG		0.67687764		12.018	15.000	
Hexachloroethane	0.418	0.500	0.447	0.455	0.432	0.397	AVRG		0.44141153		8.040	15.000	
N-Nitroso-di-n-propylamin	0.906	0.893	0.854	0.797	0.682	0.689	AVRG		0.80353239		12.307	15.000	
4-Methylphenol	0.652	0.771	0.762	0.774	0.603	0.637	AVRG		0.69998049		11.093	15.000	
Nitrobenzene	0.293	0.348	0.323	0.330	0.342	0.304	AVRG		0.32358541		6.678	15.000	
Isophorone	0.515	0.547	0.529	0.523	0.487	0.485	AVRG		0.51427011		4.733	15.000	
2-Nitrophenol	0.128	0.155	0.144	0.156	0.144	0.152	AVRG		0.14641014		7.075	15.000	
2,4-Dimethylphenol	0.226	0.254	0.245	0.259	0.236	0.231	AVRG		0.24176747		5.393	15.000	
Caprolactam	0.065	0.058	0.065	0.066	0.055	0.065	AVRG		6.242e-002		7.834	15.000	
Bis(2-Chloroethoxy)methan	0.312	0.345	0.335	0.324	0.330	0.314	AVRG		0.32682795		3.861	15.000	
2,4-Dichlorophenol	0.202	0.205	0.207	0.215	0.184	0.203	AVRG		0.20279148		4.988	15.000	
1,1'-Biphenyl	1.118	1.172	1.070	1.101	1.130	0.978	AVRG		1.09469350		6.066	15.000	
4-Chloroaniline	0.219	0.263	0.248	0.277	0.240	0.266	AVRG		0.25236630		8.338	15.000	
Hexachlorobutadiene	0.134	0.164	0.150	0.153	0.140	0.155	AVRG		0.14927939		7.194	15.000	
4-Chloro-3-Methylphenol	0.211	0.194	0.207	0.209	0.174	0.188	AVRG		0.19713738		7.376	15.000	
Hexachlorocyclopentadiene	28126	120690	205160	531910	610580	1206000	LINR	0.21919406	3.39311435		0.99364	0.99000	
2,4,6-Trichlorophenol	0.259	0.295	0.279	0.300	0.273	0.282	AVRG		0.28136317		5.229	15.000	
2,4,5-Trichlorophenol	0.257	0.291	0.286	0.330	0.292	0.305	AVRG		0.29359350		8.185	15.000	
2-Chloronaphthalene	0.816	0.947	0.860	0.864	0.873	0.769	AVRG		0.85515924		6.976	15.000	
2-Nitroaniline	0.324	0.340	0.356	0.377	0.367	0.345	AVRG		0.35160744		5.466	15.000	
Dimethyl Phthalate	0.925	0.866	0.939	0.962	0.888	0.874	AVRG		0.90891883		4.246	15.000	
2,6-Dinitrotoluene	0.223	0.210	0.209	0.241	0.213	0.229	AVRG		0.22096605		5.667	15.000	
3-Nitroaniline	0.203	0.189	0.192	0.234	0.226	0.217	AVRG		0.21030157		8.707	15.000	
2,4-Dinitrophenol	0.034	0.042	0.080	0.112	0.093	0.122	AVRG		8.072e-002		44.485	15.000	<
Dibenzofuran	1.174	1.168	1.129	1.218	1.100	1.043	AVRG		1.13853272		5.423	15.000	
4-Nitrophenol	0.107	0.106	0.128	0.138	0.080	0.134	AVRG		0.11559912		19.064	15.000	<
2,4-Dinitrotoluene	0.211	0.220	0.271	0.309	0.277	0.295	AVRG		0.26374573		15.085	15.000	<
Atrazine	0.120	0.126	0.133	0.147	0.134	0.140	AVRG		0.13341129		7.141	15.000	
Diethylphthalate	0.904	0.829	0.933	0.950	0.862	0.815	AVRG		0.88214725		6.293	15.000	
4-Chlorophenyl-phenylethe	0.406	0.446	0.417	0.425	0.390	0.387	AVRG		0.41179763		5.381	15.000	
4-Nitroaniline	38495	86382	179680	487630	456100	903460	LINR	0.12977514	4.52166674		0.99552	0.99000	
4,6-Dinitro-2-Methylpheno	21757	54193	110600	350360	297150	716030	2ORDR	9.745e-002	11.2786000	-4.4515473	0.99355	0.99000	
N-Nitrosodiphenylamine	0.476	0.542	0.498	0.487	0.474	0.437	AVRG		0.48578894		7.140	15.000	
4-Bromophenyl-phenylether	0.160	0.198	0.165	0.181	0.168	0.171	AVRG		0.17380392		7.911	15.000	
Hexachlorobenzene	0.183	0.238	0.194	0.210	0.197	0.211	AVRG		0.20570958		9.279	15.000	
Pentachlorophenol	10381	37559	108340	275340	243080	669420	2ORDR	8.135e-002	14.7372820	-10.088195	0.99457	0.99000	
Carbazole	0.582	0.645	0.624	0.683	0.676	0.655	AVRG		0.64424233		5.788	15.000	
Di-n-butylphthalate	0.813	0.888	0.890	0.955	0.973	0.945	AVRG		0.91086905		6.509	15.000	
Butylbenzylphthalate	0.503	0.517	0.470	0.537	0.492	0.476	AVRG		0.49927535		5.049	15.000	

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date(s): 03/28/05 03/28/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1206 1548

LAB FILE ID: RF10: X7611 RF25: X7610 RF50: X7606
RF100: X7609 RF150: X7608 RF200: X7607

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dichlorobenzidine	0.256	0.320	0.252	0.232	0.233	0.213	AVRG		0.25111025		14.830	15.000
bis(2-Ethylhexyl)phthalat	0.589	0.706	0.670	0.702	0.718	0.654	AVRG		0.67338550		7.086	15.000
Di-n-octylphthalate	1.420	1.558	1.689	1.849	1.868	1.688	AVRG		1.67854665		10.191	15.000
Acetophenone	1.208	1.296	1.224	1.179	0.999	1.010	AVRG		1.15278376		10.504	15.000
2-Fluorophenol	0.724	0.866	0.768	0.790	0.688	0.716	AVRG		0.75869196		8.460	15.000
Phenol-D6	1.053	1.199	1.037	1.039	0.858	0.830	AVRG		1.00271318		13.694	15.000
Nitrobenzene-D5	0.318	0.359	0.340	0.323	0.348	0.318	AVRG		0.33454842		5.154	15.000
2-Fluorobiphenyl	1.091	1.162	1.052	1.070	1.072	0.954	AVRG		1.06695821		6.313	15.000
2,4,6-Tribromophenol	0.132	0.133	0.136	0.172	0.136	0.178	AVRG		0.14801744		14.414	15.000
Terphenyl-D14	0.880	0.814	0.764	0.838	0.718	0.781	AVRG		0.79930559		7.166	15.000

Average %RSD test result.

Calculate Average %RSD: 9.224775314
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: XD456 DFTPP Injection Date: 03/29/05

Instrument ID: GCMS-X DFTPP Injection Time: 1327

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	56.1	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Less than 100.0% of mass 198	63.4	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	40.0 - 60.0% of mass 198	41.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0 - 30.0% of mass 198	21.4	
365	1.0 - 100.0% of mass 198	2.7	
441	0.0 - 100.0% of mass 443	12.0	(86.8)2
442	40.0 - 100.0% of mass 198	69.6	
443	17.0 - 23.0% of mass 442	13.8	(19.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0329	X7623	03/29/05	1345
02	PEN43SS2101MS	WG15039-3	X7626	03/29/05	1557
03	PEN43SS2101MSD	WG15039-4	X7627	03/29/05	1639
04	PEN43SS2201	WV0974-28	X7629	03/29/05	1805
05	PEN43SS2301	WV0974-29	X7630	03/29/05	1848
06	PEN43SS2901	WV0974-35	X7631	03/29/05	1931
07	PEN43SS3001	WV0974-36	X7632	03/29/05	2014
08	PEN43SS2101	WV0974-27	X7633	03/29/05	2057
09	PEN43SS3601	WV0974-31	X7635	03/29/05	2223
10	PEN43SS2701	WV0974-33	X7636	03/29/05	2306
11	PEN43SS3201	WV0974-38	X7637	03/29/05	2348
12	PEN43SS3501	WV0974-30	X7638	03/30/05	0031
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date: 03/29/05 Time: 1345

Lab File ID: X7623 Init. Calib. Date(s): 03/28/05 03/28/05

Init. Calib. Times: 1206 1548

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzaldehyde	5.4e-002	6.e-002	6.e-002	0.01	11.11	100.00	AVRG
Phenol	1.0450000	1.0365000	1.0365000	0.01	-0.81	20.00	AVRG
Bis(2-Chloroethyl)ether	0.8570000	0.8041900	0.8041900	0.01	-6.16	100.00	AVRG
2-Chlorophenol	0.8870000	0.8680000	0.8680000	0.01	-2.14	100.00	AVRG
2,2'-Oxybis(1-Chloropropane)	2.8020000	2.3796000	2.3796000	0.01	-15.08	100.00	AVRG
2-Methylphenol	0.6770000	0.6863000	0.6863000	0.01	1.37	100.00	AVRG
Hexachloroethane	0.4420000	0.4198300	0.4198300	0.01	-5.02	100.00	AVRG
N-Nitroso-di-n-propylamine	0.8040000	0.6982800	0.6982800	0.05	-13.15	100.00	AVRG
4-Methylphenol	0.7000000	0.6751900	0.6751900	0.01	-3.54	100.00	AVRG
Nitrobenzene	0.3230000	0.3069700	0.3069700	0.01	-4.96	100.00	AVRG
Isophorone	0.5140000	0.4725100	0.4725100	0.01	-8.07	100.00	AVRG
2-Nitrophenol	0.1460000	0.1405900	0.1405900	0.01	-3.70	20.00	AVRG
2,4-Dimethylphenol	0.2420000	0.2236300	0.2236300	0.01	-7.59	100.00	AVRG
Caprolactam	6.2e-002	5.17e-002	5.17e-002	0.01	-16.61	100.00	AVRG
Bis(2-Chloroethoxy)methane	0.3270000	0.3005600	0.3005600	0.01	-8.08	100.00	AVRG
2,4-Dichlorophenol	0.2030000	0.2029900	0.2029900	0.01	-0.00	20.00	AVRG
1,1'-Biphenyl	1.0950000	1.0086000	1.0086000	0.01	-7.89	100.00	AVRG
4-Chloroaniline	0.2520000	0.2563300	0.2563300	0.01	1.72	100.00	AVRG
Hexachlorobutadiene	0.1490000	0.1475300	0.1475300	0.01	-0.99	20.00	AVRG
4-Chloro-3-Methylphenol	0.1970000	0.1788300	0.1788300	0.01	-9.22	20.00	AVRG
Hexachlorocyclopentadiene	48.596000	50.000000	0.2347600	0.05	-2.81	100.00	LINR
2,4,6-Trichlorophenol	0.2810000	0.2811600	0.2811600	0.01	0.06	20.00	AVRG
2,4,5-Trichlorophenol	0.2940000	0.2913400	0.2913400	0.01	-0.90	100.00	AVRG
2-Chloronaphthalene	0.8550000	0.8347300	0.8347300	0.01	-2.37	100.00	AVRG
2-Nitroaniline	0.3520000	0.2946600	0.2946600	0.01	-16.29	100.00	AVRG
Dimethyl Phthalate	0.9090000	0.8202100	0.8202100	0.01	-9.77	100.00	AVRG
2,6-Dinitrotoluene	0.2210000	0.2016000	0.2016000	0.01	-8.78	100.00	AVRG
3-Nitroaniline	0.2100000	0.1840100	0.1840100	0.01	-12.38	100.00	AVRG
2,4-Dinitrophenol	8.e-002	7.13e-002	7.13e-002	0.05	-10.88	100.00	AVRG

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date: 03/29/05 Time: 1345

Lab File ID: X7623 Init. Calib. Date(s): 03/28/05 03/28/05

Init. Calib. Times: 1206 1548

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dibenzofuran	1.1390000	1.0268000	1.0268000	0.01	-9.85	100.00	AVRG
4-Nitrophenol	0.1160000	0.1012200	0.1012200	0.05	-12.74	100.00	AVRG
2,4-Dinitrotoluene	0.2640000	0.2213800	0.2213800	0.01	-16.14	100.00	AVRG
Atrazine	0.1330000	0.1194300	0.1194300	0.01	-10.20	100.00	AVRG
Diethylphthalate	0.8820000	0.7546200	0.7546200	0.01	-14.44	100.00	AVRG
4-Chlorophenyl-phenylether	0.4120000	0.3904100	0.3904100	0.01	-5.24	100.00	AVRG
4-Nitroaniline	37.145000	50.000000	0.1413400	0.01	-25.71	100.00	LINR
4,6-Dinitro-2-Methylphenol	50.220000	50.000000	8.58e-002	0.01	0.44	100.00	2RDR
N-Nitrosodiphenylamine	0.4860000	0.4814800	0.4814800	0.01	-0.93	20.00	AVRG
4-Bromophenyl-phenylether	0.1740000	0.1774500	0.1774500	0.01	1.98	100.00	AVRG
Hexachlorobenzene	0.2060000	0.2072800	0.2072800	0.01	0.62	100.00	AVRG
Pentachlorophenol	56.654000	50.000000	7.76e-002	0.01	13.31	20.00	2RDR
Carbazole	0.6440000	0.5905700	0.5905700	0.01	-8.30	100.00	AVRG
Di-n-butylphthalate	0.9110000	0.7879600	0.7879600	0.01	-13.51	100.00	AVRG
Butylbenzylphthalate	0.4990000	0.4422500	0.4422500	0.01	-11.37	100.00	AVRG
3,3'-Dichlorobenzidine	0.2510000	0.2372100	0.2372100	0.01	-5.49	100.00	AVRG
bis(2-Ethylhexyl)phthalate	0.6730000	0.6250000	0.6250000	0.01	-7.13	100.00	AVRG
Di-n-octylphthalate	1.6790000	1.4257000	1.4257000	0.01	-15.09	20.00	AVRG
Acetophenone	1.1530000	1.0973000	1.0973000	0.01	-4.83	100.00	AVRG
2-Fluorophenol	0.7590000	0.7573900	0.7573900	0.01	-0.21	100.00	AVRG
Phenol-D6	1.0030000	0.9954900	0.9954900	0.01	-0.75	100.00	AVRG
Nitrobenzene-D5	0.3340000	0.3002200	0.3002200	0.01	-10.11	100.00	AVRG
2-Fluorobiphenyl	1.0670000	1.0388000	1.0388000	0.01	-2.64	100.00	AVRG
2,4,6-Tribromophenol	0.1480000	0.1429900	0.1429900	0.01	-3.38	100.00	AVRG
Terphenyl-D14	0.7990000	0.7711100	0.7711100	0.01	-3.49	100.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: XD457 DFTPP Injection Date: 03/30/05

Instrument ID: GCMS-X DFTPP Injection Time: 1115

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.9
68	Less than 2.0% of mass 69	0.3 (0.5)1
69	Less than 100.0% of mass 198	61.9
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	40.0 - 60.0% of mass 198	42.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	13.4 (83.4)2
442	40.0 - 100.0% of mass 198	72.5
443	17.0 - 23.0% of mass 442	16.1 (22.2)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0330	X7642	03/30/05	1134
02	PEN43SS1901	WV0974-25	X7645	03/30/05	1347
03	PEN43SS1801D	WV0974-24	X7646	03/30/05	1429
04	PEN43SS2801	WV0974-34	X7647	03/30/05	1512
05	PEN43SS1801	WV0974-23	X7651	03/30/05	1801
06	PEN43SS2001	WV0974-26	X7652	03/30/05	1844
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date: 03/30/05 Time: 1134

Lab File ID: X7642 Init. Calib. Date(s): 03/28/05 03/28/05

Init. Calib. Times: 1206 1548

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Benzaldehyde	5.4e-002	6.91e-002	6.91e-002	0.01	27.98	100.00	AVRG	
Phenol	1.0450000	1.0324000	1.0324000	0.01	-1.20	20.00	AVRG	
Bis(2-Chloroethyl)ether	0.8570000	0.8484400	0.8484400	0.01	-1.00	100.00	AVRG	
2-Chlorophenol	0.8870000	0.8267300	0.8267300	0.01	-6.79	100.00	AVRG	
2,2'-Oxybis(1-Chloropropane)	2.8020000	2.6882000	2.6882000	0.01	-4.06	100.00	AVRG	
2-Methylphenol	0.6770000	0.6386000	0.6386000	0.01	-5.67	100.00	AVRG	
Hexachloroethane	0.4420000	0.4313000	0.4313000	0.01	-2.42	100.00	AVRG	
N-Nitroso-di-n-propylamine	0.8040000	0.6891600	0.6891600	0.05	-14.28	100.00	AVRG	
4-Methylphenol	0.7000000	0.6323600	0.6323600	0.01	-9.66	100.00	AVRG	
Nitrobenzene	0.3230000	0.3266300	0.3266300	0.01	1.12	100.00	AVRG	
Isophorone	0.5140000	0.4783900	0.4783900	0.01	-6.93	100.00	AVRG	
2-Nitrophenol	0.1460000	0.1364200	0.1364200	0.01	-6.56	20.00	AVRG	
2,4-Dimethylphenol	0.2420000	0.2201500	0.2201500	0.01	-9.03	100.00	AVRG	
Caprolactam	6.2e-002	4.7e-002	4.7e-002	0.01	-24.19	100.00	AVRG	
Bis(2-Chloroethoxy)methane	0.3270000	0.3053900	0.3053900	0.01	-6.61	100.00	AVRG	
2,4-Dichlorophenol	0.2030000	0.1747900	0.1747900	0.01	-13.90	20.00	AVRG	
1,1'-Biphenyl	1.0950000	1.0393000	1.0393000	0.01	-5.09	100.00	AVRG	
4-Chloroaniline	0.2520000	0.2514200	0.2514200	0.01	-0.23	100.00	AVRG	
Hexachlorobutadiene	0.1490000	0.1323400	0.1323400	0.01	-11.18	20.00	AVRG	
4-Chloro-3-Methylphenol	0.1970000	0.1675000	0.1675000	0.01	-14.98	20.00	AVRG	
Hexachlorocyclopentadiene	35.051000	50.000000	0.1549200	0.05	-29.90	100.00	LINR	
2,4,6-Trichlorophenol	0.2810000	0.2425200	0.2425200	0.01	-13.69	20.00	AVRG	
2,4,5-Trichlorophenol	0.2940000	0.2362400	0.2362400	0.01	-19.65	100.00	AVRG	
2-Chloronaphthalene	0.8550000	0.7834200	0.7834200	0.01	-8.37	100.00	AVRG	
2-Nitroaniline	0.3520000	0.3183200	0.3183200	0.01	-9.57	100.00	AVRG	
Dimethyl Phthalate	0.9090000	0.8282000	0.8282000	0.01	-8.89	100.00	AVRG	
2,6-Dinitrotoluene	0.2210000	0.1965200	0.1965200	0.01	-11.08	100.00	AVRG	
3-Nitroaniline	0.2100000	0.1942100	0.1942100	0.01	-7.52	100.00	AVRG	
2,4-Dinitrophenol	8.e-002	4.36e-002	4.36e-002	0.05	-45.50	100.00	AVRG	<-

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-X Calibration Date: 03/30/05 Time: 1134

Lab File ID: X7642 Init. Calib. Date(s): 03/28/05 03/28/05

Init. Calib. Times: 1206 1548

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dibenzofuran	1.1390000	1.0429000	1.0429000	0.01	-8.44	100.00	AVRG
4-Nitrophenol	0.1160000	0.1073700	0.1073700	0.05	-7.44	100.00	AVRG
2,4-Dinitrotoluene	0.2640000	0.2311300	0.2311300	0.01	-12.45	100.00	AVRG
Atrazine	0.1330000	0.1330500	0.1330500	0.01	0.04	100.00	AVRG
Diethylphthalate	0.8820000	0.8082800	0.8082800	0.01	-8.36	100.00	AVRG
4-Chlorophenyl-phenylether	0.4120000	0.3939500	0.3939500	0.01	-4.38	100.00	AVRG
4-Nitroaniline	42.916000	50.000000	0.1668600	0.01	-14.17	100.00	LINR
4,6-Dinitro-2-Methylphenol	41.216000	50.000000	6.85e-002	0.01	-17.57	100.00	2RDR
N-Nitrosodiphenylamine	0.4860000	0.4573100	0.4573100	0.01	-5.90	20.00	AVRG
4-Bromophenyl-phenylether	0.1740000	0.1592300	0.1592300	0.01	-8.49	100.00	AVRG
Hexachlorobenzene	0.2060000	0.1921700	0.1921700	0.01	-6.71	100.00	AVRG
Pentachlorophenol	43.513000	50.000000	5.75e-002	0.01	-12.97	20.00	2RDR
Carbazole	0.6440000	0.6412300	0.6412300	0.01	-0.43	100.00	AVRG
Di-n-butylphthalate	0.9110000	0.8806200	0.8806200	0.01	-3.33	100.00	AVRG
Butylbenzylphthalate	0.4990000	0.4603300	0.4603300	0.01	-7.75	100.00	AVRG
3,3'-Dichlorobenzidine	0.2510000	0.2557400	0.2557400	0.01	1.89	100.00	AVRG
bis(2-Ethylhexyl)phthalate	0.6730000	0.6223500	0.6223500	0.01	-7.53	100.00	AVRG
Di-n-octylphthalate	1.6790000	1.5052000	1.5052000	0.01	-10.35	20.00	AVRG
Acetophenone	1.1530000	1.0090000	1.0090000	0.01	-12.49	100.00	AVRG
2-Fluorophenol	0.7590000	0.7298700	0.7298700	0.01	-3.84	100.00	AVRG
Phenol-D6	1.0030000	0.8565200	0.8565200	0.01	-14.60	100.00	AVRG
Nitrobenzene-D5	0.3340000	0.3127400	0.3127400	0.01	-6.36	100.00	AVRG
2-Fluorobiphenyl	1.0670000	1.0442000	1.0442000	0.01	-2.14	100.00	AVRG
2,4,6-Tribromophenol	0.1480000	0.1256600	0.1256600	0.01	-15.09	100.00	AVRG
Terphenyl-D14	0.7990000	0.6795100	0.6795100	0.01	-14.96	100.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: UD950 DFTPP Injection Date: 04/05/05

Instrument ID: GCMS-U DFTPP Injection Time: 1018

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	43.1
68	Less than 2.0% of mass 69	0.5 (1.0)1
69	Less than 100.0% of mass 198	51.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	58.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	22.4
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	15.2 (84.4)2
442	40.0 - 100.0% of mass 198	94.7
443	17.0 - 23.0% of mass 442	18.0 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U0405	U0607	04/05/05	1043
02		SSTD200U0405	U0608	04/05/05	1129
03		SSTD150U0405	U0609	04/05/05	1213
04		SSTD100U0405	U0610	04/05/05	1256
05		SSTD025U0405	U0611	04/05/05	1339
06		SSTD010U0405	U0612	04/05/05	1422
07	WG15659-BLANK	WG15659-1	U0613	04/05/05	1504
08	WG15659-LCS	WG15659-2	U0614	04/05/05	1546
09	PEN43SS2101	WV0974-27RE	U0616	04/05/05	1713
10	PEN43SS2201	WV0974-28RE	U0617	04/05/05	1756
11	PEN43SS2301	WV0974-29RE	U0618	04/05/05	1841
12	PEN43SS3601	WV0974-31RE	U0619	04/05/05	1924
13	PEN43SS2701	WV0974-33RE	U0620	04/05/05	2007
14	PEN43SS2901	WV0974-35RE	U0621	04/05/05	2051
15	PEN43SS3001	WV0974-36RE	U0622	04/05/05	2134
16					
17					
18					
19					
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FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-U Calibration Date(s): 04/05/05 04/05/05

Column: RTX-5SILMS ID: 0.25 (mm) Calibration Time(s): 1043 1422

LAB FILE ID: RF10: U0612 RF25: U0611 RF50: U0607
RF100: U0610 RF150: U0609 RF200: U0608

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.032	0.104	0.015	0.043	0.028	0.019	AVRG		4.038e-002		81.311	15.000	<
Phenol	1.194	1.152	1.098	0.886	0.760	0.612	AVRG		0.95048370		24.737	15.000	<
Bis(2-Chloroethyl)ether	0.973	0.815	0.772	0.634	0.578	0.387	AVRG		0.69328263		29.555	15.000	<
2-Chlorophenol	218840	524310	1025600	1683700	2264600	2724600	2ORDR	7.183e-002	0.55261421	0.44639448	0.99734	0.99000	
2,2'-Oxybis(1-Chloropropa	269460	635110	1205500	2061900	2877400	3544200	2ORDR	3.395e-002	0.65393377	0.20515653	0.99853	0.99000	
2-Methylphenol	199580	500170	1084800	1686900	2461600	3063600	2ORDR	3.339e-002	0.83973989	0.25008209	0.99692	0.99000	
Hexachloroethane	90709	220970	422640	751520	1043800	1273600	2ORDR	5.293e-002	1.77421188	1.59345739	0.99771	0.99000	
N-Nitroso-di-n-propylamin	0.655	0.634	0.627	0.562	0.561	0.486	AVRG		0.58762880		10.740	15.000	
4-Methylphenol	0.910	0.939	0.971	0.846	0.785	0.694	AVRG		0.85748513		12.167	15.000	
Nitrobenzene	223900	550340	1021600	1761300	2567500	3328800	2ORDR	1.744e-002	2.86143732	2.69377921	0.99990	0.99000	
Isophorone	0.494	0.483	0.477	0.460	0.450	0.421	AVRG		0.46420466		5.680	15.000	
2-Nitrophenol	0.134	0.142	0.147	0.133	0.116	0.101	AVRG		0.12883970		13.336	15.000	
2,4-Dimethylphenol	0.255	0.248	0.262	0.224	0.204	0.183	AVRG		0.22938485		13.741	15.000	
Caprolactam	0.083	0.091	0.085	0.083	0.085	0.082	AVRG		8.466e-002		3.929	15.000	
Bis(2-Chloroethoxy)methan	259240	617100	1158700	1974800	2772000	3547100	2ORDR	4.151e-002	2.09427119	2.93520697	0.99964	0.99000	
2,4-Dichlorophenol	0.193	0.198	0.210	0.189	0.165	0.144	AVRG		0.18312608		13.248	15.000	
1,1'-Biphenyl	455370	1028600	1731300	2678900	3446600	3956800	2ORDR	9.937e-002	-3.93e-002	1.36712102	0.99605	0.99000	
4-Chloroaniline	242520	613470	1253500	2108300	3004900	3760800	2ORDR	7.365e-002	1.79128640	2.71251135	0.99858	0.99000	
Hexachlorobutadiene	82527	197120	374690	618320	811650	990050	2ORDR	0.12027716	2.15059702	54.6003512	0.99513	0.99000	
4-Chloro-3-Methylphenol	0.210	0.212	0.227	0.209	0.185	0.156	AVRG		0.19979899		12.566	15.000	
Hexachlorocyclopentadiene	11448	69614	267450	533640	818000	1032900	LINR	6.535e-002	9.57640405		0.99127	0.99000	
2,4,6-Trichlorophenol	89136	238940	515470	866770	1243600	1545000	2ORDR	3.653e-002	3.44291416	4.51980005	0.99969	0.99000	
2,4,5-Trichlorophenol	0.211	0.212	0.207	0.180	0.179	0.174	AVRG		0.19390981		9.261	15.000	
2-Chloronaphthalene	343950	803200	1374400	2067900	2806300	3333100	2ORDR	3.371e-002	0.55630394	1.62069051	0.99979	0.99000	
2-Nitroaniline	0.206	0.216	0.224	0.211	0.203	0.200	AVRG		0.20993114		4.226	15.000	
Dimethyl Phthalate	396720	940190	1771400	3105400	4603600	6068300	LINR	-0.2042421	1.76206397		0.99444	0.99000	
2,6-Dinitrotoluene	0.212	0.209	0.204	0.185	0.166	0.160	AVRG		0.18939545		11.787	15.000	
3-Nitroaniline	0.157	0.166	0.169	0.150	0.160	0.176	AVRG		0.16319618		5.639	15.000	
2,4-Dinitrophenol	1808	43642	198580	462440	748570	1091100	LINR	0.23416855	9.38932029		0.99503	0.99000	
Dibenzofuran	486910	1155000	2161400	3451800	4933200	5986300	2ORDR	7.493e-003	0.71476312	0.36412403	0.99979	0.99000	
4-Nitrophenol	20131	40826	97156	232550	435520	894160	2ORDR	3.958e-002	23.8371337	-28.666479	0.99932	0.99000	
2,4-Dinitrotoluene	0.244	0.260	0.260	0.235	0.215	0.204	AVRG		0.23643021		9.780	15.000	
Atrazine	94025	242590	490440	919850	1298600	1641900	2ORDR	8.284e-002	3.88907980	12.5773067	0.99667	0.99000	
Diethylphthalate	405230	975850	1768100	2822600	3640000	4459700	2ORDR	4.821e-002	0.48978692	0.87586185	0.99793	0.99000	
4-Chlorophenyl-phenylethe	0.393	0.377	0.336	0.240	0.182	0.147	AVRG		0.27909167		37.236	15.000	<
4-Nitroaniline	41465	143270	381970	807920	1213300	1597500	LINR	2.267e-002	6.38782122		0.99663	0.99000	
4,6-Dinitro-2-Methylpheno	0.034	0.061	0.084	0.064	0.043	0.027	AVRG		5.217e-002		40.748	15.000	<
N-Nitrosodiphenylamine	0.513	0.488	0.427	0.316	0.270	0.218	AVRG		0.37199300		32.589	15.000	<
4-Bromophenyl-phenylether	98804	246630	482620	776310	1076200	1325100	2ORDR	8.802e-002	2.21317121	25.7960735	0.99556	0.99000	
Hexachlorobenzene	120440	290540	527650	823390	1106600	1356600	2ORDR	9.612e-002	0.71367611	28.1950911	0.99566	0.99000	
Pentachlorophenol	4594	50366	203590	412850	730430	1045100	LINR	0.17306124	15.6433437		0.99595	0.99000	
Carbazole	445340	1104000	2085700	3584700	4705600	6100900	2ORDR	7.421e-002	0.62818145	1.17829537	0.99855	0.99000	
Di-n-butylphthalate	704140	1701600	2908900	4661000	6127200	7692700	2ORDR	7.984e-002	0.17229958	0.87405772	0.99818	0.99000	
Butylbenzylphthalate	0.521	0.562	0.542	0.486	0.492	0.447	AVRG		0.50848140		8.206	15.000	

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-U Calibration Date(s): 04/05/05 04/05/05

Column: RTX-5SILMS ID: 0.25 (mm) Calibration Time(s): 1043 1422

LAB FILE ID: RF10: U0612 RF25: U0611 RF50: U0607
RF100: U0610 RF150: U0609 RF200: U0608

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
3,3'-Dichlorobenzidine	73983	161090	212870	419270	444930	547370	LINR	-0.1424311	9.64592297		0.99172	0.99000	
bis(2-Ethylhexyl)phthalat	0.740	0.794	0.732	0.633	0.622	0.562	AVRG		0.68049652		12.931	15.000	
Di-n-octylphthalate	1.598	1.976	1.975	1.680	1.720	1.541	AVRG		1.74841545		10.667	15.000	
Acetophenone	1.256	1.220	1.157	1.005	0.990	0.936	AVRG		1.09384049		12.260	15.000	
2-Fluorophenol	0.853	0.884	0.909	0.782	0.726	0.680	AVRG		0.80583850		11.330	15.000	
Phenol-D6	249780	564100	1145900	1968900	2770300	3368700	2ORDR	5.09e-002	0.67424256	0.22645324	0.99726	0.99000	
Nitrobenzene-D5	0.300	0.294	0.286	0.267	0.253	0.231	AVRG		0.27203406		9.794	15.000	
2-Fluorobiphenyl	436810	1005600	1747400	2790600	3953300	4926600	2ORDR	-3.43e-002	0.98705231	0.50465703	0.99936	0.99000	
2,4,6-Tribromophenol	0.092	0.102	0.108	0.093	0.071	0.074	AVRG		9.021e-002		16.338	15.000	<
Terphenyl-D14	0.789	0.835	0.782	0.676	0.700	0.639	AVRG		0.73692401		10.341	15.000	

Average %RSD test result.

Calculate Average %RSD: 15.59808064
Maximum Average %RSD: 15.00000000

Note: Failed Average %RSD Test.

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: UD951 DFTPP Injection Date: 04/06/05

Instrument ID: GCMS-U DFTPP Injection Time: 0856

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.9
68	Less than 2.0% of mass 69	0.9 (1.8)1
69	Less than 100.0% of mass 198	54.0
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	40.0 - 60.0% of mass 198	59.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	21.5
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	13.5 (83.3)2
442	40.0 - 100.0% of mass 198	85.4
443	17.0 - 23.0% of mass 442	16.2 (19.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U0406	U0623	04/06/05	0918
02	PEN43SS3101	WV0974-37RA	U0625	04/06/05	1123
03	PEN43SS3101	WV0974-37RE	U0626	04/06/05	1207
04	PEN43SS3201	WV0974-38RE	U0627	04/06/05	1250
05	PEN43SS3701	WV0974-32RA	U0628	04/06/05	1332
06					
07					
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20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-U Calibration Date: 04/06/05 Time: 0918

Lab File ID: U0623 Init. Calib. Date(s): 04/05/05 04/05/05

Init. Calib. Times: 1043 1422

GC Column: RTX-5SILMS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzaldehyde	4.e-002	2.81e-002	2.81e-002	0.01	-29.75	100.00	AVRG
Phenol	0.9500000	1.0505000	1.0505000	0.01	10.58	20.00	AVRG
Bis(2-Chloroethyl)ether	0.6930000	0.7529300	0.7529300	0.01	8.65	100.00	AVRG
2-Chlorophenol	47.015000	50.000000	0.8566200	0.01	-5.97	100.00	2RDR
2,2'-Oxybis(1-Chloropropane)	47.943000	50.000000	1.0182000	0.01	-4.11	100.00	2RDR
2-Methylphenol	46.488000	50.000000	0.8231600	0.01	-7.02	100.00	2RDR
Hexachloroethane	46.125000	50.000000	0.3547800	0.01	-7.75	100.00	2RDR
N-Nitroso-di-n-propylamine	0.5880000	0.5940000	0.5940000	0.05	1.02	100.00	AVRG
4-Methylphenol	0.8580000	0.9457400	0.9457400	0.01	10.23	100.00	AVRG
Nitrobenzene	47.610000	50.000000	0.2527300	0.01	-4.78	100.00	2RDR
Isophorone	0.4640000	0.4432300	0.4432300	0.01	-4.48	100.00	AVRG
2-Nitrophenol	0.1290000	0.1362300	0.1362300	0.01	5.60	20.00	AVRG
2,4-Dimethylphenol	0.2290000	0.2478100	0.2478100	0.01	8.21	100.00	AVRG
Caprolactam	8.5e-002	8.38e-002	8.38e-002	0.01	-1.41	100.00	AVRG
Bis(2-Chloroethoxy)methane	47.170000	50.000000	0.2886400	0.01	-5.66	100.00	2RDR
2,4-Dichlorophenol	0.1830000	0.1927700	0.1927700	0.01	5.34	20.00	AVRG
1,1'-Biphenyl	51.784000	50.000000	0.7596100	0.01	3.57	100.00	2RDR
4-Chloroaniline	44.920000	50.000000	0.2992000	0.01	-10.16	100.00	2RDR
Hexachlorobutadiene	43.191000	50.000000	9.15e-002	0.01	-13.62	20.00	2RDR
4-Chloro-3-Methylphenol	0.2000000	0.2046100	0.2046100	0.01	2.30	20.00	AVRG
Hexachlorocyclopentadiene	56.218000	50.000000	0.1119500	0.05	12.44	100.00	LINR
2,4,6-Trichlorophenol	49.890000	50.000000	0.2093800	0.01	-0.22	20.00	2RDR
2,4,5-Trichlorophenol	0.1940000	0.2212100	0.2212100	0.01	14.03	100.00	AVRG
2-Chloronaphthalene	54.872000	50.000000	0.6024700	0.01	9.74	100.00	2RDR
2-Nitroaniline	0.2100000	0.2081400	0.2081400	0.01	-0.88	100.00	AVRG
Dimethyl Phthalate	55.570000	50.000000	0.7234700	0.01	11.14	100.00	LINR
2,6-Dinitrotoluene	0.1890000	0.1908900	0.1908900	0.01	1.00	100.00	AVRG
3-Nitroaniline	0.1630000	0.1636600	0.1636600	0.01	0.40	100.00	AVRG
2,4-Dinitrophenol	38.410000	50.000000	6.19e-002	0.05	-23.18	100.00	LINR

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-U Calibration Date: 04/06/05 Time: 0918

Lab File ID: U0623 Init. Calib. Date(s): 04/05/05 04/05/05

Init. Calib. Times: 1043 1422

GC Column: RTX-5SILMS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dibenzofuran	52.072000	50.000000	0.9152400	0.01	4.14	100.00	2RDR
4-Nitrophenol	84.443000	50.000000	7.89e-002	0.05	68.89	100.00	2RDR
2,4-Dinitrotoluene	0.2360000	0.2423900	0.2423900	0.01	2.71	100.00	AVRG
Atrazine	42.995000	50.000000	0.1327900	0.01	-14.01	100.00	2RDR
Diethylphthalate	50.888000	50.000000	0.7481200	0.01	1.78	100.00	2RDR
4-Chlorophenyl-phenylether	0.2790000	0.3341700	0.3341700	0.01	19.77	100.00	AVRG
4-Nitroaniline	49.260000	50.000000	0.1513900	0.01	-1.48	100.00	LINR
4,6-Dinitro-2-Methylphenol	5.2e-002	7.12e-002	7.12e-002	0.01	36.92	100.00	AVRG
N-Nitrosodiphenylamine	0.3720000	0.4250600	0.4250600	0.01	14.26	20.00	AVRG
4-Bromophenyl-phenylether	48.753000	50.000000	0.1366600	0.01	-2.49	100.00	2RDR
Hexachlorobenzene	50.216000	50.000000	0.1524100	0.01	0.43	100.00	2RDR
Pentachlorophenol	47.679000	50.000000	5.21e-002	0.01	-4.64	20.00	LINR
Carbazole	47.187000	50.000000	0.5904400	0.01	-5.63	100.00	2RDR
Di-n-butylphthalate	50.285000	50.000000	0.8529500	0.01	0.57	100.00	2RDR
Butylbenzylphthalate	0.5080000	0.4972500	0.4972500	0.01	-2.12	100.00	AVRG
3,3'-Dichlorobenzidine	67.309000	50.000000	0.1513700	0.01	34.62	100.00	LINR
bis(2-Ethylhexyl)phthalate	0.6800000	0.6729000	0.6729000	0.01	-1.04	100.00	AVRG
Di-n-octylphthalate	1.7480000	1.4042000	1.4042000	0.01	-19.67	20.00	AVRG
Acetophenone	1.0940000	1.1134000	1.1134000	0.01	1.77	100.00	AVRG
2-Fluorophenol	0.8060000	0.8362500	0.8362500	0.01	3.75	100.00	AVRG
Phenol-D6	45.908000	50.000000	0.9346300	0.01	-8.18	100.00	2RDR
Nitrobenzene-D5	0.2720000	0.2743200	0.2743200	0.01	0.85	100.00	AVRG
2-Fluorobiphenyl	55.365000	50.000000	0.7703400	0.01	10.73	100.00	2RDR
2,4,6-Tribromophenol	9.e-002	0.1018600	0.1018600	0.01	13.18	100.00	AVRG
Terphenyl-D14	0.7370000	0.7027700	0.7027700	0.01	-4.64	100.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: UD954 DFTPP Injection Date: 04/08/05

Instrument ID: GCMS-U DFTPP Injection Time: 0756

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	42.4
68	Less than 2.0% of mass 69	0.7 (1.4)1
69	Less than 100.0% of mass 198	48.5
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	40.0 - 60.0% of mass 198	55.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.2
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	15.9 (81.6)2
442	40.0 - 100.0% of mass 198	99.3
443	17.0 - 23.0% of mass 442	19.5 (19.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U0408	U0652	04/08/05	0902
02	WG15039-BLANK	WG15039-1RA	U0653	04/08/05	1035
03					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-U Calibration Date: 04/08/05 Time: 0902

Lab File ID: U0652 Init. Calib. Date(s): 04/05/05 04/05/05

Init. Calib. Times: 1043 1422

GC Column: RTX-5SILMS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Benzaldehyde	4.e-002	4.62e-002	4.62e-002	0.01	15.50	100.00	AVRG	
Phenol	0.9500000	1.0005000	1.0005000	0.01	5.32	20.00	AVRG	
Bis(2-Chloroethyl)ether	0.6930000	0.7096400	0.7096400	0.01	2.40	100.00	AVRG	
2-Chlorophenol	42.824000	50.000000	0.7998700	0.01	-14.35	100.00	2RDR	
2,2'-Oxybis(1-Chloropropane)	44.052000	50.000000	0.9510600	0.01	-11.90	100.00	2RDR	
2-Methylphenol	42.120000	50.000000	0.7576500	0.01	-15.76	100.00	2RDR	
Hexachloroethane	42.498000	50.000000	0.3316900	0.01	-15.00	100.00	2RDR	
N-Nitroso-di-n-propylamine	0.5880000	0.5428800	0.5428800	0.05	-7.67	100.00	AVRG	
4-Methylphenol	0.8580000	0.8083100	0.8083100	0.01	-5.79	100.00	AVRG	
Nitrobenzene	40.840000	50.000000	0.2223800	0.01	-18.32	100.00	2RDR	
Isophorone	0.4640000	0.4000800	0.4000800	0.01	-13.78	100.00	AVRG	
2-Nitrophenol	0.1290000	0.1171700	0.1171700	0.01	-9.17	20.00	AVRG	
2,4-Dimethylphenol	0.2290000	0.2154400	0.2154400	0.01	-5.92	100.00	AVRG	
Caprolactam	8.5e-002	6.09e-002	6.09e-002	0.01	-28.35	100.00	AVRG	
Bis(2-Chloroethoxy)methane	41.410000	50.000000	0.2606200	0.01	-17.18	100.00	2RDR	
2,4-Dichlorophenol	0.1830000	0.1715100	0.1715100	0.01	-6.28	20.00	AVRG	
1,1'-Biphenyl	50.590000	50.000000	0.7502100	0.01	1.18	100.00	2RDR	
4-Chloroaniline	40.374000	50.000000	0.2748800	0.01	-19.25	100.00	2RDR	
Hexachlorobutadiene	37.582000	50.000000	8.35e-002	0.01	-24.84	20.00	2RDR	<-
4-Chloro-3-Methylphenol	0.2000000	0.1854900	0.1854900	0.01	-7.26	20.00	AVRG	
Hexachlorocyclopentadiene	43.027000	50.000000	8.44e-002	0.05	-13.95	100.00	LINR	
2,4,6-Trichlorophenol	43.573000	50.000000	0.1871500	0.01	-12.85	20.00	2RDR	
2,4,5-Trichlorophenol	0.1940000	0.1915100	0.1915100	0.01	-1.28	100.00	AVRG	
2-Chloronaphthalene	51.704000	50.000000	0.5810200	0.01	3.41	100.00	2RDR	
2-Nitroaniline	0.2100000	0.1907400	0.1907400	0.01	-9.17	100.00	AVRG	
Dimethyl Phthalate	52.558000	50.000000	0.6892800	0.01	5.12	100.00	LINR	
2,6-Dinitrotoluene	0.1890000	0.1768000	0.1768000	0.01	-6.46	100.00	AVRG	
3-Nitroaniline	0.1630000	0.1571800	0.1571800	0.01	-3.57	100.00	AVRG	
2,4-Dinitrophenol	31.141000	50.000000	4.64e-002	0.05	-37.72	100.00	LINR	<-

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-U Calibration Date: 04/08/05 Time: 0902

Lab File ID: U0652 Init. Calib. Date(s): 04/05/05 04/05/05

Init. Calib. Times: 1043 1422

GC Column: RTX-5SILMS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	49.116000	50.000000	0.8766000	0.01	-1.77	100.00	2RDR	
4-Nitrophenol	55.079000	50.000000	4.84e-002	0.05	10.16	100.00	2RDR	<-
2,4-Dinitrotoluene	0.2360000	0.2225500	0.2225500	0.01	-5.70	100.00	AVRG	
Atrazine	37.944000	50.000000	0.1199400	0.01	-24.11	100.00	2RDR	
Diethylphthalate	48.183000	50.000000	0.7223600	0.01	-3.63	100.00	2RDR	
4-Chlorophenyl-phenylether	0.2790000	0.3203200	0.3203200	0.01	14.81	100.00	AVRG	
4-Nitroaniline	36.444000	50.000000	0.1112700	0.01	-27.11	100.00	LINR	
4,6-Dinitro-2-Methylphenol	5.2e-002	5.8e-002	5.8e-002	0.01	11.54	100.00	AVRG	
N-Nitrosodiphenylamine	0.3720000	0.4137200	0.4137200	0.01	11.22	20.00	AVRG	
4-Bromophenyl-phenylether	45.200000	50.000000	0.1300900	0.01	-9.60	100.00	2RDR	
Hexachlorobenzene	45.236000	50.000000	0.1434700	0.01	-9.53	100.00	2RDR	
Pentachlorophenol	34.471000	50.000000	3.52e-002	0.01	-31.06	20.00	LINR	<-
Carbazole	42.616000	50.000000	0.5508400	0.01	-14.77	100.00	2RDR	
Di-n-butylphthalate	44.963000	50.000000	0.7991200	0.01	-10.07	100.00	2RDR	
Butylbenzylphthalate	0.5080000	0.4340000	0.4340000	0.01	-14.57	100.00	AVRG	
3,3'-Dichlorobenzidine	58.791000	50.000000	0.1337100	0.01	17.58	100.00	LINR	
bis(2-Ethylhexyl)phthalate	0.6800000	0.5895700	0.5895700	0.01	-13.30	100.00	AVRG	
Di-n-octylphthalate	1.7480000	1.2370000	1.2370000	0.01	-29.23	20.00	AVRG	<-
Acetophenone	1.0940000	1.0467000	1.0467000	0.01	-4.32	100.00	AVRG	
2-Fluorophenol	0.8060000	0.7574900	0.7574900	0.01	-6.02	100.00	AVRG	
Phenol-D6	41.758000	50.000000	0.8645000	0.01	-16.48	100.00	2RDR	
Nitrobenzene-D5	0.2720000	0.2417900	0.2417900	0.01	-11.11	100.00	AVRG	
2-Fluorobiphenyl	52.159000	50.000000	0.7372500	0.01	4.32	100.00	2RDR	
2,4,6-Tribromophenol	9.e-002	9.36e-002	9.36e-002	0.01	4.00	100.00	AVRG	
Terphenyl-D14	0.7370000	0.6527900	0.6527900	0.01	-11.43	100.00	AVRG	

FORM VII PEST

FORM 2
SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 2FP#	S2 PHL#	S3 NBZ#	S4 FBP#	S5 TBP#	S6 TPH#	S7 #	S8 #	TOT OUT
01	WG15659-BLANK	WG15659-1	74	88	89	103	69	103			0
02	WG15659-LCS	WG15659-2	86	88	102	100	100J	124J			2
03	PEN43SS2101	WV0974-27RE	83	103	97	120J	100J	142J			3
04	PEN43SS2201	WV0974-28RE	81	101	95	112J	108J	134J			3
05	PEN43SS2301	WV0974-29RE	74	86	85	97	96	127J			1
06	PEN43SS3601	WV0974-31RE	88	113	103	120J	108J	146J			3
07	PEN43SS2701	WV0974-33RE	82	103	97	118J	100J	136J			3
08	PEN43SS2901	WV0974-35RE	83	100	95	113J	108J	152J			3
09	PEN43SS3001	WV0974-36RE	83	99	93	115J	108J	137J			3
10	PEN43SS3101	WV0974-37RA	79	88	64	76	96	69J			1
11	PEN43SS3101	WV0974-37RE	78	88	84	102	95	93			0
12	PEN43SS3201	WV0974-38RE	78	90	84	104	103J	99			1
13	PEN43SS3701	WV0974-32RA	75	90	59	76	98	77			0
14	WG15039-BLANK	WG15039-1RA	62	76	55	68	53	62J			1
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											

		QC LIMITS
S1 (2FP)	= 2-Fluorophenol	(40-130)
S2 (PHL)	= Phenol-D6	(35-120)
S3 (NBZ)	= Nitrobenzene-D5	(35-125)
S4 (FBP)	= 2-Fluorobiphenyl	(34-107)
S5 (TBP)	= 2,4,6-Tribromophenol	(37- 99)
S6 (TPH)	= Terphenyl-D14	(75-111)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM 2
SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 2FP#	S2 PHL#	S3 NBZ#	S4 FBP#	S5 TBP#	S6 TPH#	S7 #	S8 #	TOT OUT
01	WG15035-BLANK	WG15035-1RA	96	104	82	95	53	130J			1
02	WG15035-LCS	WG15035-2RA	88	72	80	94	97	80			0
03	WG15039-BLANK	WG15039-1	66	68	59	70	44	79			0
04	WG15039-LCS	WG15039-2	79	68	69	77	87	74J			1
05	PEN43SB2302	WV0952-4RA	87	79	65	69	88	81			0
06	PEN43SB2401	WV0974-21	79	68	73	74	83	76			0
07	PEN43SB2402	WV0974-22	82	68	77	88	80	86			0
08	PEN43SS2101MS	WG15039-3	71	57	58	65	87	62J			1
09	PEN43SS2101MSD	WG15039-4	74	64	58	67	112J	75			1
10	PEN43SS2201	WV0974-28	73	63	57	62	78	69J			1
11	PEN43SS2301	WV0974-29	74	64	58	64	85	67J			1
12	PEN43SS2901	WV0974-35	72	59	58	71	86	68J			1
13	PEN43SS3001	WV0974-36	80	69	60	74	103J	71J			2
14	PEN43SS2101	WV0974-27	73	66	62	74	71	71J			1
15	PEN43SS3601	WV0974-31	72	58	57	69	66	68J			1
16	PEN43SS2701	WV0974-33	71	54	57	75	69	69J			1
17	PEN43SS3201	WV0974-38	77	64	63	71	82	72J			1
18	PEN43SS3501	WV0974-30	70	61	57	71	70	78			0
19	PEN43SS1901	WV0974-25	76	66	62	68	66	75			0
20	PEN43SS1801D	WV0974-24	64	60	57	61	71	78			0
21	PEN43SS2801	WV0974-34	79	68	62	62	72	95			0
22	PEN43SS1801	WV0974-23	84	75	67	67	79	85			0
23	PEN43SS2001	WV0974-26	81	76	67	71	75	90			0
24											
25											
26											
27											
28											

		QC LIMITS
S1 (2FP)	= 2-Fluorophenol	(40-130)
S2 (PHL)	= Phenol-D6	(35-120)
S3 (NBZ)	= Nitrobenzene-D5	(35-125)
S4 (FBP)	= 2-Fluorobiphenyl	(34-107)
S5 (TBP)	= 2,4,6-Tribromophenol	(37- 99)
S6 (TPH)	= Terphenyl-D14	(75-111)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM 2
WATER SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 2FP#	S2 PHL#	S3 NBZ#	S4 FBP#	S5 TBP#	S6 TPH#	S7 #	S8 #	TOT OUT
01	WG15045-BLANK	WG15045-1	68	45	70	83	112	90			0
02	WG15045-LCS	WG15045-2	67	43	78	83	127	92			0
03	WG15045-LCSD	WG15045-3	62	39	71	78	127	91			0
04	PEN43RB0306	WV0974-2	62	41	71	88	108	100			0
05											
06											
07											
08											
09											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											

		QC LIMITS
S1 (2FP)	= 2-Fluorophenol	(18-103)
S2 (PHL)	= Phenol-D6	(11-117)
S3 (NBZ)	= Nitrobenzene-D5	(48-109)
S4 (FBP)	= 2-Fluorobiphenyl	(37-112)
S5 (TBP)	= 2,4,6-Tribromophenol	(22-145)
S6 (TPH)	= Terphenyl-D14	(39-164)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 03/28/05
Report Date: 04/06/2005
Matrix: SOIL

Lab ID: WG15035-2RA
Client ID: WG15035-LCS
SDG: CTO355-3
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Phenol	3333	NA	2630	79	48-116
Bis(2-Chloroethyl)ether	1667	NA	1560	94	54-114
2-Chlorophenol	3333	NA	2600	78	60-118
2,2'-Oxybis(1-Chloropropane)	1667	NA	1350	81	49-122
2-Methylphenol	3333	NA	2590	78	53-121
Hexachloroethane	1667	NA	1400	84	40- 99
N-Nitroso-di-n-propylamine	1667	NA	1200	72	36-115
4-Methylphenol	3333	NA	2620	79	59-127
Nitrobenzene	1667	NA	1500	90	49-113
Isophorone	1667	NA	1330	80	46-112
2-Nitrophenol	3333	NA	3020	91	57-120
2,4-Dimethylphenol	3333	NA	2620	79	54-113
Bis(2-Chloroethoxy)methane	1667	NA	1420	85	50-117
2,4-Dichlorophenol	3333	NA	2620	79	59-116
4-Chloroaniline	1667	NA	338	20	20-120
Hexachlorobutadiene	1667	NA	1500	90	53-114
4-Chloro-3-Methylphenol	3333	NA	2740	82	62-126
Hexachlorocyclopentadiene	1667	NA	1040	62	28- 73
2,4,6-Trichlorophenol	3333	NA	3170	95	62-120
2,4,5-Trichlorophenol	3333	NA	3140	94	62-124
2-Chloronaphthalene	1667	NA	1760	106	42-160
2-Nitroaniline	1667	NA	1690	101	66-121
Dimethyl Phthalate	1667	NA	1730	104	56-133
2,6-Dinitrotoluene	1667	NA	1480	89	66-127
3-Nitroaniline	1667	NA	1050	63	57-120
2,4-Dinitrophenol	3333	NA	635	19	3-118
Dibenzofuran	1667	NA	1660	100	66-119
4-Nitrophenol	3333	NA	2860	86	41-149
2,4-Dinitrotoluene	1667	NA	1580	95	60-125
Diethylphthalate	1667	NA	1650	99	57-135
4-Chlorophenyl-phenylether	1667	NA	1650	99	53-133
4-Nitroaniline	1667	NA	1560	94	62-125
4,6-Dinitro-2-Methylphenol	3333	NA	1760	53	46-125
N-Nitrosodiphenylamine	3333	NA	1320 *	40	70-131
4-Bromophenyl-phenylether	1667	NA	1700	102	67-138
Hexachlorobenzene	1667	NA	1570	94	63-131
Pentachlorophenol	3333	NA	2310	69	54-131
Carbazole	1667	NA	1800	108	78-133
Di-n-butylphthalate	1667	NA	1770	106	65-139
Butylbenzylphthalate	1667	NA	1630	98	44-155
3,3'-Dichlorobenzidine	1667	NA	759	46	38-137
bis(2-Ethylhexyl)phthalate	1667	NA	1740	104	45-154
Di-n-octylphthalate	1667	NA	1880	113	53-143

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 03/28/05
Report Date: 04/06/2005
Matrix: SOIL

Lab ID: WG15039-2
Client ID: WG15039-LCS
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Phenol	3333	NA	2420		73	48-116
Bis(2-Chloroethyl)ether	1667	NA	1460		88	54-114
2-Chlorophenol	3333	NA	2440		73	60-118
2,2'-Oxybis(1-Chloropropane)	1667	NA	1150		69	49-122
2-Methylphenol	3333	NA	2350		70	53-121
Hexachloroethane	1667	NA	1160		70	40- 99
N-Nitroso-di-n-propylamine	1667	NA	1030		62	36-115
4-Methylphenol	3333	NA	2340		70	59-127
Nitrobenzene	1667	NA	1300		78	49-113
Isophorone	1667	NA	1130		68	46-112
2-Nitrophenol	3333	NA	2580		77	57-120
2,4-Dimethylphenol	3333	NA	2190		66	54-113
Bis(2-Chloroethoxy)methane	1667	NA	1280		77	50-117
2,4-Dichlorophenol	3333	NA	2150		64	59-116
4-Chloroaniline	1667	NA	317	*	19	20-120
Hexachlorobutadiene	1667	NA	1380		83	53-114
4-Chloro-3-Methylphenol	3333	NA	2300		69	62-126
Hexachlorocyclopentadiene	1667	NA	900		54	28- 73
2,4,6-Trichlorophenol	3333	NA	2770		83	62-120
2,4,5-Trichlorophenol	3333	NA	2260		68	62-124
2-Chloronaphthalene	1667	NA	1520		91	42-160
2-Nitroaniline	1667	NA	1320		79	66-121
Dimethyl Phthalate	1667	NA	1400		84	56-133
2,6-Dinitrotoluene	1667	NA	1230		74	66-127
3-Nitroaniline	1667	NA	699	*	42	57-120
2,4-Dinitrophenol	3333	NA	762		23	3-118
Dibenzofuran	1667	NA	1410		85	66-119
4-Nitrophenol	3333	NA	2520		76	41-149
2,4-Dinitrotoluene	1667	NA	1340		80	60-125
Diethylphthalate	1667	NA	1390		83	57-135
4-Chlorophenyl-phenylether	1667	NA	1470		88	53-133
4-Nitroaniline	1667	NA	1220		73	62-125
4,6-Dinitro-2-Methylphenol	3333	NA	1810		54	46-125
N-Nitrosodiphenylamine	3333	NA	1100	*	33	70-131
4-Bromophenyl-phenylether	1667	NA	1500		90	67-138
Hexachlorobenzene	1667	NA	1590		95	63-131
Pentachlorophenol	3333	NA	1880		56	54-131
Carbazole	1667	NA	1480		89	78-133
Di-n-butylphthalate	1667	NA	1470		88	65-139
Butylbenzylphthalate	1667	NA	1430		86	44-155
3,3'-Dichlorobenzidine	1667	NA	728		44	38-137
bis(2-Ethylhexyl)phthalate	1667	NA	1460		88	45-154
Di-n-octylphthalate	1667	NA	1480		89	53-143

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 03/16/05
Report Date: 04/06/2005
Matrix: WATER

Lab ID: WG15045-2 & WG15045-3
Client ID: WG15045-LCS & WG15045-LCSD
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15045
Units: ug/L

COMPOUND	LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS CONC.	LCSD CONC.	LCS %REC.	LCSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Phenol	100	100	NA	46	42	46	42	8	30	0-140
Bis(2-Chloroethyl)ether	50	50	NA	37	32	75	64	15	30	51-125
2-Chlorophenol	100	100	NA	99	89	99	89	11	30	59-127
2,2'-Oxybis(1-Chloropropane)	50	50	NA	41	37	83	74	12	30	52-120
2-Methylphenol	100	100	NA	85	81	85	81	5	30	59-122
Hexachloroethane	50	50	NA	42	36	83	72	14	30	23- 98
N-Nitroso-di-n-propylamine	50	50	NA	39	36	79	71	10	30	55-109
4-Methylphenol	100	100	NA	78	72	78	72	7	30	46-139
Nitrobenzene	50	50	NA	44	40	88	80	8	30	66-114
Isophorone	50	50	NA	39	37	78	74	5	30	59-114
2-Nitrophenol	100	100	NA	100	94	100	94	7	30	18-162
2,4-Dimethylphenol	100	100	NA	97	88	97	88	10	30	73-109
Bis(2-Chloroethoxy)methane	50	50	NA	46	42	93	84	11	30	60-122
2,4-Dichlorophenol	100	100	NA	99	95	99	95	4	30	60-125
4-Chloroaniline	50	50	NA	24	32	49	63	25	30	21-142
Hexachlorobutadiene	50	50	NA	51	46	* 103	91	12	30	37-102
4-Chloro-3-Methylphenol	100	100	NA	95	94	95	94	0.1	30	74-120
Hexachlorocyclopentadiene	50	50	NA	32	29	65	57	12	30	6- 67
2,4,6-Trichlorophenol	100	100	NA	101	97	101	97	4	30	67-128
2,4,5-Trichlorophenol	100	100	NA	110	105	110	105	5	30	61-136
2-Chloronaphthalene	50	50	NA	49	45	98	90	8	30	53-153
2-Nitroaniline	50	50	NA	41	40	83	79	4	30	76-118
Dimethyl Phthalate	50	50	NA	44	44	88	89	0.7	30	38-131
2,6-Dinitrotoluene	50	50	NA	47	45	95	90	5	30	71-127
3-Nitroaniline	50	50	NA	26	29	51	59	13	30	12-178
2,4-Dinitrophenol	100	100	NA	88	87	88	87	0.6	30	53-130
Dibenzofuran	50	50	NA	50	48	100	96	4	30	73-120
4-Nitrophenol	100	100	NA	42	42	42	42	0.0	30	0-169
2,4-Dinitrotoluene	50	50	NA	51	49	102	99	3	30	68-120
Diethylphthalate	50	50	NA	49	48	99	96	2	30	70-120
4-Chlorophenyl-phenylether	50	50	NA	56	52	112	104	8	30	61-134
4-Nitroaniline	50	50	NA	46	44	91	89	3	30	32-127
4,6-Dinitro-2-Methylphenol	100	100	NA	97	101	97	101	4	30	61-148
N-Nitrosodiphenylamine	100	100	NA	29	30	* 29	* 30	4	30	31-177
4-Bromophenyl-phenylether	50	50	NA	54	53	108	105	3	30	65-149
Hexachlorobenzene	50	50	NA	56	55	112	110	2	30	57-154
Pentachlorophenol	100	100	NA	93	97	93	97	4	30	25-173
Carbazole	50	50	NA	49	50	97	100	2	30	36-170
Di-n-butylphthalate	50	50	NA	48	49	96	98	2	30	67-137
Butylbenzylphthalate	50	50	NA	44	45	89	90	2	30	60-130
3,3'-Dichlorobenzidine	50	50	NA	39	51	78	103	28	30	68-173
bis(2-Ethylhexyl)phthalate	50	50	NA	46	47	92	94	2	30	49-150
Di-n-octylphthalate	50	50	NA	42	44	85	88	3	30	58-147

 FORM III SV-1 X7484.D & X7485.D

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 04/01/05
Analysis Date: 04/05/05
Report Date: 04/06/2005
Matrix: SOIL

Lab ID: WG15659-2
Client ID: WG15659-LCS
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Phenol	3333	NA	2880	86	0-140
Bis(2-Chloroethyl)ether	1667	NA	1510	91	51-125
2-Chlorophenol	3333	NA	3010	90	59-127
2,2'-Oxybis(1-Chloropropane)	1667	NA	1380	83	52-120
2-Methylphenol	3333	NA	2840	85	59-122
Hexachloroethane	1667	NA	1160	70	23- 98
N-Nitroso-di-n-propylamine	1667	NA	1360	82	55-109
4-Methylphenol	3333	NA	2820	85	46-139
Nitrobenzene	1667	NA	1360	82	66-114
Isophorone	1667	NA	1380	83	59-114
2-Nitrophenol	3333	NA	2850	86	18-162
2,4-Dimethylphenol	3333	NA	2850	86	73-109
Bis(2-Chloroethoxy)methane	1667	NA	1360	82	60-122
2,4-Dichlorophenol	3333	NA	2990	90	60-125
4-Chloroaniline	1667	NA	487	29	21-142
Hexachlorobutadiene	1667	NA	1140	68	37-102
4-Chloro-3-Methylphenol	3333	NA	3340	100	74-120
Hexachlorocyclopentadiene	1667	NA	931	56	6- 67
2,4,6-Trichlorophenol	3333	NA	3120	94	67-128
2,4,5-Trichlorophenol	3333	NA	3400	102	61-136
2-Chloronaphthalene	1667	NA	1600	96	53-153
2-Nitroaniline	1667	NA	1700	102	76-118
Dimethyl Phthalate	1667	NA	1740	104	38-131
2,6-Dinitrotoluene	1667	NA	1670	100	71-127
3-Nitroaniline	1667	NA	1290	77	12-178
2,4-Dinitrophenol	3333	NA	1450	* 44	53-130
Dibenzofuran	1667	NA	1590	95	73-120
4-Nitrophenol	3333	NA	3640	109	0-169
2,4-Dinitrotoluene	1667	NA	1820	109	68-120
Diethylphthalate	1667	NA	1680	101	70-120
4-Chlorophenyl-phenylether	1667	NA	1910	115	61-134
4-Nitroaniline	1667	NA	1960	118	32-127
4,6-Dinitro-2-Methylphenol	3333	NA	3870	116	61-148
N-Nitrosodiphenylamine	3333	NA	1490	45	31-177
4-Bromophenyl-phenylether	1667	NA	1610	97	65-149
Hexachlorobenzene	1667	NA	1560	94	57-154
Pentachlorophenol	3333	NA	2860	86	25-173
Carbazole	1667	NA	1770	106	36-170
Di-n-butylphthalate	1667	NA	1670	100	67-137
Butylbenzylphthalate	1667	NA	1760	106	60-130
3,3'-Dichlorobenzidine	1667	NA	1900	114	68-173
bis(2-Ethylhexyl)phthalate	1667	NA	1700	102	49-150
Di-n-octylphthalate	1667	NA	1770	106	58-147

KATAHDIN ANALYTICAL SERVICES
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 03/29/05
Report Date: 04/06/2005
Matrix: SOIL

Lab ID: WG15039-3 & WG15039-4
Client ID: PEN43SS2101MS & PEN43SS2101MSD
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

COMPOUND	MS SPIKE	MSD SPIKE	SAMPLE CONC.	MS CONC.	MSD CONC.	MS %REC.	MSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Phenol	3557	3557	0.00	2320	2480	65	70	7	50	30-118
Bis(2-Chloroethyl)ether	1778	1778	0.00	1280	1350	72	76	5	50	60-140
2-Chlorophenol	3557	3557	0.00	2180	2380	61	67	9	50	30-115
2,2'-Oxybis(1-Chloropropane)	1778	1778	0.00	981	1090	* 55	61	10	50	60-140
2-Methylphenol	3557	3557	0.00	2150	2370	60	67	10	50	60-140
Hexachloroethane	1778	1778	0.00	905	958	* 51	* 54	6	50	60-140
N-Nitroso-di-n-propylamine	1778	1778	0.00	960	1050	54	59	9	50	29-117
4-Methylphenol	3557	3557	0.00	2100	2340	* 59	66	11	50	60-140
Nitrobenzene	1778	1778	0.00	1080	1260	61	71	15	50	60-140
Isophorone	1778	1778	0.00	1070	1190	60	67	11	50	60-140
2-Nitrophenol	3557	3557	0.00	2320	2670	65	75	14	50	60-140
2,4-Dimethylphenol	3557	3557	0.00	2150	2520	60	71	16	50	60-140
Bis(2-Chloroethoxy)methane	1778	1778	0.00	1090	1260	61	71	14	50	60-140
2,4-Dichlorophenol	3557	3557	0.00	2340	2470	66	69	5	50	60-140
4-Chloroaniline	1778	1778	0.00	553	506	* 31	* 28	9	50	60-140
Hexachlorobutadiene	1778	1778	0.00	1230	1310	69	74	6	50	60-140
4-Chloro-3-Methylphenol	3557	3557	0.00	2200	2630	62	74	18	50	24-136
Hexachlorocyclopentadiene	1778	1778	0.00	815	844	* 46	* 47	3	50	60-140
2,4,6-Trichlorophenol	3557	3557	0.00	2740	2940	77	83	7	50	60-140
2,4,5-Trichlorophenol	3557	3557	0.00	2540	3020	71	85	17	50	60-140
2-Chloronaphthalene	1778	1778	0.00	1300	1350	73	76	4	50	60-140
2-Nitroaniline	1778	1778	0.00	1190	1330	67	75	11	50	60-140
Dimethyl Phthalate	1778	1778	0.00	1380	1540	78	86	11	50	60-140
2,6-Dinitrotoluene	1778	1778	0.00	1180	1370	66	77	15	50	60-140
3-Nitroaniline	1778	1778	0.00	841	1020	* 47	* 57	19	50	60-140
2,4-Dinitrophenol	3557	3557	0.00	1680	2040	* 47	* 57	19	50	60-140
Dibenzofuran	1778	1778	0.00	1310	1470	74	83	12	50	60-140
4-Nitrophenol	3557	3557	0.00	1750	2180	49	61	22	50	0-157
2,4-Dinitrotoluene	1778	1778	0.00	1370	1520	77	85	10	50	15-133
Diethylphthalate	1778	1778	0.00	1380	1500	78	84	8	50	60-140
4-Chlorophenyl-phenylether	1778	1778	0.00	1460	1580	82	89	8	50	60-140
4-Nitroaniline	1778	1778	0.00	1190	1390	67	78	16	50	60-140
4,6-Dinitro-2-Methylphenol	3557	3557	0.00	2520	2980	71	84	17	50	60-140
N-Nitrosodiphenylamine	1778	1778	0.00	1060	1140	60	64	7	50	60-140
4-Bromophenyl-phenylether	1778	1778	0.00	1500	1620	84	91	8	50	60-140
Hexachlorobenzene	1778	1778	0.00	1570	1710	88	96	8	50	60-140
Pentachlorophenol	3557	3557	0.00	2490	3000	70	84	18	50	0-145
Carbazole	1778	1778	0.00	1400	1550	79	87	10	50	60-140
Di-n-butylphthalate	1778	1778	926	1420	1510	* 28	* 33	6	50	60-140
Butylbenzylphthalate	1778	1778	0.00	1210	1400	68	79	14	50	60-140
3,3'-Dichlorobenzidine	1778	1778	0.00	977	946	* 55	* 53	3	50	60-140
bis(2-Ethylhexyl)phthalate	1778	1778	0.00	1300	1390	73	78	7	50	60-140
Di-n-octylphthalate	1778	1778	0.00	1200	1400	67	79	15	50	60-140

 FORM III SV-2 X7626.D & X7627.D

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG15659-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: U0613 Lab Sample ID: WG15659-1

Instrument ID: GCMS-U Date Extracted: 04/01/05

Matrix: (soil/water) SOIL Date Analyzed: 04/05/05

Level:(low/med) LOW Time Analyzed: 1504

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG15659-LCS	WG15659-2	U0614	04/05/05	1546
02	PEN43SS2101	WV0974-27RE	U0616	04/05/05	1713
03	PEN43SS2201	WV0974-28RE	U0617	04/05/05	1756
04	PEN43SS2301	WV0974-29RE	U0618	04/05/05	1841
05	PEN43SS3601	WV0974-31RE	U0619	04/05/05	1924
06	PEN43SS2701	WV0974-33RE	U0620	04/05/05	2007
07	PEN43SS2901	WV0974-35RE	U0621	04/05/05	2051
08	PEN43SS3001	WV0974-36RE	U0622	04/05/05	2134
09	PEN43SS3101	WV0974-37RE	U0626	04/06/05	1207
10	PEN43SS3201	WV0974-38RE	U0627	04/06/05	1250
11					
12					
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COMMENTS:

FORM IV SV

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG15035-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: X7523 Lab Sample ID: WG15035-1RA

Instrument ID: GCMS-X Date Extracted: 03/10/05

Matrix: (soil/water) SOIL Date Analyzed: 03/18/05

Level:(low/med) LOW Time Analyzed: 1751

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG15035-LCS	WG15035-2RA	X7612	03/28/05	1631
02	PEN43SB2302	WV0952-4RA	X7617	03/28/05	2005
03					
04					
05					
06					
07					
08					
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COMMENTS:

FORM IV SV

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG15039-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: X7613 Lab Sample ID: WG15039-1

Instrument ID: GCMS-X Date Extracted: 03/11/05

Matrix: (soil/water) SOIL Date Analyzed: 03/28/05

Level: (low/med) LOW Time Analyzed: 1713

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG15039-LCS	WG15039-2	X7614	03/28/05	1757
02	PEN43SB2401	WV0974-21	X7620	03/28/05	2213
03	PEN43SB2402	WV0974-22	X7621	03/28/05	2255
04	PEN43SS2101MS	WG15039-3	X7626	03/29/05	1557
05	PEN43SS2101MSD	WG15039-4	X7627	03/29/05	1639
06	PEN43SS2201	WV0974-28	X7629	03/29/05	1805
07	PEN43SS2301	WV0974-29	X7630	03/29/05	1848
08	PEN43SS2901	WV0974-35	X7631	03/29/05	1931
09	PEN43SS3001	WV0974-36	X7632	03/29/05	2014
10	PEN43SS2101	WV0974-27	X7633	03/29/05	2057
11	PEN43SS3601	WV0974-31	X7635	03/29/05	2223
12	PEN43SS2701	WV0974-33	X7636	03/29/05	2306
13	PEN43SS3201	WV0974-38	X7637	03/29/05	2348
14	PEN43SS3501	WV0974-30	X7638	03/30/05	0031
15	PEN43SS1901	WV0974-25	X7645	03/30/05	1347
16	PEN43SS1801D	WV0974-24	X7646	03/30/05	1429
17	PEN43SS2801	WV0974-34	X7647	03/30/05	1512
18	PEN43SS1801	WV0974-23	X7651	03/30/05	1801
19	PEN43SS2001	WV0974-26	X7652	03/30/05	1844
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COMMENTS:

FORM IV SV

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG15039-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: U0653 Lab Sample ID: WG15039-1RA

Instrument ID: GCMS-U Date Extracted: 03/11/05

Matrix: (soil/water) SOIL Date Analyzed: 04/08/05

Level: (low/med) LOW Time Analyzed: 1035

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	PEN43SS3101	WV0974-37RA	U0625	04/06/05	1123
02	PEN43SS3701	WV0974-32RA	U0628	04/06/05	1332
03					
04					
05					
06					
07					
08					
09					
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COMMENTS:

FORM IV SV

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG15045-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: X7483 Lab Sample ID: WG15045-1

Instrument ID: GCMS-X Date Extracted: 03/11/05

Matrix: (soil/water) WATER Date Analyzed: 03/16/05

Level:(low/med) LOW Time Analyzed: 1510

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG15045-LCS	WG15045-2	X7484	03/16/05	1552
02	WG15045-LCSD	WG15045-3	X7485	03/16/05	1634
03	PEN43RB0306	WV0974-2	X7487	03/16/05	1800
04					
05					
06					
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COMMENTS:

FORM IV SV

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 19:19
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15034-1
Client ID: WG15034-Blank
SDG: CTO355-3
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	20	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	20	0.6
208-96-8	Acenaphthylene	U	0.5	1.0	20	20	0.5
83-32-9	Acenaphthene	U	0.7	1.0	20	20	0.7
86-73-7	Fluorene	U	0.6	1.0	20	20	0.6
85-01-8	Phenanthrene	U	1	1.0	20	20	1
120-12-7	Anthracene	U	0.8	1.0	20	20	0.8
206-44-0	Fluoranthene	U	2	1.0	20	20	2
129-00-0	Pyrene	U	2	1.0	20	20	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	20	1
218-01-9	Chrysene	U	1	1.0	20	20	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	20	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	20	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	20	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	20	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	20	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	20	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	20	10
7297-45-2	2-Methylnaphthalene-d10		98%				
81103-79-9	Fluorene-d10		79%				
1718-52-1	Pyrene-d10		85%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 11:25
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15038-1
Client ID: WG15038-Blank
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	20	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	20	0.6
208-96-8	Acenaphthylene	U	0.5	1.0	20	20	0.5
83-32-9	Acenaphthene	U	0.7	1.0	20	20	0.7
86-73-7	Fluorene	U	0.6	1.0	20	20	0.6
85-01-8	Phenanthrene	U	1	1.0	20	20	1
120-12-7	Anthracene	U	0.8	1.0	20	20	0.8
206-44-0	Fluoranthene	U	2	1.0	20	20	2
129-00-0	Pyrene	U	2	1.0	20	20	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	20	1
218-01-9	Chrysene	U	1	1.0	20	20	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	20	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	20	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	20	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	20	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	20	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	20	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	20	10
7297-45-2	2-Methylnaphthalene-d10		85%				
81103-79-9	Fluorene-d10		83%				
1718-52-1	Pyrene-d10		76%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 17-MAR-2005 21:05
Report Date: 03/31/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15046-1
Client ID: WG15046-Blank
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15046
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.05	1.0	0.2	0.2	0.05
91-57-6	2-Methylnaphthalene	U	0.06	1.0	0.2	0.2	0.06
208-96-8	Acenaphthylene	U	0.04	1.0	0.2	0.2	0.04
83-32-9	Acenaphthene	U	0.09	1.0	0.2	0.2	0.09
86-73-7	Fluorene	U	0.06	1.0	0.2	0.2	0.06
85-01-8	Phenanthrene	U	0.08	1.0	0.2	0.2	0.08
120-12-7	Anthracene	U	0.07	1.0	0.2	0.2	0.07
206-44-0	Fluoranthene	U	0.07	1.0	0.2	0.2	0.07
129-00-0	Pyrene	U	0.09	1.0	0.2	0.2	0.09
56-55-3	Benzo(a)anthracene	U	0.08	1.0	0.2	0.2	0.08
218-01-9	Chrysene	U	0.05	1.0	0.2	0.2	0.05
205-99-2	Benzo(b)fluoranthene	U	0.08	1.0	0.2	0.2	0.08
207-08-9	Benzo(k)fluoranthene	U	0.1	1.0	0.2	0.2	0.1
50-32-8	Benzo(a)pyrene	U	0.08	1.0	0.2	0.2	0.08
193-39-5	Indeno(1,2,3-cd)pyrene	U	0.07	1.0	0.2	0.2	0.07
53-70-3	Dibenzo(a,h)anthracene	U	0.1	1.0	0.2	0.2	0.1
191-24-2	Benzo(g,h,i)perylene	U	0.2	1.0	0.2	0.2	0.2
90-12-0	1-Methylnaphthalene	U	0.1	1.0	0.2	0.2	0.1
7297-45-2	2-Methylnaphthalene-d10		83%				
81103-79-9	Fluorene-d10		80%				
1718-52-1	Pyrene-d10		105%				

FORM 2
SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	WG15034-BLANK	WG15034-1	98	79	85						0
02	WG15034-LCS	WG15034-2	88	88	78						0
03	WG15038-BLANK	WG15038-1	85	83	76						0
04	WG15038-LCS	WG15038-2	75	75	75						0
05	PEN43SS2101MS	WG15038-3	85	101	77						0
06	PEN43SS2101MSD	WG15038-4	102	100	101						0
07	PEN43SB2401	WV0974-3	98	76	76						0
08	PEN43SB2402	WV0974-4	96	99	95						0
09	PEN43SS2101	WV0974-9	88	77	80						0
10	PEN43SS2201	WV0974-10	91	85	82						0
11	PEN43SS2301	WV0974-11	86	84	75						0
12	PEN43SS3101	WV0974-19	91	88	78						0
13	PEN43SS3601	WV0974-13	78	70	77						0
14	PEN43SS2701	WV0974-15	78	70	78						0
15	PEN43SS2901	WV0974-17	83	84	75						0
16	PEN43SS3001	WV0974-18	84	82	70						0
17	PEN43SS3201	WV0974-20	84	72	75						0
18	PEN43SS3501	WV0974-12	70	71	72						0
19	PEN43SS1801D	WV0974-6	76	67	79						0
20	PEN43SS2801	WV0974-16	77	81	84						0
21	PEN43SS1901	WV0974-7	82	88	93						0
22	PEN43SS1801	WV0974-5	84	73	98						0
23	PEN43SS3701	WV0974-14	68	70	84						0
24	PEN43SB2302	WV0952-1	83	89	92						0
25	PEN43SS2801	WV0974-16DL	100	101	96						0
26	PEN43SS1801	WV0974-5DL	91	103	80						0
27	PEN43SS2001	WV0974-8	73	87	100						0
28											

		QC LIMITS
S1	= 2-Methylnaphthalene-d1	(30-150)
S2	= Fluorene-d10	(30-150)
S3	= Pyrene-d10	(30-150)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM 2
WATER SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	WG15046-BLANK	WG15046-1	83	80	105						0
02	WG15046-LCS	WG15046-2	88	113	104						0
03	WG15046-LCSD	WG15046-3	92	113	105						0
04	PEN43RB0306	WV0974-1	92	83	103						0
05											
06											
07											
08											
09											
10											
11											
12											
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27											
28											

		QC LIMITS
S1	= 2-Methylnaphthalene-d1	(30-150)
S2	= Fluorene-d10	(30-150)
S3	= Pyrene-d10	(30-150)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 03/22/05
Report Date: 03/31/2005
Matrix: SOIL

Lab ID: WG15034-2
Client ID: WG15034-LCS
SDG: CTO355-3
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Naphthalene	67	NA	71		106	30-150
2-Methylnaphthalene	67	NA	85		127	30-150
Acenaphthylene	67	NA	70		104	30-150
Acenaphthene	67	NA	68		103	30-150
Fluorene	67	NA	77		116	30-150
Phenanthrene	67	NA	91		137	30-150
Anthracene	67	NA	69		103	30-150
Fluoranthene	67	NA	98		147	30-150
Pyrene	67	NA	69		103	30-150
Benzo(a)anthracene	67	NA	108	*	162	30-150
Chrysene	67	NA	79		119	30-150
Benzo(b)fluoranthene	67	NA	106	*	159	30-150
Benzo(k)fluoranthene	67	NA	72		109	30-150
Benzo(a)pyrene	67	NA	82		123	30-150
Indeno(1,2,3-cd)pyrene	67	NA	74		111	30-150
Dibenzo(a,h)anthracene	67	NA	72		108	30-150
Benzo(g,h,i)perylene	67	NA	72		109	30-150

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 03/28/05
Report Date: 03/31/2005
Matrix: SOIL

Lab ID: WG15038-2
Client ID: WG15038-LCS
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Naphthalene	67	NA	44	67	30-150
2-Methylnaphthalene	67	NA	70	104	30-150
Acenaphthylene	67	NA	47	71	30-150
Acenaphthene	67	NA	54	81	30-150
Fluorene	67	NA	52	78	30-150
Phenanthrene	67	NA	60	90	30-150
Anthracene	67	NA	49	74	30-150
Fluoranthene	67	NA	65	97	30-150
Pyrene	67	NA	48	72	30-150
Benzo(a)anthracene	67	NA	70	105	30-150
Chrysene	67	NA	51	77	30-150
Benzo(b)fluoranthene	67	NA	67	100	30-150
Benzo(k)fluoranthene	67	NA	52	77	30-150
Benzo(a)pyrene	67	NA	56	84	30-150
Indeno(1,2,3-cd)pyrene	67	NA	43	65	30-150
Dibenzo(a,h)anthracene	67	NA	42	62	30-150
Benzo(g,h,i)perylene	67	NA	42	63	30-150

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 03/17/05
Report Date: 03/31/2005
Matrix: WATER

Lab ID: WG15046-2 & WG15046-3
Client ID: WG15046-LCS & WG15046-LCSD
SDG: CTO355-3
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15046
Units: ug/L

COMPOUND	LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS CONC.	LCSD CONC.	LCS %REC.	LCSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Naphthalene	2.0	2.0	NA	1.7	1.8	86	91	5	30	30-150
2-Methylnaphthalene	2.0	2.0	NA	1.8	1.9	88	94	6	30	30-150
Acenaphthylene	2.0	2.0	NA	2.0	1.9	100	96	4	30	30-150
Acenaphthene	2.0	2.0	NA	2.2	2.1	110	107	3	30	30-150
Fluorene	2.0	2.0	NA	2.3	2.3	116	117	0.4	30	30-150
Phenanthrene	2.0	2.0	NA	2.3	2.3	117	116	0.4	30	30-150
Anthracene	2.0	2.0	NA	2.1	2.1	104	104	0.5	30	30-150
Fluoranthene	2.0	2.0	NA	2.2	2.2	112	112	0.0	30	30-150
Pyrene	2.0	2.0	NA	2.1	2.2	103	108	5	30	30-150
Benzo(a)anthracene	2.0	2.0	NA	2.1	2.1	107	105	2	30	30-150
Chrysene	2.0	2.0	NA	2.0	2.0	100	100	0.0	30	30-150
Benzo(b)fluoranthene	2.0	2.0	NA	2.2	2.0	108	102	5	30	30-150
Benzo(k)fluoranthene	2.0	2.0	NA	2.2	2.1	110	104	6	30	30-150
Benzo(a)pyrene	2.0	2.0	NA	2.3	2.2	115	108	7	30	30-150
Indeno(1,2,3-cd)pyrene	2.0	2.0	NA	2.2	2.0	112	99	13	30	30-150
Dibenzo(a,h)anthracene	2.0	2.0	NA	2.1	2.1	106	106	0.9	30	30-150
Benzo(g,h,i)perylene	2.0	2.0	NA	2.2	2.0	112	100	10	30	30-150

FORM III SV-1

K8851.D & K8852.D

KATAHDIN ANALYTICAL SERVICES
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 03/28/05
Report Date: 03/31/2005
Matrix: SOIL

Lab ID: WG15038-3 & WG15038-4
Client ID: PEN43SS2101MS & PEN43SS2101MSD
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

COMPOUND	MS SPIKE	MSD SPIKE	SAMPLE CONC.	MS CONC.	MSD CONC.	MS %REC.	MSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Naphthalene	71	71	1.0	52	66	72	92	23	50	30-150
2-Methylnaphthalene	71	71	0.00	82	105	115	148	25	50	30-150
Acenaphthylene	71	71	1.6	63	73	86	100	15	50	30-150
Acenaphthene	71	71	0.00	60	68	84	95	12	50	30-150
Fluorene	71	71	0.00	64	73	90	103	13	50	30-150
Phenanthrene	71	71	17	77	96	85	111	22	50	30-150
Anthracene	71	71	3.2	58	68	77	91	16	50	30-150
Fluoranthene	71	71	57	115	147	81	126	24	50	30-150
Pyrene	71	71	39	80	121	58	115	40	50	30-150
Benzo(a)anthracene	71	71	39	118	163	111	175	32	50	30-150
Chrysene	71	71	28	88	95	84	93	7	50	30-150
Benzo(b)fluoranthene	71	71	76	132	189	78	158	36	50	30-150
Benzo(k)fluoranthene	71	71	24	76	87	72	87	13	50	30-150
Benzo(a)pyrene	71	71	36	82	103	64	95	23	50	30-150
Indeno(1,2,3-cd)pyrene	71	71	19	61	70	59	72	13	50	30-150
Dibenzo(a,h)anthracene	71	71	0.00	49	74	69	104	41	50	30-150
Benzo(g,h,i)perylene	71	71	17	63	51	65	48	21	50	30-150

FORM III SV-2

K8947.D & K8948.D

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG15034-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: K8906 Lab Sample ID: WG15034-1

Instrument ID: GCMS-K Date Extracted: 03/10/05

Matrix: (soil/water) SOIL Date Analyzed: 03/22/05

Level:(low/med) LOW Time Analyzed: 1919

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG15034-LCS	WG15034-2	K8907	03/22/05	2009
02	PEN43SB2302	WV0952-1	K8971	03/29/05	2108
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
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29					
30					

COMMENTS:

FORM IV SV

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG15038-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: K8945 Lab Sample ID: WG15038-1

Instrument ID: GCMS-K Date Extracted: 03/11/05

Matrix: (soil/water) SOIL Date Analyzed: 03/28/05

Level:(low/med) LOW Time Analyzed: 1125

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG15038-LCS	WG15038-2	K8946	03/28/05	1216
02	PEN43SS2101MS	WG15038-3	K8947	03/28/05	1306
03	PEN43SS2101MSD	WG15038-4	K8948	03/28/05	1356
04	PEN43SB2401	WV0974-3	K8951	03/28/05	1622
05	PEN43SB2402	WV0974-4	K8952	03/28/05	1710
06	PEN43SS2101	WV0974-9	K8954	03/28/05	1849
07	PEN43SS2201	WV0974-10	K8955	03/28/05	1938
08	PEN43SS2301	WV0974-11	K8956	03/28/05	2029
09	PEN43SS3101	WV0974-19	K8957	03/28/05	2119
10	PEN43SS3601	WV0974-13	K8960	03/29/05	1211
11	PEN43SS2701	WV0974-15	K8961	03/29/05	1300
12	PEN43SS2901	WV0974-17	K8962	03/29/05	1348
13	PEN43SS3001	WV0974-18	K8963	03/29/05	1436
14	PEN43SS3201	WV0974-20	K8964	03/29/05	1526
15	PEN43SS3501	WV0974-12	K8965	03/29/05	1615
16	PEN43SS1801D	WV0974-6	K8966	03/29/05	1703
17	PEN43SS2801	WV0974-16	K8967	03/29/05	1751
18	PEN43SS1901	WV0974-7	K8968	03/29/05	1841
19	PEN43SS1801	WV0974-5	K8969	03/29/05	1931
20	PEN43SS3701	WV0974-14	K8970	03/29/05	2020
21	PEN43SS2801	WV0974-16DL	K8973	03/30/05	1139
22	PEN43SS1801	WV0974-5DL	K8974	03/30/05	1227
23	PEN43SS2001	WV0974-8	K8975	03/30/05	1316
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IV SV

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE ID

WG15046-BLANK

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: K8850 Lab Sample ID: WG15046-1

Instrument ID: GCMS-K Date Extracted: 03/11/05

Matrix: (soil/water) WATER Date Analyzed: 03/17/05

Level:(low/med) LOW Time Analyzed: 2105

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	WG15046-LCS	WG15046-2	K8851	03/17/05	2155
02	WG15046-LCSD	WG15046-3	K8852	03/17/05	2246
03	PEN43RB0306	WV0974-1	K8854	03/18/05	0025
04					
05					
06					
07					
08					
09					
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11					
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30					

COMMENTS:

FORM IV SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: KD510 DFTPP Injection Date: 03/17/05

Instrument ID: GCMS-K DFTPP Injection Time: 1542

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	55.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.6
70	Less than 2.0% of mass 69	0.5 (0.8)1
127	40.0 - 60.0% of mass 198	47.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.4
275	10.0 - 30.0% of mass 198	23.1
365	1.0 - 100.0% of mass 198	3.0
441	0.0 - 100.0% of mass 443	8.1 (75.7)2
442	40.0 - 100.0% of mass 198	50.0
443	17.0 - 23.0% of mass 442	10.6 (21.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0317	K8844	03/17/05	1607
02		SSTD5.00K0317	K8845	03/17/05	1656
03		SSTD3.00K0317	K8846	03/17/05	1747
04		SSTD2.00K0317	K8847	03/17/05	1836
05		SSTD0.50K0317	K8848	03/17/05	1927
06		SSTD0.20K0317	K8849	03/17/05	2015
07	WG15046-BLANK	WG15046-1	K8850	03/17/05	2105
08	WG15046-LCS	WG15046-2	K8851	03/17/05	2155
09	WG15046-LCSD	WG15046-3	K8852	03/17/05	2246
10	PEN43RB0306	WV0974-1	K8854	03/18/05	0025
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-K Calibration Date(s): 03/17/05 03/17/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1607 2015

LAB FILE ID: RF0.2: K8849 RF0.5: K8848 RF1: K8844
RF2: K8847 RF3: K8846 RF5: K8845

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF3	RF5	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2	
Naphthalene	0.784	0.746	0.672	0.662	0.654	0.594	AVRG		0.68545520	9.999	15.000	
2-Methylnaphthalene	0.439	0.431	0.412	0.369	0.466	0.351	AVRG		0.41154927	10.628	15.000	
Acenaphthylene	1.329	1.318	1.337	1.285	1.038	1.222	AVRG		1.25488766	9.100	15.000	
Acenaphthene	0.818	0.806	0.815	0.888	0.621	0.802	AVRG		0.79176438	11.294	15.000	
Fluorene	0.866	0.863	0.946	0.856	0.688	0.872	AVRG		0.84846492	10.068	15.000	
Phenanthrene	0.595	0.595	0.654	0.614	0.620	0.623	AVRG		0.61683770	3.520	15.000	
Anthracene	0.942	0.850	0.891	0.832	0.849	0.872	AVRG		0.87270874	4.555	15.000	
Fluoranthene	0.652	0.625	0.659	0.550	0.677	0.660	AVRG		0.63703182	7.203	15.000	
Pyrene	1.620	1.329	1.404	1.377	1.222	1.277	AVRG		1.37141792	10.106	15.000	
Benzo(a)anthracene	1728	6522	18582	27060	53461	99751	LINR	0.18810650	1.79793739	0.99246	0.99000	
Chrysene	1.458	1.210	1.241	1.195	1.145	1.165	AVRG		1.23554729	9.231	15.000	
Benzo(b)fluoranthene	1520	4187	13844	19725	45987	76636	LINR	0.11729370	1.37987365	0.99682	0.99000	
Benzo(k)fluoranthene	2.143	2.097	2.035	2.016	1.814	1.822	AVRG		1.98795698	6.992	15.000	
Benzo(a)pyrene	1.226	1.118	1.231	1.152	1.118	1.129	AVRG		1.16241804	4.521	15.000	
Indeno(1,2,3-cd)pyrene	1.286	1.196	1.295	1.169	1.225	1.244	AVRG		1.23571521	4.008	15.000	
Dibenzo(a,h)anthracene	1.090	0.911	0.891	0.977	0.942	0.952	AVRG		0.96050835	7.341	15.000	
Benzo(g,h,i)perylene	1.314	1.197	1.253	1.181	1.195	1.205	AVRG		1.22422990	4.134	15.000	
1-Methylnaphthalene	0.496	0.414	0.384	0.337	0.424	0.328	AVRG		0.39724361	15.697	15.000	<-
2-Methylnaphthalene-d10	0.352	0.305	0.295	0.274	0.334	0.248	AVRG		0.30144854	12.581	15.000	
Fluorene-d10	0.942	0.857	1.035	0.956	0.753	0.931	AVRG		0.91227850	10.596	15.000	
Pyrene-d10	1.293	1.159	1.144	1.181	1.011	1.095	AVRG		1.14713989	8.157	15.000	

Average %RSD test result.

Calculate Average %RSD: 9.960339546
Maximum Average %RSD: 30.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: KD514 DFTPP Injection Date: 03/22/05

Instrument ID: GCMS-K DFTPP Injection Time: 1035

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	53.8
70	Less than 2.0% of mass 69	0.4 (0.7)1
127	40.0 - 60.0% of mass 198	44.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	25.5
365	1.0 - 100.0% of mass 198	3.0
441	0.0 - 100.0% of mass 443	9.1 (71.8)2
442	40.0 - 100.0% of mass 198	64.9
443	17.0 - 23.0% of mass 442	12.6 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0322	K8896	03/22/05	1103
02	WG15034-BLANK	WG15034-1	K8906	03/22/05	1919
03	WG15034-LCS	WG15034-2	K8907	03/22/05	2009
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-K Calibration Date: 03/22/05 Time: 1103

Lab File ID: K8896 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.6523100	0.6523100	0.01	-4.77	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.3632200	0.3632200	0.01	-11.62	100.00	AVRG
Acenaphthylene	1.2550000	1.1780000	1.1780000	0.01	-6.14	100.00	AVRG
Acenaphthene	0.7920000	0.7281800	0.7281800	0.01	-8.06	20.00	AVRG
Fluorene	0.8480000	0.8751300	0.8751300	0.01	3.20	100.00	AVRG
Phenanthrene	0.6170000	0.5321400	0.5321400	0.01	-13.75	100.00	AVRG
Anthracene	0.8730000	0.6847600	0.6847600	0.01	-21.56	100.00	AVRG
Fluoranthene	0.6370000	0.5620200	0.5620200	0.01	-11.77	20.00	AVRG
Pyrene	1.3720000	0.9749300	0.9749300	0.01	-28.94	100.00	AVRG
Benzo(a)anthracene	0.9028400	1.0000000	0.4184500	0.01	-9.72	100.00	LINR
Chrysene	1.2360000	1.0230000	1.0230000	0.01	-17.23	100.00	AVRG
Benzo(b)fluoranthene	0.9309300	1.0000000	0.6066400	0.01	-6.91	100.00	LINR
Benzo(k)fluoranthene	1.9880000	1.4786000	1.4786000	0.01	-25.62	100.00	AVRG
Benzo(a)pyrene	1.1620000	0.9498800	0.9498800	0.01	-18.26	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	0.9631500	0.9631500	0.01	-22.08	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.6443900	0.6443900	0.01	-32.88	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	1.0359000	1.0359000	0.01	-15.37	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.3732000	0.3732000	0.01	-6.00	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3240900	0.3240900	0.01	7.67	100.00	AVRG
Fluorene-d10	0.9120000	0.9389500	0.9389500	0.01	2.96	100.00	AVRG
Pyrene-d10	1.1470000	0.8281400	0.8281400	0.01	-27.80	100.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: KD518 DFTPP Injection Date: 03/28/05

Instrument ID: GCMS-K DFTPP Injection Time: 1007

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	57.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	50.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	21.9
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	6.4 (82.0)2
442	40.0 - 100.0% of mass 198	40.5
443	17.0 - 23.0% of mass 442	7.8 (19.2)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0328	K8944	03/28/05	1036
02	WG15038-BLANK	WG15038-1	K8945	03/28/05	1125
03	WG15038-LCS	WG15038-2	K8946	03/28/05	1216
04	PEN43SS2101MS	WG15038-3	K8947	03/28/05	1306
05	PEN43SS2101MSD	WG15038-4	K8948	03/28/05	1356
06	PEN43SB2401	WV0974-3	K8951	03/28/05	1622
07	PEN43SB2402	WV0974-4	K8952	03/28/05	1710
08	PEN43SS2101	WV0974-9	K8954	03/28/05	1849
09	PEN43SS2201	WV0974-10	K8955	03/28/05	1938
10	PEN43SS2301	WV0974-11	K8956	03/28/05	2029
11	PEN43SS3101	WV0974-19	K8957	03/28/05	2119
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-K Calibration Date: 03/28/05 Time: 1036

Lab File ID: K8944 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.7574800	0.7574800	0.01	10.58	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.2835100	0.2835100	0.01	-31.02	100.00	AVRG
Acenaphthylene	1.2550000	0.8657200	0.8657200	0.01	-31.02	100.00	AVRG
Acenaphthene	0.7920000	0.7715000	0.7715000	0.01	-2.59	20.00	AVRG
Fluorene	0.8480000	0.7362800	0.7362800	0.01	-13.17	100.00	AVRG
Phenanthrene	0.6170000	0.6163100	0.6163100	0.01	-0.11	100.00	AVRG
Anthracene	0.8730000	0.7910800	0.7910800	0.01	-9.38	100.00	AVRG
Fluoranthene	0.6370000	0.6327500	0.6327500	0.01	-0.67	20.00	AVRG
Pyrene	1.3720000	1.1697000	1.1697000	0.01	-14.74	100.00	AVRG
Benzo(a)anthracene	0.9917000	1.0000000	0.4678800	0.01	-0.83	100.00	LINR
Chrysene	1.2360000	1.1217000	1.1217000	0.01	-9.25	100.00	AVRG
Benzo(b)fluoranthene	1.0726000	1.0000000	0.7093500	0.01	7.26	100.00	LINR
Benzo(k)fluoranthene	1.9880000	2.1838000	2.1838000	0.01	9.85	100.00	AVRG
Benzo(a)pyrene	1.1620000	1.1484000	1.1484000	0.01	-1.17	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	0.7731500	0.7731500	0.01	-37.45	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.5185400	0.5185400	0.01	-45.98	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	0.8441400	0.8441400	0.01	-31.03	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.5238800	0.5238800	0.01	31.96	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3136100	0.3136100	0.01	4.19	100.00	AVRG
Fluorene-d10	0.9120000	0.8838900	0.8838900	0.01	-3.08	100.00	AVRG
Pyrene-d10	1.1470000	0.9651400	0.9651400	0.01	-15.86	100.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: KD519 DFTPP Injection Date: 03/29/05

Instrument ID: GCMS-K DFTPP Injection Time: 1057

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.7
70	Less than 2.0% of mass 69	0.4 (0.6)1
127	40.0 - 60.0% of mass 198	49.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.6
275	10.0 - 30.0% of mass 198	23.2
365	1.0 - 100.0% of mass 198	3.4
441	0.0 - 100.0% of mass 443	5.5 (55.2)2
442	40.0 - 100.0% of mass 198	51.3
443	17.0 - 23.0% of mass 442	10.0 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0329	K8959	03/29/05	1123
02	PEN43SS3601	WV0974-13	K8960	03/29/05	1211
03	PEN43SS2701	WV0974-15	K8961	03/29/05	1300
04	PEN43SS2901	WV0974-17	K8962	03/29/05	1348
05	PEN43SS3001	WV0974-18	K8963	03/29/05	1436
06	PEN43SS3201	WV0974-20	K8964	03/29/05	1526
07	PEN43SS3501	WV0974-12	K8965	03/29/05	1615
08	PEN43SS1801D	WV0974-6	K8966	03/29/05	1703
09	PEN43SS2801	WV0974-16	K8967	03/29/05	1751
10	PEN43SS1901	WV0974-7	K8968	03/29/05	1841
11	PEN43SS1801	WV0974-5	K8969	03/29/05	1931
12	PEN43SS3701	WV0974-14	K8970	03/29/05	2020
13	PEN43SB2302	WV0952-1	K8971	03/29/05	2108
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-K Calibration Date: 03/29/05 Time: 1123

Lab File ID: K8959 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.7407800	0.7407800	0.01	8.14	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.3733700	0.3733700	0.01	-9.16	100.00	AVRG
Acenaphthylene	1.2550000	1.2462000	1.2462000	0.01	-0.70	100.00	AVRG
Acenaphthene	0.7920000	0.9286800	0.9286800	0.01	17.26	20.00	AVRG
Fluorene	0.8480000	0.8819500	0.8819500	0.01	4.00	100.00	AVRG
Phenanthrene	0.6170000	0.6746300	0.6746300	0.01	9.34	100.00	AVRG
Anthracene	0.8730000	0.7327000	0.7327000	0.01	-16.07	100.00	AVRG
Fluoranthene	0.6370000	0.7183800	0.7183800	0.01	12.78	20.00	AVRG
Pyrene	1.3720000	1.1264000	1.1264000	0.01	-17.90	100.00	AVRG
Benzo(a)anthracene	1.2641000	1.0000000	0.6193600	0.01	26.41	100.00	LINR
Chrysene	1.2360000	1.0641000	1.0641000	0.01	-13.91	100.00	AVRG
Benzo(b)fluoranthene	1.1168000	1.0000000	0.7413500	0.01	11.68	100.00	LINR
Benzo(k)fluoranthene	1.9880000	1.4478000	1.4478000	0.01	-27.17	100.00	AVRG
Benzo(a)pyrene	1.1620000	1.0146000	1.0146000	0.01	-12.68	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	0.8591200	0.8591200	0.01	-30.49	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.6034400	0.6034400	0.01	-37.14	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	0.9146800	0.9146800	0.01	-25.27	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.3778200	0.3778200	0.01	-4.83	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3199300	0.3199300	0.01	6.29	100.00	AVRG
Fluorene-d10	0.9120000	0.8903500	0.8903500	0.01	-2.37	100.00	AVRG
Pyrene-d10	1.1470000	0.9636400	0.9636400	0.01	-15.99	100.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Lab File ID: KD520 DFTPP Injection Date: 03/30/05

Instrument ID: GCMS-K DFTPP Injection Time: 1017

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	57.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.9
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	52.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 30.0% of mass 198	24.5
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	3.7 (33.7)2
442	40.0 - 100.0% of mass 198	55.0
443	17.0 - 23.0% of mass 442	11.0 (20.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0330	K8972	03/30/05	1047
02	PEN43SS2801	WV0974-16DL	K8973	03/30/05	1139
03	PEN43SS1801	WV0974-5DL	K8974	03/30/05	1227
04	PEN43SS2001	WV0974-8	K8975	03/30/05	1316
05					
06					
07					
08					
09					
10					
11					
12					
13					
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17					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-K Calibration Date: 03/30/05 Time: 1047

Lab File ID: K8972 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.6452100	0.6452100	0.01	-5.81	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.3550900	0.3550900	0.01	-13.60	100.00	AVRG
Acenaphthylene	1.2550000	1.0506000	1.0506000	0.01	-16.29	100.00	AVRG
Acenaphthene	0.7920000	0.7016300	0.7016300	0.01	-11.41	20.00	AVRG
Fluorene	0.8480000	0.7583400	0.7583400	0.01	-10.57	100.00	AVRG
Phenanthrene	0.6170000	0.6534800	0.6534800	0.01	5.91	100.00	AVRG
Anthracene	0.8730000	0.7353700	0.7353700	0.01	-15.76	100.00	AVRG
Fluoranthene	0.6370000	0.6723200	0.6723200	0.01	5.54	20.00	AVRG
Pyrene	1.3720000	1.1921000	1.1921000	0.01	-13.11	100.00	AVRG
Benzo(a)anthracene	1.3413000	1.0000000	0.6623100	0.01	-34.13	100.00	LINR
Chrysene	1.2360000	1.0491000	1.0491000	0.01	-15.12	100.00	AVRG
Benzo(b)fluoranthene	1.2538000	1.0000000	0.8406300	0.01	-25.38	100.00	LINR
Benzo(k)fluoranthene	1.9880000	1.6934000	1.6934000	0.01	-14.82	100.00	AVRG
Benzo(a)pyrene	1.1620000	1.1168000	1.1168000	0.01	-3.89	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	0.8342300	0.8342300	0.01	-32.51	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.6833200	0.6833200	0.01	-28.82	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	0.7290600	0.7290600	0.01	-40.44	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.3848000	0.3848000	0.01	-3.07	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3199400	0.3199400	0.01	6.29	100.00	AVRG
Fluorene-d10	0.9120000	0.7397700	0.7397700	0.01	-18.88	100.00	AVRG
Pyrene-d10	1.1470000	1.0216000	1.0216000	0.01	-10.93	100.00	AVRG

FORM VII PEST

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE _____ OF _____

CLIENT NAS Pensacola		JOB NUMBER CT0355	
SUBJECT PAH			
BASED ON 8270C SIM		DRAWING NUMBER	
BY EWS	CHECKED BY	APPROVED BY	DATE

PEN4355 1801

Fluoranthene = 210 ug/kg

$$\frac{114230 \text{ area} \times 800 \text{ ng} \times 2 \text{ df}}{49988 \text{ area} \times 30 \text{ g} \times 0.637 \text{ rf} \times 0.905 \text{ \%solid}} = 211 \text{ ug/kg}$$

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/06/05
Received Date: 03/08/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 12:27
Report Date: 03/31/2005
Matrix: SOIL
% Solids: 90.5

Lab ID: WV0974-5DL
Client ID: PEN43SS1801
SDG: CTO355-3
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	2	2.0	20	44	2
91-57-6	2-Methylnaphthalene	U	1	2.0	20	44	1
208-96-8	Acenaphthylene	I	5	2.0	20	44	1
83-32-9	Acenaphthene	U	2	2.0	20	44	2
86-73-7	Fluorene	U	1	2.0	20	44	1
85-01-8	Phenanthrene		45	2.0	20	44	3
120-12-7	Anthracene	I	7	2.0	20	44	2
206-44-0	Fluoranthene		210	2.0	20	44	4
129-00-0	Pyrene		110	2.0	20	44	4
56-55-3	Benzo(a)anthracene		120	2.0	20	44	2
218-01-9	Chrysene		83	2.0	20	44	3
205-99-2	Benzo(b)fluoranthene		210	2.0	20	44	4
207-08-9	Benzo(k)fluoranthene		57	2.0	20	44	3
50-32-8	Benzo(a)pyrene		94	2.0	20	44	2
193-39-5	Indeno(1,2,3-cd)pyrene		51	2.0	20	44	4
53-70-3	Dibenzo(a,h)anthracene	U	4	2.0	20	44	4
191-24-2	Benzo(g,h,i)perylene	I	41	2.0	20	44	4
90-12-0	1-Methylnaphthalene	U	22	2.0	20	44	22
7297-45-2	2-Methylnaphthalene-d10		91%				
81103-79-9	Fluorene-d10		103%				
1718-52-1	Pyrene-d10		80%				

Data File: \\Target_server\GG\chem\gcms-k.i\K033005.b\K8974.D
Report Date: 31-Mar-2005 10:49

Katahdin Analytical Services

Data file : \\Target_server\GG\chem\gcms-k.i\K033005.b\K8974.D
Lab Smp Id: WV0974-5DL Client Smp ID: PEN43SS1801
Inj Date : 30-MAR-2005 12:27 MS Autotune Date: 01-MAR-2004 10:18
Operator : JCG Inst ID: gcms-k.i
Smp Info : WV0974-5DL
Misc Info : SW846 M8270C
Comment :
Method : \\Target_server\GG\chem\gcms-k.i\K033005.b\ksim023.m
Meth Date : 30-Mar-2005 11:21 cgomez Quant Type: ISTD
Cal Date : 17-MAR-2005 20:15 Cal File: K8849.D
Als bottle: 4
Dil Factor: 2.00000
Integrator: HP RTE Compound Sublist: tetrat355001.sub
Target Version: 4.12
Processing Host: TARGET06

Concentration Formula: Amt * DF * (Vt/Vo)* 1000 * (100/(100 - M)) * CpndVari

Name	Value	Description
DF	2.000	Dilution Factor
Vt	0.00100	Volume of final extract (L)
Vo	0.03000	Sample Weight
M	9.503	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-D4	152	9.811	9.816	(1.000)	16408	0.80000	
* 2 Naphthalene-D8	136	12.643	12.644	(1.000)	62234	0.80000	
$ 4 2-Methylnaphthalene-d10	150	14.244	14.255	(1.127)	21305	0.90851	66.9
7 Acenaphthylene	152	16.434	16.434	(0.980)	3384	0.06796	5.01(a)
* 8 Acenaphthene-D10	164	16.771	16.771	(1.000)	31743	0.80000	
$ 10 Fluorene-d10	176	18.017	18.028	(1.074)	37163	1.02666	75.6
* 14 Phenanthrene-D10	188	20.311	20.310	(1.000)	49988	0.80000	
15 Phenanthrene	178	20.364	20.364	(1.003)	23552	0.61106	45.0
16 Anthracene	178	20.472	20.498	(1.008)	5085	0.09325	6.87(a)
18 Fluoranthene	202	23.205	23.220	(1.143)	114230	2.86974	211
$ 19 Pyrene-d10	212	23.704	23.705	(0.889)	39484	0.79576	58.6
20 Pyrene	202	23.745	23.746	(0.890)	90747	1.52981	113
21 Benzo(a)anthracene	228	26.642	26.642	(0.999)	37070	1.69138	124
* 22 Chrysene-D12	240	26.665	26.665	(1.000)	34603	0.80000	
23 Chrysene	228	26.723	26.723	(1.002)	60064	1.12391	82.8
25 Benzo(b)fluoranthene	252	29.062	29.061	(0.974)	42479	2.81935	208(M)
26 Benzo(k)fluoranthene	252	29.108	29.119	(0.975)	33258	0.77790	57.3(M)
27 Benzo(a)pyrene	252	29.733	29.733	(0.996)	31732	1.26932	93.5
* 28 Perylene-D12	264	29.849	29.860	(1.000)	17205	0.80000	
29 Indeno(1,2,3-cd)pyrene	276	31.899	31.900	(1.069)	18541	0.69767	51.4
31 Benzo(g,h,i)perylene	276	32.441	32.442	(1.087)	14551	0.55267	40.7(aQ)

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-3

Instrument ID: GCMS-K Calibration Date(s): 03/17/05 03/17/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1607 2015

LAB FILE ID: RF0.2: K8849 RF0.5: K8848 RF1: K8844
RF2: K8847 RF3: K8846 RF5: K8845

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF3	RF5	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2
Naphthalene	0.784	0.746	0.672	0.662	0.654	0.594	AVRG		0.68545520	9.999	15.000
2-Methylnaphthalene	0.439	0.431	0.412	0.369	0.466	0.351	AVRG		0.41154927	10.628	15.000
Acenaphthylene	1.329	1.318	1.337	1.285	1.038	1.222	AVRG		1.25488766	9.100	15.000
Acenaphthene	0.818	0.806	0.815	0.888	0.621	0.802	AVRG		0.79176438	11.294	15.000
Fluorene	0.866	0.863	0.946	0.856	0.688	0.872	AVRG		0.84846492	10.068	15.000
Phenanthrene	0.595	0.595	0.654	0.614	0.620	0.623	AVRG		0.61683770	3.520	15.000
Anthracene	0.942	0.850	0.891	0.832	0.849	0.872	AVRG		0.87270874	4.555	15.000
Fluoranthene	0.652	0.625	0.659	0.550	0.677	0.660	AVRG		0.63703182	7.203	15.000
Pyrene	1.620	1.329	1.404	1.377	1.222	1.277	AVRG		1.37141792	10.106	15.000
Benzo(a)anthracene	1728	6522	18582	27060	53461	99751	LINR	0.18810650	1.79793739	0.99246	0.99000
Chrysene	1.458	1.210	1.241	1.195	1.145	1.165	AVRG		1.23554729	9.231	15.000
Benzo(b)fluoranthene	1520	4187	13844	19725	45987	76636	LINR	0.11729370	1.37987365	0.99682	0.99000
Benzo(k)fluoranthene	2.143	2.097	2.035	2.016	1.814	1.822	AVRG		1.98795698	6.992	15.000
Benzo(a)pyrene	1.226	1.118	1.231	1.152	1.118	1.129	AVRG		1.16241804	4.521	15.000
Indeno(1,2,3-cd)pyrene	1.286	1.196	1.295	1.169	1.225	1.244	AVRG		1.23571521	4.008	15.000
Dibenzo(a,h)anthracene	1.090	0.911	0.891	0.977	0.942	0.952	AVRG		0.96050835	7.341	15.000
Benzo(g,h,i)perylene	1.314	1.197	1.253	1.181	1.195	1.205	AVRG		1.22422990	4.134	15.000
1-Methylnaphthalene	0.496	0.414	0.384	0.337	0.424	0.328	AVRG		0.39724361	15.697	15.000 <-
2-Methylnaphthalene-d10	0.352	0.305	0.295	0.274	0.334	0.248	AVRG		0.30144854	12.581	15.000
Fluorene-d10	0.942	0.857	1.035	0.956	0.753	0.931	AVRG		0.91227850	10.596	15.000
Pyrene-d10	1.293	1.159	1.144	1.181	1.011	1.095	AVRG		1.14713989	8.157	15.000

Average %RSD test result.

Calculate Average %RSD: 9.960339546
Maximum Average %RSD: 30.00000000

Note: Passes Average %RSD Test.

FORM VI SV

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**G. WALKER**	**DATE:**	**APRIL 15, 2005**
FROM:	**ERIN M. FAUST**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – METALS**
CTO – 355 NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – 3552

SAMPLES: 19/Soil/

PEN43SB1101	PEN43SB1102	PEN43SB1102D
PEN43SB1201	PEN43SB1202	PEN43SB1301
PEN43SB1302	PEN43SB1401	PEN43SB1402
PEN43SB1501	PEN43SB1502	PEN43SB1601
PEN43SB1602	PEN43SB1701	PEN43SB1702
PEN43SB1801	PEN43SB1802	PEN43SB1901
PEN43SB1902		

1/Aqueous/

PEN43RB0304

Overview

The sample set for CTO 355, NAS Pensacola, SDG 3552, consists of nineteen (19) soil environmental samples and one (1) aqueous rinsate blank. One (1) field duplicate pair (PEN43SB1102 / PEN43SB1102D) is included within this SDG.

All samples were analyzed for arsenic, barium, copper, lead and vanadium. The samples were collected by TetraTech NUS on March 4, 2005 and analyzed by Katahdin Analytical Services under Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. Metals analyses were conducted using SW-846 method 6010B.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verification Results
• Laboratory Blank Analyses
* • ICP Interference Check Sample Results
• Matrix Spike/Matrix Spike Duplicate Results
* • Laboratory Control Sample Results
• ICP Serial Dilution Results
• Field Duplicate Results
* • Sample Quantitation
* • Detection Limits

* - All quality control criteria were met for this parameter.

Laboratory Blank Analyses

The following contaminant was detected in the laboratory method blanks at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
Lead	2.09 µg/L	1.045 mg/kg

An action level of 5X the maximum concentration has been used to evaluate the sample data for blank contamination. Sample aliquot, percent solids and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results, less than the action level, reported for lead were qualified "U" as a result of laboratory blank contamination.

Matrix Spike/Matrix Spike Duplicate Results

The matrix spike (MS) and matrix spike duplicate (MSD) percent recoveries for copper and lead in sample PEN43SB1202 were > 125% quality control limit. The positive results reported for lead and copper, in this sample only, were qualified as estimated, "J".

ICP Serial Dilution Results

The ICP serial dilution percent difference for copper in sample PEN43SB1202 was > 10% quality control limit and the original sample result was > 50X the Instrument Detection Limit (IDL). The positive result reported for copper, in this sample only, was qualified as estimated, "J".

Field Duplicate Results

Field Duplicate imprecision (difference > 4X CRDL) was noted barium and lead. Positive results reported for barium and lead in the soil samples were qualified as estimated, "J".

Notes

Sample PEN43SB1101D was renamed PEN43SB1102D as per Bill Olson because the sample was incorrectly labeled at the time of collection.

Sample PEN43SB1101 was diluted 10X for copper and lead.

Sample PEN43SB1401 was diluted 2X for copper and vanadium and 10X for lead.

Sample PEN43SB1701 was diluted 2X for arsenic, copper, lead and vanadium.

The rinsate blank sample was not used to establish blank action levels and was not qualified due to laboratory blank contamination.

The Contract Required Detection Limit (CRDL) percent recoveries for lead on 3/24/04 at 00:11 and 3/28/04 at 18:40 were > 120% quality control limit. No validation action was taken based on the CRDL percent recoveries.

The CRDL percent recovery for arsenic on 3/31/04 at 19:43 was < 80% quality control limit. No validation action was taken based on the CRDL percent recoveries.

The Practical Quantitation Limit (PQL) percent recoveries for arsenic on 3/28/04 and 3/31/04 were < 80% quality control limit. No validation action was taken based on the PQL percent recoveries.

The MS and MSD percent recoveries for copper and lead in sample PEN43SB1701 were outside the 75-125% quality control limits. No validation action was necessary because the concentrations of copper and lead in the un-spiked sample were greater than four times the concentrations of these analytes in the spiking solution.

The MS/MSD RPDs for copper and lead in samples PEN43SB1202 and PEN43SB1701 were > 35% quality control limit. The laboratory did not perform laboratory duplicate analyses for samples within this SDG. No validation action was taken based on the MS/MSD RPDs.

Executive Summary

Laboratory Performance: Lead was present in the laboratory method blanks.

Other Factors Affecting Data Quality: Copper and lead were qualified due to MS noncompliance. Copper was qualified due to ICP serial dilution noncompliance. Field duplicate imprecision was noted for barium and lead.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", July 2002 and the NFESC document entitled "Navy IRCDQM" (September 1999).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Erin M Faust

Tetra Tech NUS
Erin M. Faust
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB1101	nsample	PEN43SB1102	nsample	PEN43SB1102D
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-003	lab_id	WV0943-005	lab_id	WV0943-004
qc_type	NM	qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG	units	MG/KG
Pct_Solids	88.6	Pct_Solids	95.2	Pct_Solids	94.6
DUP_OF:		DUP_OF:		DUP_OF:	PEN43SB1102

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	4.2			
BARIUM	306		J	G
COPPER	3380	JJ		
LEAD	1370	J	J	G
VANADIUM	8.0			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.21	U	U	
BARIUM	1.5		J	G
COPPER	0.74	IJ		
LEAD	1.4	J	J	G
VANADIUM	2.4			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.31	I		
BARIUM	15.1		J	G
COPPER	2.2	JJ		
LEAD	4.0	J	J	G
VANADIUM	2.3			

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB1201	nsample	PEN43SB1202	nsample	PEN43SB1301
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-006	lab_id	WV0943-007	lab_id	WV0943-008
qc_type	NM	qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG	units	MG/KG
Pct_Solids	92.9	Pct_Solids	93.1	Pct_Solids	94.6
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.20	U	U	
BARIUM	58.6		J	G
COPPER	22.5	JJ		
LEAD	87.7	J	J	G
VANADIUM	2.3			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.56			
BARIUM	10.0		J	G
COPPER	10.6	JJ	J	DI
LEAD	37.5	J	J	DG
VANADIUM	3.0			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.24	U	U	
BARIUM	1.3		J	G
COPPER	0.95	IJ		
LEAD	1.1	J	J	G
VANADIUM	1.9	I		

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB1302
samp_date	3/4/2005
lab_id	WV0943-009
qc_type	NM
units	MG/KG
Pct_Solids	93.3
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.38	I		
BARIUM	1.4		J	G
COPPER	0.63	IJ		
LEAD	0.58	J	U	A
VANADIUM	1.6	I		

nsample	PEN43SB1401
samp_date	3/4/2005
lab_id	WV0943-012
qc_type	NM
units	MG/KG
Pct_Solids	86.0
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	11.4			
BARIUM	939		J	G
COPPER	1220	JJ		
LEAD	5500	J	J	G
VANADIUM	156			

nsample	PEN43SB1402
samp_date	3/4/2005
lab_id	WV0943-013
qc_type	NM
units	MG/KG
Pct_Solids	92.7
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.25	I		
BARIUM	7.6		J	G
COPPER	5.1	JJ		
LEAD	9.6	J	J	G
VANADIUM	6.2			

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB1501
samp_date	3/4/2005
lab_id	WV0943-010
qc_type	NM
units	MG/KG
Pct_Solids	94.6
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.35	I		
BARIUM	7.7		J	G
COPPER	1.4	IJ		
LEAD	3.2	J	J	G
VANADIUM	2.2			

nsample	PEN43SB1502
samp_date	3/4/2005
lab_id	WV0943-011
qc_type	NM
units	MG/KG
Pct_Solids	95.3
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.25	U	U	
BARIUM	3.7		J	G
COPPER	0.94	IJ		
LEAD	1.3	J	J	G
VANADIUM	1.6	I		

nsample	PEN43SB1601
samp_date	3/4/2005
lab_id	WV0943-014
qc_type	NM
units	MG/KG
Pct_Solids	95.6
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.32	I		
BARIUM	14.1		J	G
COPPER	1.5	IJ		
LEAD	1.2	J	J	G
VANADIUM	38.2			

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB1602	nsample	PEN43SB1701	nsample	PEN43SB1702
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-015	lab_id	WV0943-016	lab_id	WV0943-017
qc_type	NM	qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG	units	MG/KG
Pct_Solids	90.4	Pct_Solids	90.6	Pct_Solids	95.2
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.24	U	U	
BARIUM	4.8		J	G
COPPER	1.1	IJ		
LEAD	2.4	J	J	G
VANADIUM	26.4			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	7.3			
BARIUM	366		J	G
COPPER	500	JJ		
LEAD	1460	J	J	G
VANADIUM	40.1			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.32	I		
BARIUM	1.1		J	G
COPPER	0.54	IJ		
LEAD	0.96	J	J	G
VANADIUM	1.8			

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB1801	nsample	PEN43SB1802	nsample	PEN43SB1901
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-018	lab_id	WV0943-019	lab_id	WV0943-020
qc_type	NM	qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG	units	MG/KG
Pct_Solids	93.1	Pct_Solids	94.5	Pct_Solids	94.9
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.41	I		
BARIUM	2.8		J	G
COPPER	1.7	IJ		
LEAD	6.5	J	J	G
VANADIUM	1.8	I		

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.50	I		
BARIUM	1.8		J	G
COPPER	1.2	IJ		
LEAD	2.8	J	J	G
VANADIUM	2.2			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.33	I		
BARIUM	1.6		J	G
COPPER	0.45	IJ		
LEAD	0.81	J	J	G
VANADIUM	2.4			

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB1902
samp_date	3/4/2005
lab_id	WV0943-021
qc_type	NM
units	MG/KG
Pct_Solids	94.8
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.23	U	U	
BARIUM	0.56		J	G
COPPER	0.78	IJ		
LEAD	0.56	J	U	A
VANADIUM	0.83	I		

PROJ_NO: 4821

SDG: 3552 MEDIA: WATER DATA FRACTION: M

nsample	PEN43RB0304
samp_date	3/4/2005
lab_id	WV0943-001
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	2.81	U	U	
BARIUM	6.6			
COPPER	1.16	U	U	
LEAD	2.07	U	U	
VANADIUM	0.83	U	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43RB0304

Matrix: WATER **SDG Name:** CTO355-2

Percent Solids: 0.00 **Lab Sample ID:** WV0943-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	6.6			P	1	5.0	0.29
7440-50-8	COPPER, TOTAL	1.16	U		P	1	25	1.16
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7440-62-2	VANADIUM, TOTAL	0.83	U		P	1	25	0.83

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1101

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 88.6 **Lab Sample ID:** WV0943-003

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	4.2			P	1	0.76	0.27
7440-39-3	BARIUM, TOTAL	306			P	1	0.47	0.05
7440-50-8	COPPER, TOTAL	3380		JJ	P	10	24	2.39
7439-92-1	LEAD, TOTAL	1370		J	P	10	4.7	1.96
7440-62-2	VANADIUM, TOTAL	8.0			P	1	2.4	0.48

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1101D

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 94.6 **Lab Sample ID:** WV0943-004

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.31	I		P	1	0.63	0.22
7440-39-3	BARIUM, TOTAL	15.1			P	1	0.39	0.04
7440-50-8	COPPER, TOTAL	2.2		JJ	P	1	2.0	0.20
7439-92-1	LEAD, TOTAL	4.0		J	P	1	0.39	0.16
7440-62-2	VANADIUM, TOTAL	2.3			P	1	2.0	0.40

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1102

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 95.2 **Lab Sample ID:** WV0943-005

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.21	U		P	1	0.60	0.21
7440-39-3	BARIUM, TOTAL	1.5			P	1	0.37	0.04
7440-50-8	COPPER, TOTAL	0.74	I	JJ	P	1	1.9	0.19
7439-92-1	LEAD, TOTAL	1.4		J	P	1	0.37	0.15
7440-62-2	VANADIUM, TOTAL	2.4			P	1	1.9	0.38

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1201

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 92.9 **Lab Sample ID:** WV0943-006

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.20	U		P	1	0.56	0.20
7440-39-3	BARIUM, TOTAL	58.6			P	1	0.35	0.04
7440-50-8	COPPER, TOTAL	22.5		JJ	P	1	1.8	0.18
7439-92-1	LEAD, TOTAL	87.7		J	P	1	0.35	0.15
7440-62-2	VANADIUM, TOTAL	2.3			P	1	1.8	0.36

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1202

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 93.1 **Lab Sample ID:** WV0943-007

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.56			P	1	0.56	0.20
7440-39-3	BARIUM, TOTAL	10.0			P	1	0.35	0.04
7440-50-8	COPPER, TOTAL	10.6		JJ	P	1	1.8	0.18
7439-92-1	LEAD, TOTAL	37.5		J	P	1	0.35	0.15
7440-62-2	VANADIUM, TOTAL	3.0			P	1	1.8	0.36

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1301

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 94.6 **Lab Sample ID:** WV0943-008

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.24	U		P	1	0.67	0.24
7440-39-3	BARIUM, TOTAL	1.3			P	1	0.42	0.04
7440-50-8	COPPER, TOTAL	0.95	I	JJ	P	1	2.1	0.21
7439-92-1	LEAD, TOTAL	1.1		J	P	1	0.42	0.17
7440-62-2	VANADIUM, TOTAL	1.9	I		P	1	2.1	0.43

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1302

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 93.3 **Lab Sample ID:** WV0943-009

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.38	I		P	1	0.70	0.24
7440-39-3	BARIUM, TOTAL	1.4			P	1	0.44	0.04
7440-50-8	COPPER, TOTAL	0.63	I	JJ	P	1	2.2	0.22
7439-92-1	LEAD, TOTAL	0.58		J	P	1	0.44	0.18
7440-62-2	VANADIUM, TOTAL	1.6	I		P	1	2.2	0.44

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1401

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 86.0 **Lab Sample ID:** WV0943-012

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	11.4			P	1	0.57	0.20
7440-39-3	BARIUM, TOTAL	939			P	1	0.36	0.04
7440-50-8	COPPER, TOTAL	1220		JJ	P	2	3.6	0.36
7439-92-1	LEAD, TOTAL	5500		J	P	10	3.6	1.48
7440-62-2	VANADIUM, TOTAL	156			P	2	3.6	0.72

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1402

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 92.7 **Lab Sample ID:** WV0943-013

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.25	I		P	1	0.60	0.21
7440-39-3	BARIUM, TOTAL	7.6			P	1	0.37	0.04
7440-50-8	COPPER, TOTAL	5.1		JJ	P	1	1.9	0.19
7439-92-1	LEAD, TOTAL	9.6		J	P	1	0.37	0.16
7440-62-2	VANADIUM, TOTAL	6.2			P	1	1.9	0.38

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1501

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 94.6 **Lab Sample ID:** WV0943-010

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.35	I		P	1	0.60	0.21
7440-39-3	BARIUM, TOTAL	7.7			P	1	0.37	0.04
7440-50-8	COPPER, TOTAL	1.4	I	JJ	P	1	1.9	0.19
7439-92-1	LEAD, TOTAL	3.2		J	P	1	0.37	0.15
7440-62-2	VANADIUM, TOTAL	2.2			P	1	1.9	0.38

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1502

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 95.3 **Lab Sample ID:** WV0943-011

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.25	U		P	1	0.72	0.25
7440-39-3	BARIUM, TOTAL	3.7			P	1	0.45	0.05
7440-50-8	COPPER, TOTAL	0.94	I	JJ	P	1	2.3	0.23
7439-92-1	LEAD, TOTAL	1.3		J	P	1	0.45	0.19
7440-62-2	VANADIUM, TOTAL	1.6	I		P	1	2.3	0.46

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1601

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 95.6 **Lab Sample ID:** WV0943-014

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.32	I		P	1	0.54	0.19
7440-39-3	BARIUM, TOTAL	14.1			P	1	0.34	0.03
7440-50-8	COPPER, TOTAL	1.5	I	JJ	P	1	1.7	0.17
7439-92-1	LEAD, TOTAL	1.2		J	P	1	0.34	0.14
7440-62-2	VANADIUM, TOTAL	38.2			P	1	1.7	0.34

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1602

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 90.4 **Lab Sample ID:** WV0943-015

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.24	U		P	1	0.67	0.24
7440-39-3	BARIUM, TOTAL	4.8			P	1	0.42	0.04
7440-50-8	COPPER, TOTAL	1.1	I	JJ	P	1	2.1	0.21
7439-92-1	LEAD, TOTAL	2.4		J	P	1	0.42	0.17
7440-62-2	VANADIUM, TOTAL	26.4			P	1	2.1	0.42

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1701

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 90.6 **Lab Sample ID:** WV0943-016

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	7.3			P	2	1.4	0.50
7440-39-3	BARIUM, TOTAL	366			P	1	0.44	0.04
7440-50-8	COPPER, TOTAL	500		JJ	P	2	4.4	0.45
7439-92-1	LEAD, TOTAL	1460		J	P	2	0.88	0.37
7440-62-2	VANADIUM, TOTAL	40.1			P	2	4.4	0.90

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1702

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 95.2 **Lab Sample ID:** WV0943-017

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.32	I		P	1	0.52	0.18
7440-39-3	BARIUM, TOTAL	1.1			P	1	0.32	0.03
7440-50-8	COPPER, TOTAL	0.54	I	JJ	P	1	1.6	0.16
7439-92-1	LEAD, TOTAL	0.96		J	P	1	0.32	0.13
7440-62-2	VANADIUM, TOTAL	1.8			P	1	1.6	0.33

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1801

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 93.1 **Lab Sample ID:** WV0943-018

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.41	I		P	1	0.67	0.23
7440-39-3	BARIUM, TOTAL	2.8			P	1	0.42	0.04
7440-50-8	COPPER, TOTAL	1.7	I	JJ	P	1	2.1	0.21
7439-92-1	LEAD, TOTAL	6.5		J	P	1	0.42	0.17
7440-62-2	VANADIUM, TOTAL	1.8	I		P	1	2.1	0.42

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1802

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 94.5 **Lab Sample ID:** WV0943-019

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.50	I		P	1	0.60	0.21
7440-39-3	BARIUM, TOTAL	1.8			P	1	0.38	0.04
7440-50-8	COPPER, TOTAL	1.2	I	JJ	P	1	1.9	0.19
7439-92-1	LEAD, TOTAL	2.8		J	P	1	0.38	0.16
7440-62-2	VANADIUM, TOTAL	2.2			P	1	1.9	0.38

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1901

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 94.9 **Lab Sample ID:** WV0943-020

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.33	I		P	1	0.46	0.16
7440-39-3	BARIUM, TOTAL	1.6			P	1	0.29	0.03
7440-50-8	COPPER, TOTAL	0.45	I	JJ	P	1	1.4	0.15
7439-92-1	LEAD, TOTAL	0.81		J	P	1	0.29	0.12
7440-62-2	VANADIUM, TOTAL	2.4			P	1	1.4	0.29

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1902

Matrix: SOIL **SDG Name:** CTO355-2

Percent Solids: 94.8 **Lab Sample ID:** WV0943-021

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.23	U		P	1	0.66	0.23
7440-39-3	BARIUM, TOTAL	0.56			P	1	0.41	0.04
7440-50-8	COPPER, TOTAL	0.78	I	JJ	P	1	2.0	0.21
7439-92-1	LEAD, TOTAL	0.56		J	P	1	0.41	0.17
7440-62-2	VANADIUM, TOTAL	0.83	I		P	1	2.0	0.42

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

APPENDIX C
SUPPORT DOCUMENTATION

WV0943

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 2602 PAGE 1 OF 3

PROJECT NO: 4821	FACILITY: NAS PEN	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Analytical A. Coby
SAMPLERS (SIGNATURE) Matt D. Olson		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX 8428 7247 7090		CITY, STATE Westbrook Me

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): P G G G G

PRESERVATIVE USED: HNO3 4° 4° 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	6010B As/Ba/Cu/Pb/UA	8270 TCL SVOC	8270 SIM PAHs	6010B As/Ba/Cu/Pb/UA	8270 SIM TCL SVOC/PAH				COMMENTS
3/4	0800	PEN43 RB0304	—	—	—	QC	G	5	1	2	2	—	—				
	0805	PEN43 SB1101		2	3	SO	G	2	—	—	—	1	1				
	0805	PEN43 SB1101D		2	3	SO	G	2	—	—	—	1	1				
	0810	PEN43 SB1102		5	7	SO	G	2	—	—	—	1	1				
	0830	PEN43 SB1201		2	3	SO	G	2	—	—	—	1	1				
	0835	PEN43 SB1202		7	8	SO	G	2	—	—	—	1	1				
	0835	PEN43 SB1202MS		7	8	SO	G	2	—	—	—	1	1				
	0835	PEN43 SB1202MSD		7	8	SO	G	2	—	—	—	1	1				
	0855	PEN43 SB1301		2	3	SO	G	2	—	—	—	1	1				
	0900	PEN43 SB1302		5	7	SO	G	2	—	—	—	1	1				
	0920	PEN43 SB1501		2	3	SO	G	2	—	—	—	1	1				
	0925	PEN43 SB1502		7	8	SO	G	2	—	—	—	1	1				
	0940	PEN43 SB1401		2	3	SO	G	2	—	—	—	1	1				

1. RELINQUISHED BY Matt Olson	DATE 3/4/05	TIME 1630	1. RECEIVED BY [illegible]	DATE 3/5/05	TIME 1235
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

000009

WW0943, WW0951

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2601 | PAGE 2 OF 3

PROJECT NO: 4821	FACILITY: PEW 43	PROJECT MANAGER: G. Walker	PHONE NUMBER: 850 385 9899
LABORATORY NAME AND CONTACT: Katahdin Andrea Colby			
SAMPLERS (SIGNATURE): [signature]	FIELD OPERATIONS LEADER: Bill Olson	PHONE NUMBER: 850 385 9899	ADDRESS: 340 County Rd #5
CARRIER/WAYBILL NUMBER: FEDEX 8428 7247 7090			CITY, STATE: Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 6010B As/Ba/Cu/Pb/Va	8270/SIM TCL SVOC/PAHS							COMMENTS
3/4	0943	PEW43SB1402		4	6	50	G	2	1	1							
3/4	1010	PEW43SB1601		2	3	50	G	2	1	1							
3/4	1015	PEW43SB1602		7	8	50	G	2	1	1							
3/4	1025	PEW43SB1701		2	3	50	G	2	1	1							
3/4	1025	PEW43SB1701MS		2	3	50	G	2	1	1							
3/4	1025	PEW43SB1701MSD		2	3	50	G	2	1	1							
3/4	1030	PEW43SB1702		5	7	50	G	2	1	1							
3/4	1050	PEW43SB1801		2	3	50	G	2	1	1							
3/4	1055	PEW43SB1802		7	9	50	G	2	1	1							
3/4	1120	PEW43SB1901		2	3	50	G	2	1	1							
3/4	1125	PEW43SB1902		6	8	50	G	2	1	1							
3/4	1225	PEW43SB2501		2	3	50	G	2	1	1							
3/4	1225	PEW43SB2501D		2	3	50	G	2	1	1							

1. RELINQUISHED BY: [signature]	DATE: 3/4/05	TIME: 1630	1. RECEIVED BY: [signature]	DATE: 3/5/05	TIME: 1235
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

000010

HOLDTIME

SDG 3552

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB1301	WV0943-008	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1501	WV0943-010	NM	3/4/2005	3/17/2005	3/29/2005	13	12	25
M	MG/KG	PEN43SB1501	WV0943-010	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1402	WV0943-013	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1402	WV0943-013	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1401	WV0943-012	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1401	WV0943-012	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24
M	MG/KG	PEN43SB1302	WV0943-009	NM	3/4/2005	3/17/2005	3/29/2005	13	12	25
M	MG/KG	PEN43SB1101D	WV0943-004	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1301	WV0943-008	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1601	WV0943-014	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1202	WV0943-007	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1202	WV0943-007	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1201	WV0943-006	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24
M	MG/KG	PEN43SB1201	WV0943-006	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB1102	WV0943-005	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24
M	MG/KG	PEN43SB1102	WV0943-005	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1101D	WV0943-004	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24
M	MG/KG	PEN43SB1302	WV0943-009	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1702	WV0943-017	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1101	WV0943-003	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1902	WV0943-021	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1902	WV0943-021	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1901	WV0943-020	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1901	WV0943-020	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1802	WV0943-019	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1802	WV0943-019	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1502	WV0943-011	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1801	WV0943-018	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1502	WV0943-011	NM	3/4/2005	3/17/2005	3/29/2005	13	12	25
M	MG/KG	PEN43SB1702	WV0943-017	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1701	WV0943-016	NM	3/4/2005	3/17/2005	3/31/2005	13	14	27
M	MG/KG	PEN43SB1701	WV0943-016	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB1701	WV0943-016	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1602	WV0943-015	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1602	WV0943-015	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1601	WV0943-014	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1401	WV0943-012	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1801	WV0943-018	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1101	WV0943-003	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24
M	MG/KG	PEN43SB1401	WV0943-012	NM	3/4/2005	3/17/2005	3/29/2005	13	12	25
M	UG/L	PEN43RB0304	WV0943-001	NM	3/4/2005	3/8/2005	3/24/2005	4	16	20
M	UG/L	PEN43RB0304	WV0943-001	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB1502	WV0943-11	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1502	WV0943-43	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1601	WV0943-14	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1601	WV0943-46	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1602	WV0943-15	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1602	WV0943-47	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1701	WV0943-16	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1701	WV0943-48	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SB1501	WV0943-42	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1801	WV0943-18	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1702	WV0943-49	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1802	WV0943-19	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1802	WV0943-51	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1901	WV0943-20	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1901	WV0943-68	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1902	WV0943-69	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1902	WV0943-21	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1702	WV0943-17	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1201	WV0943-38	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1101	WV0943-3	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1801	WV0943-50	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1501	WV0943-10	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1101D	WV0943-36	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1101D	WV0943-4	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1102	WV0943-5	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1101	WV0943-35	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SB1201	WV0943-6	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1202	WV0943-39	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1202	WV0943-7	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1401	WV0943-44	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1301	WV0943-8	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1302	WV0943-41	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1302	WV0943-9	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1401	WV0943-12	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1301	WV0943-40	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1402	WV0943-45	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1102	WV0943-37	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1402	WV0943-13	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
OS	%	PEN43SB1201RA	WV0943-6RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	%	PEN43SB1202	WV0943-39	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	%	PEN43SB1202RA	WV0943-7RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	%	PEN43SB1301	WV0943-40	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	%	PEN43SB1301RA	WV0943-8RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	%	PEN43SB1302RA	WV0943-9RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CTO 355 NAS PENSACOLA
SDG: CTO355-2

Sample Receipt

The following samples were received on March 5, 2005 and were logged in under Katahdin Analytical Services work order number WV0943 for a hardcopy due date of March 31, 2005.

KATAHDIN Sample No.	TTNUS Sample Identification
WV0943-1	PEN43RB0304
WV0943-2	PEN43RB0304
WV0943-3	PEN43SB1101
WV0943-4	PEN43SB1101D
WV0943-5	PEN43SB1102
WV0943-6	PEN43SB1201
WV0943-7	PEN43SB1202
WV0943-8	PEN43SB1301
WV0943-9	PEN43SB1302
WV0943-10	PEN43SB1501
WV0943-11	PEN43SB1502
WV0943-12	PEN43SB1401
WV0943-13	PEN43SB1402
WV0943-14	PEN43SB1601
WV0943-15	PEN43SB1602
WV0943-16	PEN43SB1701
WV0943-17	PEN43SB1702
WV0943-18	PEN43SB1801
WV0943-19	PEN43SB1802
WV0943-20	PEN43SB1901
WV0943-21	PEN43SB1902
WV0943-35	PEN43SB1101
WV0943-36	PEN43SB1101D
WV0943-37	PEN43SB1102
WV0943-38	PEN43SB1201
WV0943-39	PEN43SB1202
WV0943-40	PEN43SB1301
WV0943-41	PEN43SB1302
WV0943-42	PEN43SB1501
WV0943-43	PEN43SB1502
WV0943-44	PEN43SB1401
WV0943-45	PEN43SB1402
WV0943-46	PEN43SB1601
WV0943-47	PEN43SB1602
WV0943-48	PEN43SB1701

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WV0943-49	PEN43SB1702
WV0943-50	PEN43SB1801
WV0943-51	PEN43SB1802
WV0943-68	PEN43SB1901
WV0943-69	PEN43SB1902

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Andrea J. Colby**. This narrative is an integral part of the Report of Analysis.

Organics Laboratory

The samples of SDG CTO355-2 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, and III 1996, Office of Solid Waste and Emergency Response, U.S. EPA, for the specific methods listed below or on the Report of Analysis. Samples WV0943-7, 16, 39, and 48 were used for matrix spike (MS) and matrix spike duplicate (MSD) samples, as per client request. Some manual integrations may have been performed due to split peaks and/or corrected baselines. All have been flagged with a "M" (software-generated) on the pertinent quantitation reports.

8270C SCAN Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The acceptance limits for the MS/MSD are for a short list of the spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

One or more target analytes may have been detected above the MDL in some method blanks. Any of these analytes that were also detected in any of the associated samples were flagged with a "V" qualifier indicating that the analyte was detected in the method blank analyzed and/or extracted concurrently with the sample.

The initial calibration analyzed on the U instrument on 03/15/05 had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. Also, the target analytes benzaldehyde and pentachlorophenol failed for both the linear and quadratic models in the

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short list of the spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

The initial calibration analyzed on the K instrument on 03/17/05 had %RSD values for three analytes that exceeded the method acceptance limit of 15%. For these analytes, a linear model was used for quantitation instead of an average response factor. There was one target analyte, 1-methylnaphthalene, that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. This compound was calibrated using the average model.

Sample WV0943-3 had a high response for one internal standard, which was outside the laboratory acceptance limit of -50% to 100% of the response of the internal standard of the daily calibration verification standard. The sample was reanalyzed with similar failures confirming a matrix effect. The results from both analyses are reported.

Sample WV0943-16DL had a low response for one internal standard, which was outside the laboratory acceptance limit of -50% to 100% of the response of the internal standard of the daily calibration verification standard. Since this sample was analyzed undiluted and had acceptable responses for the internal standards, the sample was not reanalyzed. The results from both analyses are reported.

Sample WV0943-12DL had a low response for one internal standard, which was outside the laboratory acceptance limit of -50% to 100% of the response of the internal standard of the daily calibration verification standard. Since this sample was analyzed at a second dilution and had acceptable responses for the internal standards, the sample was not reanalyzed. The results from both analyses are reported.

The MS and MSD WG15034-3 and WG15034-4 had several spiked target analytes with recoveries that were non-calculable (NC) due to the concentration in the native sample being higher than in the MS and/or MSD. This is likely due to a non-homogeneous sample.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of Katahdin SDG CTO355-2 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Waste", SW-846, November 1986, Third Edition.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample No. WV0943-1 was digested for ICP analysis on 03/08/05 (QC Batch VC08ICW0) in accordance with USEPA Method 3010A. Katahdin Sample No. WV0943-1 was prepared with duplicate matrix-spiked aliquots.

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Solid-matrix Katahdin Sample Nos. WV0943-(3-21) were digested for ICP analysis on 03/17/05 (QC Batch VC17ICS0) in accordance with USEPA Method 3050B. Katahdin Sample No. WV0943-(7 and 16) were prepared with duplicate matrix-spiked aliquots.

ICP analyses of SDG CTO355-2 sample digestates were performed using a Thermo Jarrell Ash (TJA) Trace ICP spectrometer and a TJA ICAP 61E ICP spectrometer. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following comments or exceptions:

Some of the results for run QC samples (ICV, ICB, CCV, CCB, ICSA, and ICSAB) included in the accompanying data package may have exceeded acceptance limits for some elements. Please note that all client samples and batch QC samples associated with out-of-control results for run QC samples were subsequently reanalyzed for the analytes in question.

Matrix QC Summary

The matrix-spike recoveries for all analytes for Katahdin Sample No. WV0943-1 are within the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix-spike recoveries for copper and lead for Katahdin Sample No. WV0943-7 are outside the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix-spike recoveries for all analytes for Katahdin Sample No. WV0943-16 are within the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix spike duplicate analysis of Katahdin Sample No. WV0943-1 is within the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for all analytes.

The matrix spike duplicate analysis of Katahdin Sample No. WV0943-(7 and 16) are outside the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for copper and lead.

The serial dilution analyses of Katahdin Sample Nos. WV0943-(1 and 16) are within the laboratory's ICP serial dilution acceptance limit (<10% difference between the original sample result and the result for a 5-fold dilution of the sample, if the result for the dilution is at least ten times the instrument detection limit) for all analytes.

The serial dilution analysis of Katahdin Sample No. WV0943-7 is outside the laboratory's ICP serial dilution acceptance limit (<10% difference between the original sample result and the result for a 5-fold dilution of the sample, if the result for the dilution is at least ten times the instrument detection limit) for copper.

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Katahdin
ANALYTICAL SERVICES

Cert. No. E87604

Wet Chemistry Analysis

The samples of SDG CTO355-2 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total solids were performed according to "U.S. EPA Contract Laboratory Program Statement of Work for Inorganic Analysis", SOW 7/88.

All analyses were performed within analytical hold time. All quality control criteria were met.

No deviations were noted by the Wet Chemistry group.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
04.05.05

Leslie Dimond
Quality Assurance Officer

0000007

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
J	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
J	Spiked sample recovery not within control limits.
J	Duplicate sample analysis not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected in the sample at a level greater than the instrument detection limit.
I	The analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the laboratory's Practical Quantitation Level.

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: CTO355-2 **SOW No.** SW846

Client Field ID	Lab Sample ID
PEN43RB0304	WV0943-001
PEN43RB0304	WV0943-001P
PEN43RB0304	WV0943-001S
PEN43SB1101	WV0943-003
PEN43SB1101D	WV0943-004
PEN43SB1102	WV0943-005
PEN43SB1201	WV0943-006
PEN43SB1202	WV0943-007P
PEN43SB1202	WV0943-007S
PEN43SB1301	WV0943-008
PEN43SB1302	WV0943-009
PEN43SB1401	WV0943-012
PEN43SB1402	WV0943-013
PEN43SB1501	WV0943-010
PEN43SB1502	WV0943-011
PEN43SB1601	WV0943-014
PEN43SB1602	WV0943-015
PEN43SB1701	WV0943-016
PEN43SB1701	WV0943-016P
PEN43SB1701	WV0943-016S
PEN43SB1702	WV0943-017
PEN43SB1801	WV0943-018
PEN43SB1802	WV0943-019
PEN43SB1901	WV0943-020

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Edward A. Morgan Name: Edward A. Morgan

Date: April 5, 2005 Title: Senior Chemist

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: CTO355-2 **SOW No.** SW846

Client Field ID	Lab Sample ID
PEN43SB1902	WV0943-021

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Edward A. Morgan Name: Edward A. Morgan

Date: April 5, 2005 Title: Senior Chemist

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICV

File: AVC09A Mar 09, 2005 13:03

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	18660.09	93.3
ARSENIC	600.0	580.19	96.7
BARIUM	500.0	500.37	100.1
CALCIUM	20000.0	19840.88	99.2
COPPER	500.0	463.70	92.7
IRON	20000.0	19643.80	98.2
LEAD	550.0	540.50	98.3
MAGNESIUM	20000.0	20533.05	102.7
VANADIUM	500.0	491.13	98.2

SAMPLE: CCV

File: AVC09A Mar 09, 2005 13:44

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48328.54	96.7
ARSENIC	1000.0	1004.53	100.5
BARIUM	1000.0	1000.61	100.1
CALCIUM	50000.0	50629.18	101.3
COPPER	1000.0	993.27	99.3
IRON	20000.0	20059.23	100.3
LEAD	1000.0	1026.35	102.6
MAGNESIUM	50000.0	51004.97	102.0
VANADIUM	1000.0	982.34	98.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC09A Mar 09, 2005 17:17

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47415.97	94.8
ARSENIC	1000.0	1040.13	104.0
BARIUM	1000.0	1011.24	101.1
CALCIUM	50000.0	51486.48	103.0
COPPER	1000.0	1000.90	100.1
IRON	20000.0	20299.23	101.5
LEAD	1000.0	1047.67	104.8
MAGNESIUM	50000.0	50870.41	101.7
VANADIUM	1000.0	945.62	94.6

SAMPLE: CCV

File: AVC09A Mar 09, 2005 18:37

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46269.74	92.5
ARSENIC	1000.0	1061.90	106.2
BARIUM	1000.0	1010.09	101.0
CALCIUM	50000.0	50931.43	101.9
COPPER	1000.0	1005.43	100.5
IRON	20000.0	20259.50	101.3
LEAD	1000.0	1061.27	106.1
MAGNESIUM	50000.0	50171.63	100.3
VANADIUM	1000.0	920.31	92.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC09A Mar 09, 2005 19:58

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45848.58	91.7
ARSENIC	1000.0	1119.87	112.0 *
BARIUM	1000.0	1021.58	102.2
CALCIUM	50000.0	51771.10	103.5
COPPER	1000.0	1028.12	102.8
IRON	20000.0	20755.76	103.8
LEAD	1000.0	1108.14	110.8 *
MAGNESIUM	50000.0	50698.48	101.4
VANADIUM	1000.0	904.33	90.4

SAMPLE: CCV

File: AVC09A Mar 09, 2005 21:18

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45239.82	90.5
ARSENIC	1000.0	1155.62	115.6 *
BARIUM	1000.0	1026.38	102.6
CALCIUM	50000.0	52354.51	104.7
COPPER	1000.0	1041.92	104.2
IRON	20000.0	21071.14	105.4
LEAD	1000.0	1146.92	114.7 *
MAGNESIUM	50000.0	50741.60	101.5
VANADIUM	1000.0	883.97	88.4 *

OK no reported results for As, Pb or V bracketed by these CCVs.
EMF 3/14/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICV

File: AVC23A Mar 23, 2005 12:21

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	18579.45	92.9
ARSENIC	600.0	596.45	99.4
CALCIUM	20000.0	20216.25	101.1
IRON	20000.0	20090.14	100.5
LEAD	550.0	549.91	100.0
MAGNESIUM	20000.0	21083.27	105.4

SAMPLE: CCV

File: AVC23A Mar 23, 2005 13:15

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47548.52	95.1
ARSENIC	1000.0	998.31	99.8
CALCIUM	50000.0	50384.43	100.8
IRON	20000.0	19977.73	99.9
LEAD	1000.0	1005.63	100.6
MAGNESIUM	50000.0	51008.49	102.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC23A Mar 23, 2005 23:06

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	40074.96	80.1 *
ARSENIC	1000.0	969.29	96.9
CALCIUM	50000.0	46541.53	93.1
IRON	20000.0	18495.70	92.5
LEAD	1000.0	988.78	98.9
MAGNESIUM	50000.0	48109.81	96.2

SAMPLE: CCV

File: AVC23A Mar 24, 2005 0:32

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	40785.11	81.6 *
ARSENIC	1000.0	954.56	95.5
CALCIUM	50000.0	46665.95	93.3
IRON	20000.0	18513.15	92.6
LEAD	1000.0	978.75	97.9
MAGNESIUM	50000.0	47938.17	95.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC23A Mar 24, 2005 1:59

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45015.97	90.0
ARSENIC	1000.0	1035.91	103.6
CALCIUM	50000.0	50812.08	101.6
IRON	20000.0	20177.64	100.9
LEAD	1000.0	1064.59	106.5
MAGNESIUM	50000.0	52243.04	104.5

SAMPLE: CCV

File: AVC23A Mar 24, 2005 3:26

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	43683.26	87.4 *
ARSENIC	1000.0	1015.76	101.6
CALCIUM	50000.0	49735.06	99.5
IRON	20000.0	19795.93	99.0
LEAD	1000.0	1043.43	104.3
MAGNESIUM	50000.0	51169.48	102.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICV

File: AVC28B Mar 28, 2005 12:47

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	18740.55	93.7
ARSENIC	600.0	598.52	99.8
CALCIUM	20000.0	20124.51	100.6
IRON	20000.0	19747.45	98.7
LEAD	550.0	549.07	99.8
MAGNESIUM	20000.0	20592.39	103.0

SAMPLE: CCV

File: AVC28B Mar 28, 2005 13:29

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48712.52	97.4
ARSENIC	1000.0	990.81	99.1
CALCIUM	50000.0	50243.69	100.5
IRON	20000.0	19518.60	97.6
LEAD	1000.0	998.58	99.9
MAGNESIUM	50000.0	50262.77	100.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC28B Mar 28, 2005 16:08

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47390.14	94.8
ARSENIC	1000.0	1060.22	106.0
CALCIUM	50000.0	48918.62	97.8
IRON	20000.0	17824.36	89.1 *
LEAD	1000.0	1048.21	104.8
MAGNESIUM	50000.0	47456.50	94.9

SAMPLE: CCV

File: AVC28B Mar 28, 2005 17:36

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46600.46	93.2
ARSENIC	1000.0	1038.39	103.8
CALCIUM	50000.0	47564.68	95.1
IRON	20000.0	17157.93	85.8 *
LEAD	1000.0	1035.54	103.6
MAGNESIUM	50000.0	45900.28	91.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC28B Mar 28, 2005 19:01

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47155.83	94.3
ARSENIC	1000.0	1084.55	108.5
CALCIUM	50000.0	48124.59	96.2
IRON	20000.0	16906.42	84.5 *
LEAD	1000.0	1073.17	107.3
MAGNESIUM	50000.0	46146.46	92.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICV

File: AVC29A Mar 29, 2005 12:26

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19107.69	95.5
ARSENIC	600.0	624.95	104.2
CALCIUM	20000.0	20564.54	102.8
IRON	20000.0	20445.90	102.2
LEAD	550.0	560.28	101.9
MAGNESIUM	20000.0	21133.80	105.7

SAMPLE: CCV

File: AVC29A Mar 29, 2005 13:08

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49394.36	98.8
ARSENIC	1000.0	1031.73	103.2
CALCIUM	50000.0	51410.48	102.8
IRON	20000.0	20412.08	102.1
LEAD	1000.0	1024.68	102.5
MAGNESIUM	50000.0	51892.89	103.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 19:15

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49530.15	99.1
ARSENIC	1000.0	1089.26	108.9
CALCIUM	50000.0	51539.16	103.1
IRON	20000.0	20636.52	103.2
LEAD	1000.0	1042.34	104.2
MAGNESIUM	50000.0	51664.58	103.3

SAMPLE: CCV

File: AVC29A Mar 29, 2005 20:40

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49662.82	99.3
ARSENIC	1000.0	1087.99	108.8
CALCIUM	50000.0	51625.40	103.3
IRON	20000.0	20607.18	103.0
LEAD	1000.0	1039.44	103.9
MAGNESIUM	50000.0	51659.52	103.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

OK

SAMPLE: CCV

File: AVC29A Mar 29, 2005 22:04

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50498.02	101.0
ARSENIC	1000.0	1092.69	109.3
CALCIUM	50000.0	52570.93	105.1
IRON	20000.0	21035.96	105.2
LEAD	1000.0	1057.34	105.7
MAGNESIUM	50000.0	52575.08	105.2

SAMPLE: CCV

File: AVC29A Mar 29, 2005 23:29

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50887.60	101.8
ARSENIC	1000.0	1116.28	111.6 *
CALCIUM	50000.0	53030.66	106.1
IRON	20000.0	21231.95	106.2
LEAD	1000.0	1076.92	107.7
MAGNESIUM	50000.0	53054.06	106.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 30, 2005 0:54

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	51322.41	102.6
ARSENIC	1000.0	1119.37	111.9*
CALCIUM	50000.0	53429.43	106.9
IRON	20000.0	21431.89	107.2
LEAD	1000.0	1080.14	108.0
MAGNESIUM	50000.0	53401.00	106.8

SAMPLE: CCV

File: AVC29A Mar 30, 2005 2:04

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50752.88	101.5
ARSENIC	1000.0	1113.98	111.4*
CALCIUM	50000.0	53173.92	106.3
IRON	20000.0	21239.60	106.2
LEAD	1000.0	1077.79	107.8
MAGNESIUM	50000.0	53109.15	106.2

OK - no reported results for AS bracketed by these CCVS. EMF 3/14/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICV

File: AVC30A Mar 30, 2005 12:38

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	18568.80	92.8
ARSENIC	600.0	586.80	97.8
CALCIUM	20000.0	19669.54	98.3
IRON	20000.0	19519.14	97.6
LEAD	550.0	532.45	96.8
MAGNESIUM	20000.0	20272.28	101.4

SAMPLE: CCV

File: AVC30A Mar 30, 2005 13:25

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49377.76	98.8
ARSENIC	1000.0	1034.69	103.5
CALCIUM	50000.0	51346.80	102.7
IRON	20000.0	20329.15	101.6
LEAD	1000.0	1009.87	101.0
MAGNESIUM	50000.0	51856.52	103.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC30A Mar 30, 2005 16:22

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48777.94	97.6
ARSENIC	1000.0	1015.73	101.6
CALCIUM	50000.0	50442.65	100.9
IRON	20000.0	19880.14	99.4
LEAD	1000.0	1009.05	100.9
MAGNESIUM	50000.0	50350.82	100.7

SAMPLE: CCV

File: AVC30A Mar 30, 2005 17:46

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49592.48	99.2
ARSENIC	1000.0	1027.58	102.8
CALCIUM	50000.0	51028.56	102.1
IRON	20000.0	20119.31	100.6
LEAD	1000.0	1011.85	101.2
MAGNESIUM	50000.0	50722.96	101.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC30A Mar 30, 2005 19:11

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49733.70	99.5
ARSENIC	1000.0	1057.36	105.7
CALCIUM	50000.0	50190.91	100.4
IRON	20000.0	20018.97	100.1
LEAD	1000.0	1020.73	102.1
MAGNESIUM	50000.0	49694.74	99.4

SAMPLE: CCV

File: AVC30A Mar 30, 2005 20:35

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49823.22	99.6
ARSENIC	1000.0	1047.44	104.7
CALCIUM	50000.0	49390.75	98.8
IRON	20000.0	19885.95	99.4
LEAD	1000.0	1001.30	100.1
MAGNESIUM	50000.0	49046.29	98.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICV

File: AVC31B Mar 31, 2005 14:57

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	18577.55	92.9
ARSENIC	600.0	599.79	100.0
CALCIUM	20000.0	20032.37	100.2
IRON	20000.0	19752.57	98.8
LEAD	550.0	530.94	96.5
MAGNESIUM	20000.0	20599.38	103.0

SAMPLE: CCV

File: AVC31B Mar 31, 2005 15:49

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48851.10	97.7
ARSENIC	1000.0	1010.99	101.1
CALCIUM	50000.0	49933.26	99.9
IRON	20000.0	19735.19	98.7
LEAD	1000.0	986.34	98.6
MAGNESIUM	50000.0	50125.99	100.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC31B Mar 31, 2005 17:14

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48524.09	97.0
ARSENIC	1000.0	980.80	98.1
CALCIUM	50000.0	49152.93	98.3
IRON	20000.0	19391.25	97.0
LEAD	1000.0	961.82	96.2
MAGNESIUM	50000.0	49198.89	98.4

SAMPLE: CCV

File: AVC31B Mar 31, 2005 18:39

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49201.38	98.4
ARSENIC	1000.0	1055.88	105.6
CALCIUM	50000.0	49538.70	99.1
IRON	20000.0	19635.99	98.2
LEAD	1000.0	987.33	98.7
MAGNESIUM	50000.0	49311.23	98.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: AVC31B Mar 31, 2005 20:04

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49385.76	98.8
ARSENIC	1000.0	1065.93	106.6
CALCIUM	50000.0	49381.08	98.8
IRON	20000.0	19683.95	98.4
LEAD	1000.0	993.61	99.4
MAGNESIUM	50000.0	49175.59	98.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICV

File: BVC24A Mar 24, 2005 11:23

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19527.40	97.6
BARIUM	500.0	501.50	100.3
CALCIUM	20000.0	19302.86	96.5
COPPER	500.0	473.05	94.6
IRON	20000.0	20084.65	100.4
MAGNESIUM	20000.0	19357.23	96.8
VANADIUM	500.0	502.89	100.6

SAMPLE: CCV

File: BVC24A Mar 24, 2005 12:00

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49764.51	99.5
BARIUM	1000.0	992.54	99.3
CALCIUM	50000.0	47288.54	94.6
COPPER	1000.0	993.66	99.4
IRON	20000.0	19650.74	98.3
MAGNESIUM	50000.0	49198.63	98.4
VANADIUM	1000.0	979.09	97.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: BVC24A Mar 24, 2005 17:01

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47231.71	94.5
BARIUM	1000.0	945.53	94.6
CALCIUM	50000.0	48698.41	97.4
COPPER	1000.0	939.85	94.0
IRON	20000.0	19470.67	97.4
MAGNESIUM	50000.0	47615.45	95.2
VANADIUM	1000.0	968.77	96.9

SAMPLE: CCV

File: BVC24A Mar 24, 2005 18:03

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46097.16	92.2
BARIUM	1000.0	920.72	92.1
CALCIUM	50000.0	48754.53	97.5
COPPER	1000.0	903.76	90.4
IRON	20000.0	19183.49	95.9
MAGNESIUM	50000.0	46722.77	93.4
VANADIUM	1000.0	951.89	95.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: BVC24A Mar 24, 2005 19:10

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46304.00	92.6
BARIUM	1000.0	922.88	92.3
CALCIUM	50000.0	48619.33	97.2
COPPER	1000.0	908.88	90.9
IRON	20000.0	19278.21	96.4
MAGNESIUM	50000.0	46991.26	94.0
VANADIUM	1000.0	953.36	95.3

SAMPLE: CCV

File: BVC24A Mar 24, 2005 20:18

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45995.12	92.0
BARIUM	1000.0	920.53	92.1
CALCIUM	50000.0	49389.19	98.8
COPPER	1000.0	900.42	90.0
IRON	20000.0	19264.11	96.3
MAGNESIUM	50000.0	46966.40	93.9
VANADIUM	1000.0	953.68	95.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICV

File: BVC28A Mar 28, 2005 13:29

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19774.97	98.9
CALCIUM	20000.0	19512.29	97.6
COPPER	500.0	476.57	95.3
IRON	20000.0	20337.30	101.7
MAGNESIUM	20000.0	19459.55	97.3
VANADIUM	500.0	510.98	102.2

SAMPLE: CCV

File: BVC28A Mar 28, 2005 14:03

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49920.08	99.8
CALCIUM	50000.0	49782.82	99.6
COPPER	1000.0	971.53	97.2
IRON	20000.0	20325.79	101.6
MAGNESIUM	50000.0	49745.14	99.5
VANADIUM	1000.0	1013.30	101.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: BVC28A Mar 28, 2005 16:45

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50181.31	100.4
CALCIUM	50000.0	50531.05	101.1
COPPER	1000.0	975.91	97.6
IRON	20000.0	20497.97	102.5
MAGNESIUM	50000.0	50220.14	100.4
VANADIUM	1000.0	1018.81	101.9

SAMPLE: CCV

File: BVC28A Mar 28, 2005 17:53

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50484.28	101.0
CALCIUM	50000.0	50484.54	101.0
COPPER	1000.0	979.40	97.9
IRON	20000.0	20450.45	102.3
MAGNESIUM	50000.0	50382.11	100.8
VANADIUM	1000.0	1019.25	101.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCV

File: BVC28A Mar 28, 2005 19:01

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50830.90	101.7
CALCIUM	50000.0	50489.70	101.0
COPPER	1000.0	985.45	98.5
IRON	20000.0	20535.65	102.7
MAGNESIUM	50000.0	50596.54	101.2
VANADIUM	1000.0	1022.85	102.3

SAMPLE: CCV

File: BVC28A Mar 28, 2005 19:51

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	51120.74	102.2
CALCIUM	50000.0	50744.53	101.5
COPPER	1000.0	986.55	98.7
IRON	20000.0	20646.23	103.2
MAGNESIUM	50000.0	50820.42	101.6
VANADIUM	1000.0	1029.43	102.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: AVC09A Mar 09, 2005 15:40

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	19.40	97.0
COPPER	50.0	44.96	89.9
LEAD	6.0	5.54	92.3
VANADIUM	100.0	95.33	95.3

SAMPLE: CRI

File: AVC09A Mar 09, 2005 16:57

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	20.32	101.6
COPPER	50.0	44.05	88.1
LEAD	6.0	5.90	98.3
VANADIUM	100.0	94.01	94.0

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: AVC09A Mar 09, 2005 20:58

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	22.85	114.3
COPPER	50.0	44.25	88.5
LEAD	6.0	6.56	109.3
VANADIUM	100.0	86.77	86.8

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: AVC23A Mar 24, 2005 00:11

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	20.14	100.7
LEAD	6.0	7.35	122.5

SAMPLE: CRI

File: AVC23A Mar 24, 2005 04:31

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	23.82	119.1
LEAD	6.0	5.89	98.2

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: AVC28B Mar 28, 2005 13:08

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	21.55	107.8
LEAD	6.0	5.15	85.8

SAMPLE: CRI

File: AVC28B Mar 28, 2005 14:23

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	17.10	85.5
LEAD	6.0	5.32	88.7

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: AVC28B Mar 28, 2005 18:40

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	22.04	110.2
LEAD	6.0	8.01	133.5

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: AVC29A Mar 29, 2005 12:47

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	18.65	93.2
LEAD	6.0	6.92	115.3

SAMPLE: CRI

File: AVC29A Mar 29, 2005 17:30

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	21.33	106.7
LEAD	6.0	7.14	119.0

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: AVC29A Mar 29, 2005 21:43

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	20.99	104.9
LEAD	6.0	7.02	117.0

SAMPLE: CRI

File: AVC29A Mar 30, 2005 02:18

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	19.66	98.3
LEAD	6.0	8.31	138.5

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: AVC30A Mar 30, 2005 12:59

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	18.53	92.7
LEAD	6.0	5.69	94.8

SAMPLE: CRI

File: AVC30A Mar 30, 2005 17:25

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	19.24	96.2
LEAD	6.0	6.26	104.3

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: AVC30A Mar 30, 2005 21:39

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	17.68	88.4
LEAD	6.0	5.49	91.5

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: AVC31B Mar 31, 2005 15:19

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	20.72	103.6
LEAD	6.0	5.29	88.2

SAMPLE: CRI

File: AVC31B Mar 31, 2005 19:43

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	12.91	64.5
LEAD	6.0	6.92	115.3

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: BVC24A Mar 24, 2005 11:43

Analyte	TRUE	FOUND	% R
COPPER	50.0	48.16	96.3
VANADIUM	100.0	104.04	104.0

SAMPLE: CRI

File: BVC24A Mar 24, 2005 16:15

Analyte	TRUE	FOUND	% R
COPPER	50.0	44.13	88.3
VANADIUM	100.0	102.66	102.7

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: BVC24A Mar 24, 2005 20:01

Analyte	TRUE	FOUND	% R
COPPER	50.0	43.83	87.7
VANADIUM	100.0	98.72	98.7

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: BVC28A Mar 28, 2005 13:46

Analyte	TRUE	FOUND	% R
COPPER	50.0	48.30	96.6
VANADIUM	100.0	107.68	107.7

SAMPLE: CRI

File: BVC28A Mar 28, 2005 16:28

Analyte	TRUE	FOUND	% R
COPPER	50.0	48.68	97.4
VANADIUM	100.0	110.71	110.7

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CRI

File: BVC28A Mar 28, 2005 19:34

Analyte	TRUE	FOUND	% R
COPPER	50.0	48.43	96.9
VANADIUM	100.0	108.73	108.7

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

SAMPLE: PQL

File: AVC09A Mar 09, 2005 13:17 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	280.75	93.6
ARSENIC	8.0	7.28	91.0
BARIUM	5.0	5.05	101.0
CALCIUM	50.0	50.62	101.2
COPPER	25.0	23.92	95.7
IRON	100.0	108.73	108.7
LEAD	5.0	4.34	86.8
MAGNESIUM	50.0	64.99	130.0
VANADIUM	25.0	24.67	98.7

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

SAMPLE: PQL

File: AVC23A Mar 23, 2005 12:47 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	232.54	77.5
ARSENIC	8.0	6.85	85.6
CALCIUM	50.0	47.01	94.0
IRON	100.0	107.61	107.6
LEAD	5.0	5.37	107.4
MAGNESIUM	50.0	59.01	118.0

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

SAMPLE: PQL

File: AVC28B Mar 28, 2005 13:01 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	279.47	93.2
ARSENIC	8.0	5.65	70.6
CALCIUM	50.0	54.57	109.1
IRON	100.0	93.53	93.5
LEAD	5.0	4.96	99.2
MAGNESIUM	50.0	66.81	133.6

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

SAMPLE: PQL

File: AVC29A Mar 29, 2005 12:40 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	269.71	89.9
ARSENIC	8.0	7.49	93.6
CALCIUM	50.0	48.26	96.5
IRON	100.0	110.63	110.6
LEAD	5.0	5.36	107.2
MAGNESIUM	50.0	58.10	116.2

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

SAMPLE: PQL

File: AVC30A Mar 30, 2005 12:52 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	279.16	93.1
ARSENIC	8.0	8.40	105.0
CALCIUM	50.0	52.49	105.0
IRON	100.0	103.14	103.1
LEAD	5.0	5.79	115.8
MAGNESIUM	50.0	61.76	123.5

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

SAMPLE: PQL

File: AVC31B Mar 31, 2005 15:12 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	279.18	93.1
ARSENIC	8.0	5.25	65.6
CALCIUM	50.0	50.08	100.2
IRON	100.0	92.31	92.3
LEAD	5.0	6.00	120.0
MAGNESIUM	50.0	60.04	120.1

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

SAMPLE: PQL

File: BVC24A Mar 24, 2005 11:35 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	279.82	93.3
BARIUM	5.0	5.19	103.8
CALCIUM	50.0	51.06	102.1
COPPER	25.0	25.62	102.5
IRON	100.0	119.90	119.9
MAGNESIUM	50.0	60.53	121.1
VANADIUM	25.0	26.89	107.6

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

SAMPLE: PQL

File: BVC28A Mar 28, 2005 13:40 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	284.36	94.8
CALCIUM	50.0	41.63	83.3
COPPER	25.0	24.78	99.1
IRON	100.0	107.27	107.3
MAGNESIUM	50.0	46.20	92.4
VANADIUM	25.0	26.35	105.4

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICB

File: AVC09A Mar 09, 2005 13:10

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
BARIUM	0.29	U
CALCIUM	7.24	U
COPPER	1.16	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
VANADIUM	0.83	U

SAMPLE: CCB

File: AVC09A Mar 09, 2005 13:50

Analyte	Result	C
ALUMINUM	58.22	I
ARSENIC	2.81	U
BARIUM	0.29	U
CALCIUM	-16.23	I
COPPER	-1.16	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	9.49	I
VANADIUM	0.83	U

SAMPLE: CCB

File: AVC09A Mar 09, 2005 15:09

Analyte	Result	C
ALUMINUM	40.09	I
ARSENIC	2.81	U
BARIUM	0.29	U
CALCIUM	-9.30	I
COPPER	-1.49	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	10.68	I
VANADIUM	0.83	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB
File: AVC09A Mar 09, 2005 16:10

Analyte	Result	C
ALUMINUM	50.54	I
ARSENIC	2.81	U
BARIUM	0.29	U
CALCIUM	-14.31	I
COPPER	-1.85	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
VANADIUM	0.83	U

SAMPLE: CCB
File: AVC09A Mar 09, 2005 17:24

Analyte	Result	C
ALUMINUM	95.09	I
ARSENIC	2.81	U
BARIUM	0.29	U
CALCIUM	-22.78	I
COPPER	-2.60	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
VANADIUM	0.83	U

SAMPLE: CCB
File: AVC09A Mar 09, 2005 18:44

Analyte	Result	C
ALUMINUM	123.61	I
ARSENIC	2.81	U
BARIUM	0.29	U
CALCIUM	-33.08	I
COPPER	-3.65	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
VANADIUM	0.83	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB

File: AVC09A Mar 09, 2005 20:04

Analyte	Result	C
ALUMINUM	164.17	I
ARSENIC	-3.81	I
BARIUM	0.29	U
CALCIUM	-38.87	I
COPPER	-4.99	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
VANADIUM	0.83	U

SAMPLE: CCB

File: AVC09A Mar 09, 2005 21:25

Analyte	Result	C
ALUMINUM	198.72	I
ARSENIC	2.81	U
BARIUM	0.29	U
CALCIUM	-41.31	I
COPPER	-5.76	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	9.02	I
VANADIUM	0.83	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICB

File: AVC23A Mar 23, 2005 12:38

Analyte	Result	C
ALUMINUM	-29.34	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	-22.98	I
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC23A Mar 23, 2005 13:23

Analyte	Result	C
ALUMINUM	69.87	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC23A Mar 23, 2005 14:49

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	-8.26	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB

File: AVC23A Mar 24, 2005 0:40

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	-12.92	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.19	I

SAMPLE: CCB

File: AVC23A Mar 24, 2005 2:06

Analyte	Result	C
ALUMINUM	-32.66	I
ARSENIC	2.81	U
CALCIUM	-14.96	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC23A Mar 24, 2005 3:33

Analyte	Result	C
ALUMINUM	-51.66	I
ARSENIC	2.81	U
CALCIUM	-15.89	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICB

File: AVC28B Mar 28, 2005 12:54

Analyte	Result	C
ALUMINUM	34.04	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC28B Mar 28, 2005 13:36

Analyte	Result	C
ALUMINUM	61.59	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	10.98	I

SAMPLE: CCB

File: AVC28B Mar 28, 2005 14:15

Analyte	Result	C
ALUMINUM	103.59	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB
File: AVC28B Mar 28, 2005 14:51

Analyte	Result	C
ALUMINUM	135.79	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	9.37	I

SAMPLE: CCB
File: AVC28B Mar 28, 2005 16:15

Analyte	Result	C
ALUMINUM	219.35	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	10.38	I

SAMPLE: CCB
File: AVC28B Mar 28, 2005 17:43

Analyte	Result	C
ALUMINUM	256.99	I
ARSENIC	-3.16	I
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	13.03	I

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB

File: AVC28B Mar 28, 2005 19:08

Analyte	Result	C
ALUMINUM	308.01	
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.09	I
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICB

File: AVC29A Mar 29, 2005 12:33

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.60	I

SAMPLE: CCB

File: AVC29A Mar 29, 2005 13:15

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	-9.10	I
IRON	-39.10	I
LEAD	2.07	U
MAGNESIUM	-22.14	I

SAMPLE: CCB

File: AVC29A Mar 29, 2005 14:42

Analyte	Result	C
ALUMINUM	54.58	I
ARSENIC	2.81	U
CALCIUM	-15.12	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB

File: AVC29A Mar 29, 2005 19:22

Analyte	Result	C
ALUMINUM	87.47	I
ARSENIC	2.81	U
CALCIUM	-24.59	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 20:47

Analyte	Result	C
ALUMINUM	81.84	I
ARSENIC	2.81	U
CALCIUM	-21.02	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 22:11

Analyte	Result	C
ALUMINUM	82.82	I
ARSENIC	2.81	U
CALCIUM	-22.76	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB

File: AVC29A Mar 29, 2005 23:36

Analyte	Result	C
ALUMINUM	78.73	I
ARSENIC	2.81	U
CALCIUM	-23.47	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC29A Mar 30, 2005 1:01

Analyte	Result	C
ALUMINUM	88.63	I
ARSENIC	2.81	U
CALCIUM	-25.16	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.63	I

SAMPLE: CCB

File: AVC29A Mar 30, 2005 2:11

Analyte	Result	C
ALUMINUM	83.66	I
ARSENIC	2.81	U
CALCIUM	-21.59	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICB

File: AVC30A Mar 30, 2005 12:45

Analyte	Result	C
ALUMINUM	23.08	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC30A Mar 30, 2005 13:32

Analyte	Result	C
ALUMINUM	35.96	I
ARSENIC	-2.85	I
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC30A Mar 30, 2005 14:28

Analyte	Result	C
ALUMINUM	32.98	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB
File: AVC30A Mar 30, 2005 15:52

Analyte	Result	C
ALUMINUM	68.37	I
ARSENIC	2.81	U
CALCIUM	-14.87	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB
File: AVC30A Mar 30, 2005 16:29

Analyte	Result	C
ALUMINUM	73.22	I
ARSENIC	2.81	U
CALCIUM	-17.33	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB
File: AVC30A Mar 30, 2005 17:53

Analyte	Result	C
ALUMINUM	80.40	I
ARSENIC	2.81	U
CALCIUM	-14.62	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.46	I

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB
File: AVC30A Mar 30, 2005 19:18

Analyte	Result	C
ALUMINUM	113.86	I
ARSENIC	2.81	U
CALCIUM	-23.33	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB
File: AVC30A Mar 30, 2005 20:42

Analyte	Result	C
ALUMINUM	118.53	I
ARSENIC	2.81	U
CALCIUM	-23.55	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	12.93	I

SAMPLE: CCB
File: AVC30A Mar 30, 2005 22:07

Analyte	Result	C
ALUMINUM	113.31	I
ARSENIC	2.81	U
CALCIUM	-25.64	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICB

File: AVC31B Mar 31, 2005 15:04

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC31B Mar 31, 2005 15:56

Analyte	Result	C
ALUMINUM	40.48	I
ARSENIC	2.81	U
CALCIUM	-7.74	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC31B Mar 31, 2005 17:21

Analyte	Result	C
ALUMINUM	44.29	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB

File: AVC31B Mar 31, 2005 18:46

Analyte	Result	C
ALUMINUM	90.26	I
ARSENIC	2.81	U
CALCIUM	-14.10	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC31B Mar 31, 2005 20:11

Analyte	Result	C
ALUMINUM	100.24	I
ARSENIC	2.81	U
CALCIUM	-21.20	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICB

File: BVC24A Mar 24, 2005 11:29

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 12:05

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	22.13	I
COPPER	2.52	U
IRON	9.75	I
MAGNESIUM	38.35	I
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 13:18

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	2.04	I
CALCIUM	15.90	U
COPPER	2.52	U
IRON	20.36	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB

File: BVC24A Mar 24, 2005 17:06

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	27.98	I
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 18:08

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	37.63	I
COPPER	2.52	U
IRON	12.90	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 19:16

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	29.43	I
COPPER	2.52	U
IRON	11.76	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB

File: BVC24A Mar 24, 2005 20:24

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	30.06	I
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICB

File: BVC28A Mar 28, 2005 13:35

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 14:09

Analyte	Result	C
ALUMINUM	55.95	I
CALCIUM	53.97	
COPPER	2.52	U
IRON	29.09	I
MAGNESIUM	59.56	
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 14:48

Analyte	Result	C
ALUMINUM	33.07	I
CALCIUM	20.34	I
COPPER	2.52	U
IRON	16.83	I
MAGNESIUM	36.09	I
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB

File: BVC28A Mar 28, 2005 15:35

Analyte	Result	C
ALUMINUM	22.28	I
CALCIUM	15.90	U
COPPER	2.52	U
IRON	12.65	I
MAGNESIUM	34.94	I
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 16:51

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	12.43	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 17:59

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	15.04	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: CCB

File: BVC28A Mar 28, 2005 19:06

Analyte	Result	C
ALUMINUM	25.84	I
CALCIUM	15.90	U
COPPER	2.52	U
IRON	24.09	I
MAGNESIUM	43.90	I
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 19:57

Analyte	Result	C
ALUMINUM	82.45	I
CALCIUM	73.04	
COPPER	2.52	U
IRON	40.60	I
MAGNESIUM	83.62	
VANADIUM	5.07	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSVC17ICS0

Matrix: SOIL **SDG Name:** CTO355-2

QC Batch ID: VC17ICS0

Concentration Units : mg/Kg

Analyte	RESULT	C
ARSENIC	0.280	U
BARIUM	0.050	U
COPPER	0.250	U
LEAD	0.210	U
VANADIUM	0.510	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWVC08ICW0

Matrix: WATER **SDG Name:** CTO355-2

QC Batch ID: VC08ICW0

Concentration Units : ug/L

Analyte	RESULT	C
ARSENIC	2.810	U
BARIUM	0.290	U
COPPER	1.160	U
LEAD	2.070	U
VANADIUM	0.830	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC09A Mar 09, 2005 17:04

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	471457	94.3
ARSENIC	0	-1	
BARIUM	0	0	
CALCIUM	500000	521271	104.3
COPPER	0	-4	
IRON	200000	193911	97.0
LEAD	0	1	
MAGNESIUM	500000	481883	96.4
VANADIUM	0	0	

SAMPLE: ICSAB

File: AVC09A Mar 09, 2005 17:10

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	465019	93.0
ARSENIC	100	100	100.0
BARIUM	500	502	100.4
CALCIUM	500000	514096	102.8
COPPER	500	486	97.2
IRON	200000	191910	96.0
LEAD	50	52	104.0
MAGNESIUM	500000	474573	94.9
VANADIUM	500	466	93.2

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC09A Mar 09, 2005 21:05

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	458326	91.7
ARSENIC	0	-2	
BARIUM	0	0	
CALCIUM	500000	532045	106.4
COPPER	0	-10	
IRON	200000	205047	102.5
LEAD	0	0	
MAGNESIUM	500000	486194	97.2
VANADIUM	0	2	

SAMPLE: ICSAB

File: AVC09A Mar 09, 2005 21:11

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	451382	90.3
ARSENIC	100	111	111.0
BARIUM	500	520	104.0
CALCIUM	500000	527362	105.5
COPPER	500	514	102.8
IRON	200000	203034	101.5
LEAD	50	55	110.0
MAGNESIUM	500000	480718	96.1
VANADIUM	500	446	89.2

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC23A Mar 24, 2005 00:18

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	431705	86.3
ARSENIC	0	1	
CALCIUM	500000	506021	101.2
IRON	200000	190257	95.1
LEAD	0	3	
MAGNESIUM	500000	474937	95.0

SAMPLE: ICSAB

File: AVC23A Mar 24, 2005 00:25

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	463054	92.6
ARSENIC	100	105	105.0
CALCIUM	500000	541831	108.4
IRON	200000	203623	101.8
LEAD	50	55	110.0
MAGNESIUM	500000	505562	101.1

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC23A Mar 24, 2005 04:38

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	437302	87.5
ARSENIC	0	1	
CALCIUM	500000	509774	102.0
IRON	200000	191833	95.9
LEAD	0	7	
MAGNESIUM	500000	479808	96.0

SAMPLE: ICSAB

File: AVC23A Mar 24, 2005 04:45

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	428464	85.7
ARSENIC	100	101	101.0
CALCIUM	500000	496961	99.4
IRON	200000	187285	93.6
LEAD	50	49	98.0
MAGNESIUM	500000	467416	93.5

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC28B Mar 28, 2005 14:30

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	503076	100.6
ARSENIC	0	2	
CALCIUM	500000	505490	101.1
IRON	200000	190939	95.5
LEAD	0	-1	
MAGNESIUM	500000	484454	96.9

SAMPLE: ICSAB

File: AVC28B Mar 28, 2005 14:37

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	507321	101.5
ARSENIC	100	106	106.0
CALCIUM	500000	507280	101.5
IRON	200000	191240	95.6
LEAD	50	44	88.0
MAGNESIUM	500000	485551	97.1

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC28B Mar 28, 2005 18:47

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	479448	95.9
ARSENIC	0	-5	
CALCIUM	500000	478106	95.6
IRON	200000	167029	83.5
LEAD	0	1	
MAGNESIUM	500000	449952	90.0

SAMPLE: ICSAB

File: AVC28B Mar 28, 2005 18:54

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	492496	98.5
ARSENIC	100	102	102.0
CALCIUM	500000	478691	95.7
IRON	200000	170288	85.1
LEAD	50	50	100.0
MAGNESIUM	500000	451827	90.4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC29A Mar 29, 2005 17:37

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	517239	103.4
ARSENIC	0	6	
CALCIUM	500000	536277	107.3
IRON	200000	207077	103.5
LEAD	0	6	
MAGNESIUM	500000	513881	102.8

SAMPLE: ICSAB

File: AVC29A Mar 29, 2005 17:44

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	508687	101.7
ARSENIC	100	107	107.0
CALCIUM	500000	522632	104.5
IRON	200000	202515	101.3
LEAD	50	52	104.0
MAGNESIUM	500000	501341	100.3

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC29A Mar 29, 2005 21:50

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	518660	103.7
ARSENIC	0	-2	
CALCIUM	500000	538466	107.7
IRON	200000	208225	104.1
LEAD	0	6	
MAGNESIUM	500000	515206	103.0

SAMPLE: ICSAB

File: AVC29A Mar 29, 2005 21:57

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	516556	103.3
ARSENIC	100	113	113.0
CALCIUM	500000	535863	107.2
IRON	200000	206933	103.5
LEAD	50	58	116.0
MAGNESIUM	500000	512309	102.5

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC29A Mar 30, 2005 02:25

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	510380	102.1
ARSENIC	0	3	
CALCIUM	500000	532322	106.5
IRON	200000	205725	102.9
LEAD	0	8	
MAGNESIUM	500000	508080	101.6

SAMPLE: ICSAB

File: AVC29A Mar 30, 2005 02:32

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	515161	103.0
ARSENIC	100	109	109.0
CALCIUM	500000	534390	106.9
IRON	200000	206505	103.3
LEAD	50	58	116.0
MAGNESIUM	500000	509681	101.9

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC30A Mar 30, 2005 13:07

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	504038	100.8
ARSENIC	0	3	
CALCIUM	500000	524153	104.8
IRON	200000	198807	99.4
LEAD	0	5	
MAGNESIUM	500000	502269	100.5

SAMPLE: ICSAB

File: AVC30A Mar 30, 2005 13:16

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	506906	101.4
ARSENIC	100	99	99.0
CALCIUM	500000	522343	104.5
IRON	200000	198547	99.3
LEAD	50	52	104.0
MAGNESIUM	500000	499820	100.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC30A Mar 30, 2005 17:32

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	513519	102.7
ARSENIC	0	3	
CALCIUM	500000	530582	106.1
IRON	200000	200744	100.4
LEAD	0	4	
MAGNESIUM	500000	500951	100.2

SAMPLE: ICSAB

File: AVC30A Mar 30, 2005 17:39

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	515615	103.1
ARSENIC	100	105	105.0
CALCIUM	500000	529938	106.0
IRON	200000	200772	100.4
LEAD	50	54	108.0
MAGNESIUM	500000	499760	100.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC30A Mar 30, 2005 21:46

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	507656	101.5
ARSENIC	0	1	
CALCIUM	500000	499338	99.9
IRON	200000	193878	96.9
LEAD	0	8	
MAGNESIUM	500000	478879	95.8

SAMPLE: ICSAB

File: AVC30A Mar 30, 2005 21:53

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	517899	103.6
ARSENIC	100	102	102.0
CALCIUM	500000	512192	102.4
IRON	200000	198349	99.2
LEAD	50	51	102.0
MAGNESIUM	500000	488329	97.7

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC31B Mar 31, 2005 15:26

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	505741	101.1
ARSENIC	0	-1	
CALCIUM	500000	524942	105.0
IRON	200000	198354	99.2
LEAD	0	5	
MAGNESIUM	500000	501431	100.3

SAMPLE: ICSAB

File: AVC31B Mar 31, 2005 15:42

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	507746	101.5
ARSENIC	100	107	107.0
CALCIUM	500000	517620	103.5
IRON	200000	196956	98.5
LEAD	50	53	106.0
MAGNESIUM	500000	496145	99.2

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC31B Mar 31, 2005 19:50

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	506778	101.4
ARSENIC	0	2	
CALCIUM	500000	507112	101.4
IRON	200000	195075	97.5
LEAD	0	7	
MAGNESIUM	500000	483210	96.6

SAMPLE: ICSAB

File: AVC31B Mar 31, 2005 19:57

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	512160	102.4
ARSENIC	100	103	103.0
CALCIUM	500000	508033	101.6
IRON	200000	196260	98.1
LEAD	50	60	120.0
MAGNESIUM	500000	483422	96.7

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC24A Mar 24, 2005 16:21

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	487671	97.5
BARIUM	0	0	
CALCIUM	500000	489104	97.8
COPPER	0	-3	
IRON	200000	183386	91.7
MAGNESIUM	500000	500263	100.1
VANADIUM	0	-5	

SAMPLE: ICSAB

File: BVC24A Mar 24, 2005 16:26

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	488343	97.7
BARIUM	500	469	93.8
CALCIUM	500000	493036	98.6
COPPER	500	450	90.0
IRON	200000	184495	92.2
MAGNESIUM	500000	501765	100.4
VANADIUM	500	472	94.4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC24A Mar 24, 2005 20:07

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	478979	95.8
BARIUM	0	0	
CALCIUM	500000	487675	97.5
COPPER	0	-4	
IRON	200000	181492	90.7
MAGNESIUM	500000	494987	99.0
VANADIUM	0	-4	

SAMPLE: ICSAB

File: BVC24A Mar 24, 2005 20:12

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	483762	96.8
BARIUM	500	465	93.0
CALCIUM	500000	493798	98.8
COPPER	500	445	89.0
IRON	200000	183618	91.8
MAGNESIUM	500000	499715	99.9
VANADIUM	500	466	93.2

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC28A Mar 28, 2005 16:34

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	524972	105.0
CALCIUM	500000	504833	101.0
COPPER	0	-1	
IRON	200000	194145	97.1
MAGNESIUM	500000	533079	106.6
VANADIUM	0	0	

SAMPLE: ICSAB

File: BVC28A Mar 28, 2005 16:40

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	519538	103.9
CALCIUM	500000	497162	99.4
COPPER	500	489	97.8
IRON	200000	191881	95.9
MAGNESIUM	500000	526405	105.3
VANADIUM	500	492	98.4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC28A Mar 28, 2005 19:40

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	535217	107.0
CALCIUM	500000	511575	102.3
COPPER	0	-2	
IRON	200000	197456	98.7
MAGNESIUM	500000	543206	108.6
VANADIUM	0	-3	

SAMPLE: ICSAB

File: BVC28A Mar 28, 2005 19:46

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	524924	105.0
CALCIUM	500000	503293	100.7
COPPER	500	492	98.4
IRON	200000	193852	96.9
MAGNESIUM	500000	532400	106.5
VANADIUM	500	497	99.4

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43RB0304S

Matrix: WATER | **SDG Name:** CTO355-2

Percent Solids: 0.00 | **Lab Sample ID:** WV0943-001P

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	498.2900		-1.1900	U	500	99.7		75	125	P
BARIUM, TOTAL	2031.0900		6.6400		2000	101.2		75	125	P
COPPER, TOTAL	243.4700		-4.1700	U	250	97.4		75	125	P
LEAD, TOTAL	510.2800		-0.0600	U	500	102.1		75	125	P
VANADIUM, TOTAL	453.5500		-0.7200	U	500	90.7		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43RB0304S

Matrix: WATER | **SDG Name:** CTO355-2

Percent Solids: 0.00 | **Lab Sample ID:** WV0943-001S

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	% R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	493.2400		-1.1900	U	500	98.6		75	125	P
BARIUM, TOTAL	2013.4900		6.6400		2000	100.3		75	125	P
COPPER, TOTAL	241.8400		-4.1700	U	250	96.7		75	125	P
LEAD, TOTAL	500.8000		-0.0600	U	500	100.2		75	125	P
VANADIUM, TOTAL	536.5200		-0.7200	U	500	107.3		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SB1202S

Matrix: SOIL | **SDG Name:** CTO355-2

Percent Solids: 93.1 | **Lab Sample ID:** WV0943-007P

Concentration Units : mg/Kg

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	36.7665		0.5629		35.09	103.2		75	125	P
BARIUM, TOTAL	149.6254		10.0108		140.36	99.5		75	125	P
COPPER, TOTAL	37.6248		10.5526		17.55	154.3	J	75	125	P
LEAD, TOTAL	115.9603		37.4802		35.09	223.7	J	75	125	P
VANADIUM, TOTAL	38.6544		2.9898		35.09	101.6		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SB1202S

Matrix: SOIL | **SDG Name:** CTO355-2

Percent Solids: 93.1 | **Lab Sample ID:** WV0943-007S

Concentration Units : mg/Kg

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	34.7713		0.5629		34.86	98.1		75	125	P
BARIUM, TOTAL	156.9443		10.0108		139.45	105.4		75	125	P
COPPER, TOTAL	53.8632		10.5526		17.43	248.5	J	75	125	P
LEAD, TOTAL	194.3081		37.4802		34.86	449.9	J	75	125	P
VANADIUM, TOTAL	39.4646		2.9898		34.86	104.6		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SB1701S

Matrix: SOIL | **SDG Name:** CTO355-2

Percent Solids: 90.6 | **Lab Sample ID:** WV0943-016P

Concentration Units : mg/Kg

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	48.7533		7.2853		43.81	94.7		75	125	P
BARIUM, TOTAL	533.5059		366.0704		175.25	95.5		75	125	P
COPPER, TOTAL	976.1280		499.8607		21.91	2173.7	ok	75	125	P
LEAD, TOTAL	1463.1502		1462.1325		43.81	2.3	ok	75	125	P
VANADIUM, TOTAL	88.6886		40.1170		43.81	110.9		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SB1701S

Matrix: SOIL | **SDG Name:** CTO355-2

Percent Solids: 90.6 | **Lab Sample ID:** WV0943-016S

Concentration Units : mg/Kg

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	% R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	45.1959		7.2853		44.16	85.8		75	125	P
BARIUM, TOTAL	517.1457		366.0704		176.66	85.5		75	125	P
COPPER, TOTAL	637.4270		499.8607		22.08	623.0	OK	75	125	P
LEAD, TOTAL	6711.5577		1462.1325		44.16	11887.3	OK	75	125	P
VANADIUM, TOTAL	75.3451		40.1170		44.16	79.8		75	125	P

Comments:

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43RB0304

Matrix: WATER **SDG Name:** CTO355-2

Percent Solids: 0.00 **Lab Sample ID:** WV0943-001

Concentration Units : ug/L

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ARSENIC, TOTAL		493.2400		498.2900		1.0		P
BARIUM, TOTAL		2013.4900		2031.0900		0.9		P
COPPER, TOTAL		241.8400		243.4700		0.7		P
LEAD, TOTAL		500.8000		510.2800		1.9		P
VANADIUM, TOTAL	120	536.5200		453.5500		16.8		P

Comments:

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SB1202

Matrix: SOIL | **SDG Name:** CTO355-2

Percent Solids: 93.1 | **Lab Sample ID:** WV0943-007

Concentration Units : mg/Kg

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ARSENIC, TOTAL		34.7713		36.7665		5.6		P
BARIUM, TOTAL		156.9443		149.6254		4.8		P
COPPER, TOTAL		53.8632		37.6248		35.5	J	P
LEAD, TOTAL		194.3081		115.9603		50.5	J	P
VANADIUM, TOTAL		39.4646		38.6544		2.1		P

Comments:

FORM VD - IN

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SB1701

Matrix: SOIL | **SDG Name:** CTO355-2

Percent Solids: 90.6 | **Lab Sample ID:** WV0943-016

Concentration Units : mg/Kg

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ARSENIC, TOTAL		45.1959		48.7533		7.6		P
BARIUM, TOTAL		517.1457		533.5059		3.1		P
COPPER, TOTAL		637.4270		976.1280		42.0	J	P
LEAD, TOTAL		6711.5577		1463.1502		128.4	J	P
VANADIUM, TOTAL		75.3451		88.6886		16.3		P

Comments:

FORM VD - IN

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOVC17ICS0

Matrix: SOIL **SDG Name:** CTO355-2

QC Batch ID: VC17ICS0

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ARSENIC	500.0	501.07	100.2	80	120
BARIUM	2000.0	1830.33	91.5	80	120
COPPER	250.0	215.85	86.3	80	120
LEAD	500.0	487.31	97.5	80	120
VANADIUM	500.0	490.05	98.0	80	120

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWVC08ICW0

Matrix: WATER **SDG Name:** CTO355-2

QC Batch ID: VC08ICW0

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ARSENIC	500.0	521.29	104.3	80	120
BARIUM	2000.0	2057.13	102.9	80	120
COPPER	250.0	242.53	97.0	80	120
LEAD	500.0	538.07	107.6	80	120
VANADIUM	500.0	509.14	101.8	80	120

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43RB0304L

Matrix: WATER | **SDG Name:** CTO355-2

Lab Sample ID: WV0943-001L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
ARSENIC, TOTAL	-1.19	U	-0.68	U			P
BARIUM, TOTAL	6.64		6.96	I	4.8		P
COPPER, TOTAL	-4.17	U	-20.23	U			P
LEAD, TOTAL	-0.06	U	-2.56	U			P
VANADIUM, TOTAL	-0.72	U	-0.81	U			P

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services

Matrix: SOIL

Client Field ID: PEN43SB1202L

SDG Name: CTO355-2

Lab Sample ID: WV0943-007L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
ARSENIC, TOTAL	8.02		19.43	I	142.3	OK	P
BARIUM, TOTAL	142.64		152.32		6.8		P
COPPER, TOTAL	150.36		179.26		19.2	J	P
LEAD, TOTAL	534.04		528.66		1.0		P
VANADIUM, TOTAL	42.60		42.87	I	0.6		P

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SB1701L

Matrix: SOIL | **SDG Name:** CTO355-2

Lab Sample ID: WV0943-016L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
ARSENIC, TOTAL	41.24		41.62		0.9		P
BARIUM, TOTAL	4144.42		4172.11		0.7		P
COPPER, TOTAL	2829.55		2802.36		1.0		P
LEAD, TOTAL	8276.67		8049.82		2.7		P
VANADIUM, TOTAL	227.09		229.72		1.2		P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** A

Instrument Name: TJA TRACE ICP **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ARSENIC	8.0	2.81	P
BARIUM	5.0	0.29	P
COPPER	25	1.16	P
LEAD	5.0	2.07	P
VANADIUM	25	0.83	P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** B

Instrument Name: TJA 61 ICP **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
BARIUM	5.0	0.50	P
COPPER	25	2.52	P
VANADIUM	25	5.07	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** VC08ICW0

Matrix: WATER **SDG Name:** CTO355-2

Method: P **Prep Date:** 03/08/2005

Client ID	Lab Sample ID	Initial (L)	Final (L)
LCSWVC08ICW0	LCSWVC08ICW0	0.05	0.05
PBWVC08ICW0	PBWVC08ICW0	0.05	0.05
PEN43RB0304	WV0943-001	0.05	0.05
PEN43RB0304P	WV0943-001P	0.05	0.05
PEN43RB0304S	WV0943-001S	0.05	0.05

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** VC17ICS0

Matrix: SOIL **SDG Name:** CTO355-2

Method: P **Prep Date:** 03/17/2005

Client ID	Lab Sample ID	Initial (g)	Final (L)
LCSOVC17ICS0	LCSOVC17ICS0	1	0.1
PBSVC17ICS0	PBSVC17ICS0	1	0.1
PEN43SB1101	WV0943-003	1.19	0.1
PEN43SB1101D	WV0943-004	1.34	0.1
PEN43SB1102	WV0943-005	1.41	0.1
PEN43SB1201	WV0943-006	1.53	0.1
PEN43SB1202	WV0943-007	1.53	0.1
PEN43SB1202P	WV0943-007P	1.53	0.1
PEN43SB1202S	WV0943-007S	1.54	0.1
PEN43SB1301	WV0943-008	1.26	0.1
PEN43SB1302	WV0943-009	1.23	0.1
PEN43SB1501	WV0943-010	1.42	0.1
PEN43SB1502	WV0943-011	1.16	0.1
PEN43SB1401	WV0943-012	1.63	0.1
PEN43SB1402	WV0943-013	1.44	0.1
PEN43SB1601	WV0943-014	1.54	0.1
PEN43SB1602	WV0943-015	1.32	0.1
PEN43SB1701	WV0943-016	1.25	0.1
PEN43SB1701P	WV0943-016P	1.26	0.1
PEN43SB1701S	WV0943-016S	1.25	0.1
PEN43SB1702	WV0943-017	1.63	0.1
PEN43SB1801	WV0943-018	1.29	0.1
PEN43SB1802	WV0943-019	1.41	0.1
PEN43SB1901	WV0943-020	1.82	0.1
PEN43SB1902	WV0943-021	1.28	0.1

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC09A

Date: 3/9/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements								
S0		1	11:50	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
S1		1	11:57	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
AL IEC		1	12:08	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
FE IEC		1	12:14	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
MN IEC		1	12:21	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
IEC		1	12:28	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICV		1	13:03	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICB		1	13:10	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
PQL		1	13:17	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CRI		1	13:23	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICSA		1	13:30	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICSAB		1	13:37	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCV		1	13:44	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCB		1	13:50	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ZZZZZZ		1	13:57									
ZZZZZZ		1	14:04									
ZZZZZZ		1	14:17									
ZZZZZZ		1	14:23									
ZZZZZZ		1	14:30									
CRI		1	14:42	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICSA		1	14:48	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICSAB		1	14:55	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCV		1	15:02	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCB		1	15:09	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
LCSWVC08ICW0		1	15:20		As	Ba		Cu		Pb		V
PBWVC08ICW0		1	15:26		As	Ba		Cu		Pb		V
ZZZZZZ		1	15:33									
CRI		1	15:40	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICSA		1	15:47	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICSAB		1	15:53	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCV		1	16:00	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCB		1	16:10	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ZZZZZZ		1	16:16									
ZZZZZZ		1	16:24									
ZZZZZZ		1	16:30									
ZZZZZZ		1	16:37									
ZZZZZZ		1	16:44									
ZZZZZZ		1	16:50									
CRI		1	16:57	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICSA		1	17:04	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICSAB		1	17:10	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCV		1	17:17	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCB		1	17:24	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ZZZZZZ		1	17:31									
ZZZZZZ		1	17:37									
ZZZZZZ		1	17:44									
ZZZZZZ		1	17:51									
ZZZZZZ		1	17:57									
ZZZZZZ		1	18:04									
ZZZZZZ		1	18:11									

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC09A

Date: 3/9/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements							
ZZZZZZ		1	18:17								
ZZZZZZ		1	18:24								
ZZZZZZ		1	18:31								
CCV		1	18:37	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCB		1	18:44	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ZZZZZZ		1	18:51								
ZZZZZZ		1	18:57								
ZZZZZZ		1	19:04								
ZZZZZZ		1	19:11								
ZZZZZZ		1	19:17								
ZZZZZZ		1	19:24								
ZZZZZZ		1	19:31								
WV0943-001	PEN43RB0304	1	19:38			Ba		Cu				V
WV0943-001L	PEN43RB0304L	5	19:44			Ba		Cu				V
WV0943-001P	PEN43RB0304P	1	19:51			Ba		Cu				V
CCV		1	19:58	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCB		1	20:04	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
WV0943-001S	PEN43RB0304S	1	20:11			Ba		Cu				
ZZZZZZ		1	20:18								
ZZZZZZ		1	20:24								
ZZZZZZ		1	20:31								
ZZZZZZ		1	20:38								
ZZZZZZ		1	20:44								
ZZZZZZ		1	20:51								
CRI		1	20:58	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICSA		1	21:05	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
ICSAB		1	21:11	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCV		1	21:18	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V
CCB		1	21:25	Al	As	Ba	Ca	Cu	Fe	Pb	Mg	V

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC23A

Date: 3/23/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	11:21	Al	As	Ca	Fe Pb Mg
S1		1	11:29	Al	As	Ca	Fe Pb Mg
AL IEC		1	11:39	Al	As	Ca	Fe Pb Mg
FE IEC		1	11:46	Al	As	Ca	Fe Pb Mg
MN IEC		1	11:54	Al	As	Ca	Fe Pb Mg
IEC		1	12:02	Al	As	Ca	Fe Pb Mg
ICV		1	12:21	Al	As	Ca	Fe Pb Mg
ICB		1	12:38	Al	As	Ca	Fe Pb Mg
PQL		1	12:47	Al	As	Ca	Fe Pb Mg
CRI		1	12:54	Al	As	Ca	Fe Pb Mg
ICSA		1	13:01	Al	As	Ca	Fe Pb Mg
ICSAB		1	13:08	Al	As	Ca	Fe Pb Mg
CCV		1	13:15	Al	As	Ca	Fe Pb Mg
CCB		1	13:23	Al	As	Ca	Fe Pb Mg
ZZZZZZ		5	13:30				
ZZZZZZ		1	13:37				
ZZZZZZ		1	13:44				
ZZZZZZ		1	13:51				
ZZZZZZ		1	13:59				
ZZZZZZ		1	14:06				
ZZZZZZ		1	14:13				
ZZZZZZ		1	14:20				
ZZZZZZ		1	14:27				
ZZZZZZ		1	14:35				
CCV		1	14:42	Al	As	Ca	Fe Pb Mg
CCB		1	14:49	Al	As	Ca	Fe Pb Mg
ZZZZZZ		5	14:56				
ZZZZZZ		1	15:03				
ZZZZZZ		1	15:11				
ZZZZZZ		1	15:18				
ZZZZZZ		1	15:25				
ZZZZZZ		1	15:32				
ZZZZZZ		1	15:39				
ZZZZZZ		1	15:47				
ZZZZZZ		1	15:54				
ZZZZZZ		1	16:01				
CCV		1	16:08	Al	As	Ca	Fe Pb Mg
CCB		1	16:15	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	16:37				
ZZZZZZ		1	16:44				
ZZZZZZ		1	16:51				
ZZZZZZ		1	16:58				
ZZZZZZ		1	17:06				
ZZZZZZ		1	17:13				
CCV		1	17:20	Al	As	Ca	Fe Pb Mg
CCB		1	17:27	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	17:34				
ZZZZZZ		1	17:42				
ZZZZZZ		1	17:49				
ZZZZZZ		1	17:56				

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC23A

Date: 3/23/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		1	18:03				
ZZZZZZ		1	18:10				
ZZZZZZ		1	18:18				
ZZZZZZ		1	18:25				
ZZZZZZ		1	18:32				
ZZZZZZ		1	18:39				
CCV		1	18:46	Al	As	Ca	Fe Pb Mg
CCB		1	18:54	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	19:01				
ZZZZZZ		1	19:08				
ZZZZZZ		1	19:15				
ZZZZZZ		1	19:22				
ZZZZZZ		1	19:30				
ZZZZZZ		1	19:37				
ZZZZZZ		1	19:44				
CRI		1	19:51	Al	As	Ca	Fe Pb Mg
ICSA		1	19:58	Al	As	Ca	Fe Pb Mg
ICSAB		1	20:06	Al	As	Ca	Fe Pb Mg
CCV		1	20:13	Al	As	Ca	Fe Pb Mg
CCB		1	20:20	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	20:27				
ZZZZZZ		1	20:34				
ZZZZZZ		1	20:42				
ZZZZZZ		1	20:49				
ZZZZZZ		1	20:56				
ZZZZZZ		1	21:03				
ZZZZZZ		1	21:11				
ZZZZZZ		1	21:18				
ZZZZZZ		1	21:25				
ZZZZZZ		1	21:32				
CCV		1	21:39	Al	As	Ca	Fe Pb Mg
CCB		1	21:47	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	21:54				
ZZZZZZ		1	22:01				
ZZZZZZ		1	22:08				
ZZZZZZ		1	22:15				
ZZZZZZ		1	22:23				
ZZZZZZ		1	22:30				
ZZZZZZ		1	22:37				
ZZZZZZ		1	22:44				
ZZZZZZ		1	22:51				
ZZZZZZ		1	22:59				
CCV		1	23:06	Al	As	Ca	Fe Pb Mg
CCB		1	23:13	Al	As	Ca	Fe Pb Mg
ZZZZZZ		5	23:20				
ZZZZZZ		1	23:28				
ZZZZZZ		1	23:35				
ZZZZZZ		2	23:42				
ZZZZZZ		1	23:49				
ZZZZZZ		1	23:56				
ZZZZZZ		5	0:04				

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC23A

Date: 3/24/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
CRI		1	0:11	Al	As	Ca	Fe	Pb	Mg
ICSA		1	0:18	Al	As	Ca	Fe	Pb	Mg
ICSAB		1	0:25	Al	As	Ca	Fe	Pb	Mg
CCV		1	0:32	Al	As	Ca	Fe	Pb	Mg
CCB		1	0:40	Al	As	Ca	Fe	Pb	Mg
ZZZZZZ		1	0:47						
ZZZZZZ		1	0:54						
ZZZZZZ		1	1:01						
ZZZZZZ		1	1:08						
ZZZZZZ		5	1:16						
ZZZZZZ		1	1:23						
ZZZZZZ		1	1:30						
ZZZZZZ		2	1:37						
WV0943-001	PEN43RB0304	1	1:45		As			Pb	
WV0943-001L	PEN43RB0304L	5	1:52		As			Pb	
CCV		1	1:59	Al	As	Ca	Fe	Pb	Mg
CCB		1	2:06	Al	As	Ca	Fe	Pb	Mg
WV0943-001P	PEN43RB0304P	1	2:13		As			Pb	
WV0943-001S	PEN43RB0304S	1	2:21		As			Pb	
ZZZZZZ		5	2:28						
ZZZZZZ		1	2:35						
ZZZZZZ		1	2:42						
ZZZZZZ		1	2:49						
ZZZZZZ		1	2:57						
ZZZZZZ		1	3:04						
ZZZZZZ		1	3:11						
ZZZZZZ		1	3:18						
CCV		1	3:26	Al	As	Ca	Fe	Pb	Mg
CCB		1	3:33	Al	As	Ca	Fe	Pb	Mg
ZZZZZZ		1	3:40						
ZZZZZZ		5	3:47						
ZZZZZZ		5	3:54						
ZZZZZZ		1	4:02						
ZZZZZZ		1	4:09						
ZZZZZZ		1	4:16						
ZZZZZZ		1	4:23						
CRI		1	4:31	Al	As	Ca	Fe	Pb	Mg
ICSA		1	4:38	Al	As	Ca	Fe	Pb	Mg
ICSAB		1	4:45	Al	As	Ca	Fe	Pb	Mg
CCV		1	4:52	Al	As	Ca	Fe	Pb	Mg
CCB		1	5:00	Al	As	Ca	Fe	Pb	Mg

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC28B

Date: 3/28/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	12:33	Al	As	Ca	Fe Pb Mg
S1		1	12:40	Al	As	Ca	Fe Pb Mg
ICV		1	12:47	Al	As	Ca	Fe Pb Mg
ICB		1	12:54	Al	As	Ca	Fe Pb Mg
PQL		1	13:01	Al	As	Ca	Fe Pb Mg
CRI		1	13:08	Al	As	Ca	Fe Pb Mg
ICSA		1	13:15	Al	As	Ca	Fe Pb Mg
ICSAB		1	13:22	Al	As	Ca	Fe Pb Mg
CCV		1	13:29	Al	As	Ca	Fe Pb Mg
CCB		1	13:36	Al	As	Ca	Fe Pb Mg
ZZZZZZ		2	13:46				
ZZZZZZ		5	13:54				
ZZZZZZ		1	14:01				
CCV		1	14:08	Al	As	Ca	Fe Pb Mg
CCB		1	14:15	Al	As	Ca	Fe Pb Mg
CRI		1	14:23	Al	As	Ca	Fe Pb Mg
ICSA		1	14:30	Al	As	Ca	Fe Pb Mg
ICSAB		1	14:37	Al	As	Ca	Fe Pb Mg
CCV		1	14:44	Al	As	Ca	Fe Pb Mg
CCB		1	14:51	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	14:58				
ZZZZZZ		5	15:05				
ZZZZZZ		1	15:12				
ZZZZZZ		1	15:19				
ZZZZZZ		1	15:26				
ZZZZZZ		1	15:33				
ZZZZZZ		1	15:40				
ZZZZZZ		1	15:47				
ZZZZZZ		1	15:54				
ZZZZZZ		1	16:01				
CCV		1	16:08	Al	As	Ca	Fe Pb Mg
CCB		1	16:15	Al	As	Ca	Fe Pb Mg
ZZZZZZ		5	16:22				
ZZZZZZ		5	16:29				
ZZZZZZ		2	16:36				
ZZZZZZ		5	16:47				
ZZZZZZ		1	16:54				
ZZZZZZ		5	17:01				
ZZZZZZ		1	17:08				
ZZZZZZ		1	17:15				
PBSVC17ICS0		1	17:22		As		Pb
LCSOVC17ICS0		1	17:29		As		Pb
CCV		1	17:36	Al	As	Ca	Fe Pb Mg
CCB		1	17:43	Al	As	Ca	Fe Pb Mg
WV0943-003	PEN43SB1101	1	17:50		As		
WV0943-003	PEN43SB1101	10	17:57				Pb
WV0943-004	PEN43SB1101D	1	18:04		As		Pb
WV0943-005	PEN43SB1102	1	18:11		As		Pb
WV0943-006	PEN43SB1201	1	18:18		As		Pb
WV0943-007P	PEN43SB1202P	1	18:25		As		Pb

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC28B

Date: 3/28/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
ZZZZZZ		5	18:33						
CRI		1	18:40	Al	As	Ca	Fe	Pb	Mg
ICSA		1	18:47	Al	As	Ca	Fe	Pb	Mg
ICSAB		1	18:54	Al	As	Ca	Fe	Pb	Mg
CCV		1	19:01	Al	As	Ca	Fe	Pb	Mg
CCB		1	19:08	Al	As	Ca	Fe	Pb	Mg

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	11:40	Al	As	Ca	Fe Pb Mg
S1		1	11:47	Al	As	Ca	Fe Pb Mg
AL IEC		1	11:57	Al	As	Ca	Fe Pb Mg
FE IEC		1	12:04	Al	As	Ca	Fe Pb Mg
MN IEC		1	12:11	Al	As	Ca	Fe Pb Mg
IEC		1	12:18	Al	As	Ca	Fe Pb Mg
ICV		1	12:26	Al	As	Ca	Fe Pb Mg
ICB		1	12:33	Al	As	Ca	Fe Pb Mg
PQL		1	12:40	Al	As	Ca	Fe Pb Mg
CRI		1	12:47	Al	As	Ca	Fe Pb Mg
ICSA		1	12:54	Al	As	Ca	Fe Pb Mg
ICSAB		1	13:01	Al	As	Ca	Fe Pb Mg
CCV		1	13:08	Al	As	Ca	Fe Pb Mg
CCB		1	13:15	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	13:22				
ZZZZZZ		1	13:30				
ZZZZZZ		1	13:37				
ZZZZZZ		1	13:46				
ZZZZZZ		1	13:53				
ZZZZZZ		1	14:00				
ZZZZZZ		1	14:07				
ZZZZZZ		2	14:14				
ZZZZZZ		10	14:21				
ZZZZZZ		1	14:28				
CCV		1	14:35	Al	As	Ca	Fe Pb Mg
CCB		1	14:42	Al	As	Ca	Fe Pb Mg
ZZZZZZ		2	14:51				
CCV		1	14:58	Al	As	Ca	Fe Pb Mg
CCB		1	15:05	Al	As	Ca	Fe Pb Mg
ZZZZZZ		5	15:12				
ZZZZZZ		1	15:19				
ZZZZZZ		1	15:30				
ZZZZZZ		1	15:37				
ZZZZZZ		1	15:44				
ZZZZZZ		1	15:51				
ZZZZZZ		1	15:58				
ZZZZZZ		1	16:05				
ZZZZZZ		1	16:12				
ZZZZZZ		1	16:19				
CCV		1	16:26	Al	As	Ca	Fe Pb Mg
CCB		1	16:33	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	16:41				
ZZZZZZ		2	16:48				
ZZZZZZ		5	16:55				
ZZZZZZ		10	17:02				
ZZZZZZ		25	17:09				
ZZZZZZ		2	17:16				
ZZZZZZ		2	17:23				
CRI		1	17:30	Al	As	Ca	Fe Pb Mg
ICSA		1	17:37	Al	As	Ca	Fe Pb Mg

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ICSAB		1	17:44	Al	As	Ca	Fe Pb Mg
CCV		1	17:51	Al	As	Ca	Fe Pb Mg
CCB		1	17:58	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	18:05				
ZZZZZZ		1	18:12				
ZZZZZZ		2	18:19				
ZZZZZZ		10	18:26				
ZZZZZZ		2	18:33				
ZZZZZZ		20	18:40				
ZZZZZZ		1	18:47				
ZZZZZZ		1	18:54				
ZZZZZZ		1	19:01				
ZZZZZZ		1	19:08				
CCV		1	19:15	Al	As	Ca	Fe Pb Mg
CCB		1	19:22	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	19:29				
ZZZZZZ		1	19:36				
ZZZZZZ		1	19:44				
ZZZZZZ		1	19:51				
ZZZZZZ		1	19:58				
WV0943-009	PEN43SB1302	1	20:05		As		Pb
ZZZZZZ		1	20:12				
ZZZZZZ		1	20:19				
ZZZZZZ		1	20:26				
ZZZZZZ		3	20:33				
CCV		1	20:40	Al	As	Ca	Fe Pb Mg
CCB		1	20:47	Al	As	Ca	Fe Pb Mg
WV0943-010	PEN43SB1501	1	20:54		As		Pb
ZZZZZZ		1	21:01				
ZZZZZZ		1	21:08				
WV0943-011	PEN43SB1502	1	21:15		As		Pb
WV0943-012	PEN43SB1401	1	21:22		As		
ZZZZZZ		1	21:29				
ZZZZZZ		1	21:36				
CRI		1	21:43	Al	As	Ca	Fe Pb Mg
ICSA		1	21:50	Al	As	Ca	Fe Pb Mg
ICSAB		1	21:57	Al	As	Ca	Fe Pb Mg
CCV		1	22:04	Al	As	Ca	Fe Pb Mg
CCB		1	22:11	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	22:18				
ZZZZZZ		1	22:26				
ZZZZZZ		1	22:33				
ZZZZZZ		1	22:40				
ZZZZZZ		1	22:47				
ZZZZZZ		1	22:54				
ZZZZZZ		1	23:01				
ZZZZZZ		1	23:08				
ZZZZZZ		1	23:15				
ZZZZZZ		1	23:22				
CCV		1	23:29	Al	As	Ca	Fe Pb Mg
CCB		1	23:36	Al	As	Ca	Fe Pb Mg

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
ZZZZZZ		5	23:43						
ZZZZZZ		1	23:50						
ZZZZZZ		1	23:57						
ZZZZZZ		1	0:04						
ZZZZZZ		1	0:11						
ZZZZZZ		1	0:18						
WV0943-013	PEN43SB1402	1	0:25					Pb	
WV0943-014	PEN43SB1601	1	0:32					Pb	
ZZZZZZ		1	0:39						
ZZZZZZ		1	0:47						
CCV		1	0:54	Al	As	Ca	Fe	Pb	Mg
CCB		1	1:01	Al	As	Ca	Fe	Pb	Mg
ZZZZZZ		1	1:08						
ZZZZZZ		1	1:15						
ZZZZZZ		10	1:22						
ZZZZZZ		1	1:29						
ZZZZZZ		1	1:36						
ZZZZZZ		1	1:43						
WV0943-008	PEN43SB1301	1	1:50					Pb	
ZZZZZZ		5	1:57						
CCV		1	2:04	Al	As	Ca	Fe	Pb	Mg
CCB		1	2:11	Al	As	Ca	Fe	Pb	Mg
CRI		1	2:18	Al	As	Ca	Fe	Pb	Mg
ICSA		1	2:25	Al	As	Ca	Fe	Pb	Mg
ICSAB		1	2:32	Al	As	Ca	Fe	Pb	Mg
CCV		1	2:39	Al	As	Ca	Fe	Pb	Mg
CCB		1	2:46	Al	As	Ca	Fe	Pb	Mg

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC30A

Date: 3/30/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	11:52	Al	As	Ca	Fe Pb Mg
S1		1	11:59	Al	As	Ca	Fe Pb Mg
AL IEC		1	12:09	Al	As	Ca	Fe Pb Mg
FE IEC		1	12:16	Al	As	Ca	Fe Pb Mg
MN IEC		1	12:23	Al	As	Ca	Fe Pb Mg
IEC		1	12:31	Al	As	Ca	Fe Pb Mg
ICV		1	12:38	Al	As	Ca	Fe Pb Mg
ICB		1	12:45	Al	As	Ca	Fe Pb Mg
PQL		1	12:52	Al	As	Ca	Fe Pb Mg
CRI		1	12:59	Al	As	Ca	Fe Pb Mg
ICSA		1	13:07	Al	As	Ca	Fe Pb Mg
ICSAB		1	13:16	Al	As	Ca	Fe Pb Mg
CCV		1	13:25	Al	As	Ca	Fe Pb Mg
CCB		1	13:32	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	13:39				
ZZZZZZ		1	13:46				
ZZZZZZ		1	13:53				
ZZZZZZ		1	14:00				
ZZZZZZ		1	14:07				
ZZZZZZ		1	14:14				
CCV		1	14:21	Al	As	Ca	Fe Pb Mg
CCB		1	14:28	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	14:35				
ZZZZZZ		1	14:42				
ZZZZZZ		1	14:49				
ZZZZZZ		1	14:56				
ZZZZZZ		1	15:03				
ZZZZZZ		1	15:10				
ZZZZZZ		1	15:17				
ZZZZZZ		1	15:24				
ZZZZZZ		1	15:31				
ZZZZZZ		1	15:38				
CCV		1	15:45	Al	As	Ca	Fe Pb Mg
CCB		1	15:52	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	16:01				
ZZZZZZ		1	16:08				
ZZZZZZ		1	16:15				
CCV		1	16:22	Al	As	Ca	Fe Pb Mg
CCB		1	16:29	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	16:36				
ZZZZZZ		1	16:43				
ZZZZZZ		1	16:50				
ZZZZZZ		1	16:57				
WV0943-007	PEN43SB1202	1	17:04		As		Pb
WV0943-007S	PEN43SB1202S	1	17:11		As		Pb
WV0943-008	PEN43SB1301	1	17:18		As		
CRI		1	17:25	Al	As	Ca	Fe Pb Mg
ICSA		1	17:32	Al	As	Ca	Fe Pb Mg
ICSAB		1	17:39	Al	As	Ca	Fe Pb Mg
CCV		1	17:46	Al	As	Ca	Fe Pb Mg

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC30A

Date: 3/30/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements
CCB		1	17:53	Al As Ca Fe Pb Mg
WV0943-012	PEN43SB1401	10	18:00	Pb
WV0943-013	PEN43SB1402	1	18:07	As
WV0943-014	PEN43SB1601	1	18:14	As
WV0943-015	PEN43SB1602	1	18:21	As Pb
ZZZZZZ		1	18:28	
ZZZZZZ		5	18:35	
WV0943-016P	PEN43SB1701P	1	18:42	As
WV0943-016P	PEN43SB1701P	10	18:49	Pb
WV0943-016S	PEN43SB1701S	1	18:57	As
WV0943-017	PEN43SB1702	1	19:04	As Pb
CCV		1	19:11	Al As Ca Fe Pb Mg
CCB		1	19:18	Al As Ca Fe Pb Mg
WV0943-018	PEN43SB1801	1	19:25	As Pb
WV0943-019	PEN43SB1802	1	19:32	As Pb
WV0943-020	PEN43SB1901	1	19:39	As Pb
WV0943-021	PEN43SB1902	1	19:46	As Pb
ZZZZZZ		1	19:53	
ZZZZZZ		5	20:00	
ZZZZZZ		1	20:07	
ZZZZZZ		1	20:14	
ZZZZZZ		1	20:21	
ZZZZZZ		1	20:28	
CCV		1	20:35	Al As Ca Fe Pb Mg
CCB		1	20:42	Al As Ca Fe Pb Mg
ZZZZZZ		1	20:49	
ZZZZZZ		1	20:56	
ZZZZZZ		1	21:03	
ZZZZZZ		1	21:10	
ZZZZZZ		1	21:17	
ZZZZZZ		1	21:24	
ZZZZZZ		1	21:32	
CRI		1	21:39	Al As Ca Fe Pb Mg
ICSA		1	21:46	Al As Ca Fe Pb Mg
ICSAB		1	21:53	Al As Ca Fe Pb Mg
CCV		1	22:00	Al As Ca Fe Pb Mg
CCB		1	22:07	Al As Ca Fe Pb Mg

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA TRACE ICP **File Name:** AVC31B

Date: 3/31/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements						
S0		1	14:12	Al	As	Ca	Fe	Pb	Mg	
S1		1	14:19	Al	As	Ca	Fe	Pb	Mg	
AL IEC		1	14:29	Al	As	Ca	Fe	Pb	Mg	
FE IEC		1	14:36	Al	As	Ca	Fe	Pb	Mg	
MN IEC		1	14:43	Al	As	Ca	Fe	Pb	Mg	
IEC		1	14:50	Al	As	Ca	Fe	Pb	Mg	
ICV		1	14:57	Al	As	Ca	Fe	Pb	Mg	
ICB		1	15:04	Al	As	Ca	Fe	Pb	Mg	
PQL		1	15:12	Al	As	Ca	Fe	Pb	Mg	
CRI		1	15:19	Al	As	Ca	Fe	Pb	Mg	
ICSA		1	15:26	Al	As	Ca	Fe	Pb	Mg	
ICSAB		1	15:42	Al	As	Ca	Fe	Pb	Mg	
CCV		1	15:49	Al	As	Ca	Fe	Pb	Mg	
CCB		1	15:56	Al	As	Ca	Fe	Pb	Mg	
ZZZZZZ		1	16:03							
ZZZZZZ		1	16:10							
ZZZZZZ		1	16:17							
ZZZZZZ		1	16:24							
ZZZZZZ		1	16:32							
ZZZZZZ		1	16:39							
ZZZZZZ		1	16:46							
ZZZZZZ		1	16:53							
ZZZZZZ		1	17:00							
ZZZZZZ		1	17:07							
CCV		1	17:14	Al	As	Ca	Fe	Pb	Mg	
CCB		1	17:21	Al	As	Ca	Fe	Pb	Mg	
ZZZZZZ		1	17:29							
ZZZZZZ		1	17:36							
ZZZZZZ		1	17:43							
ZZZZZZ		5	17:50							
ZZZZZZ		1	17:57							
ZZZZZZ		1	18:04							
ZZZZZZ		1	18:11							
ZZZZZZ		1	18:18							
ZZZZZZ		1	18:25							
ZZZZZZ		1	18:32							
CCV		1	18:39	Al	As	Ca	Fe	Pb	Mg	
CCB		1	18:46	Al	As	Ca	Fe	Pb	Mg	
ZZZZZZ		1	18:53							
WV0943-016	PEN43SB1701	2	19:01		As			Pb		
WV0943-016L	PEN43SB1701L	10	19:08		As			Pb		
WV0943-016S	PEN43SB1701S	10	19:15					Pb		
ZZZZZZ		1	19:22							
ZZZZZZ		5	19:29							
ZZZZZZ		2	19:36							
CRI		1	19:43	Al	As	Ca	Fe	Pb	Mg	
ICSA		1	19:50	Al	As	Ca	Fe	Pb	Mg	
ICSAB		1	19:57	Al	As	Ca	Fe	Pb	Mg	
CCV		1	20:04	Al	As	Ca	Fe	Pb	Mg	
CCB		1	20:11	Al	As	Ca	Fe	Pb	Mg	

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA 61 ICP **File Name:** BVC24A

Date: 3/24/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
S0		1	10:54	Al	Ba	Ca	Cu Fe	Mg	V
S1		1	11:00	Al	Ba	Ca	Cu Fe	Mg	V
AL IEC		1	11:05	Al	Ba	Ca	Cu Fe	Mg	V
FE IEC		1	11:14	Al	Ba	Ca	Cu Fe	Mg	V
ICV		1	11:23	Al	Ba	Ca	Cu Fe	Mg	V
ICB		1	11:29	Al	Ba	Ca	Cu Fe	Mg	V
PQL		1	11:35	Al	Ba	Ca	Cu Fe	Mg	V
CRI		1	11:43	Al	Ba	Ca	Cu Fe	Mg	V
ICSA		1	11:48	Al	Ba	Ca	Cu Fe	Mg	V
ICSAB		1	11:54	Al	Ba	Ca	Cu Fe	Mg	V
CCV		1	12:00	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	12:05	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1000	12:11						
ZZZZZZ		1	12:17						
ZZZZZZ		5	12:28						
ZZZZZZ		1	12:33						
ZZZZZZ		1	12:39						
ZZZZZZ		1	12:45						
ZZZZZZ		1	12:50						
ZZZZZZ		1	12:56						
ZZZZZZ		1	13:02						
ZZZZZZ		1	13:07						
CCV		1	13:13	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	13:18	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	13:24						
ZZZZZZ		1	13:30						
ZZZZZZ		1	13:35						
ZZZZZZ		1	13:41						
ZZZZZZ		1	13:47						
ZZZZZZ		1	13:52						
ZZZZZZ		1	13:58						
ZZZZZZ		5	14:04						
ZZZZZZ		5	14:09						
ZZZZZZ		1	14:15						
CCV		1	14:20	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	14:26	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	14:32						
ZZZZZZ		1	14:38						
ZZZZZZ		1	14:43						
ZZZZZZ		1	14:49						
ZZZZZZ		1	14:54						
ZZZZZZ		1	15:00						
ZZZZZZ		1	15:06						
ZZZZZZ		1	15:17						
CCV		1	15:24	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	15:30	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	15:35						
ZZZZZZ		1	15:41						
ZZZZZZ		1	15:47						
ZZZZZZ		1	15:52						

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA 61 ICP **File Name:** BVC24A

Date: 3/24/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements						
ZZZZZZ		1	15:58							
ZZZZZZ		1	16:04							
ZZZZZZ		1	16:09							
CRI		1	16:15	Al	Ba	Ca	Cu Fe	Mg		V
ICSA		1	16:21	Al	Ba	Ca	Cu Fe	Mg		V
ICSAB		1	16:26	Al	Ba	Ca	Cu Fe	Mg		V
CCV		1	16:32	Al	Ba	Ca	Cu Fe	Mg		V
CCB		1	16:37	Al	Ba	Ca	Cu Fe	Mg		V
LCSOVC17ICS0		1	16:43		Ba		Cu			V
ZZZZZZ		3	16:55							
CCV		1	17:01	Al	Ba	Ca	Cu Fe	Mg		V
CCB		1	17:06	Al	Ba	Ca	Cu Fe	Mg		V
PBSVC17ICS0		1	17:12		Ba		Cu			V
WV0943-003	PEN43SB1101	1	17:18		Ba					V
WV0943-004	PEN43SB1101D	1	17:23		Ba		Cu			V
WV0943-005	PEN43SB1102	1	17:29		Ba		Cu			V
WV0943-006	PEN43SB1201	1	17:35		Ba		Cu			V
WV0943-007P	PEN43SB1202P	1	17:40		Ba		Cu			V
ZZZZZZ		5	17:46							
WV0943-007	PEN43SB1202	1	17:51		Ba		Cu			V
WV0943-007S	PEN43SB1202S	1	17:57		Ba		Cu			V
CCV		1	18:03	Al	Ba	Ca	Cu Fe	Mg		V
CCB		1	18:08	Al	Ba	Ca	Cu Fe	Mg		V
WV0943-008	PEN43SB1301	1	18:14		Ba		Cu			V
WV0943-009	PEN43SB1302	1	18:20		Ba		Cu			V
WV0943-010	PEN43SB1501	1	18:25		Ba		Cu			V
WV0943-011	PEN43SB1502	1	18:31		Ba		Cu			V
WV0943-012	PEN43SB1401	1	18:37		Ba					
WV0943-013	PEN43SB1402	1	18:42		Ba		Cu			V
WV0943-014	PEN43SB1601	1	18:48		Ba		Cu			V
WV0943-015	PEN43SB1602	1	18:53		Ba		Cu			V
WV0943-016	PEN43SB1701	1	18:59		Ba					
WV0943-016L	PEN43SB1701L	5	19:05		Ba					
CCV		1	19:10	Al	Ba	Ca	Cu Fe	Mg		V
CCB		1	19:16	Al	Ba	Ca	Cu Fe	Mg		V
WV0943-016P	PEN43SB1701P	1	19:22		Ba					V
WV0943-016S	PEN43SB1701S	1	19:27		Ba		Cu			V
WV0943-017	PEN43SB1702	1	19:33		Ba		Cu			V
WV0943-018	PEN43SB1801	1	19:39		Ba		Cu			V
WV0943-019	PEN43SB1802	1	19:44		Ba		Cu			V
WV0943-020	PEN43SB1901	1	19:50		Ba		Cu			V
WV0943-021	PEN43SB1902	1	19:55		Ba		Cu			V
CRI		1	20:01	Al	Ba	Ca	Cu Fe	Mg		V
ICSA		1	20:07	Al	Ba	Ca	Cu Fe	Mg		V
ICSAB		1	20:12	Al	Ba	Ca	Cu Fe	Mg		V
CCV		1	20:18	Al	Ba	Ca	Cu Fe	Mg		V
CCB		1	20:24	Al	Ba	Ca	Cu Fe	Mg		V

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA 61 ICP **File Name:** BVC28A

Date: 3/28/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements				
S0		1	13:01	Al	Ca	Cu Fe	Mg	V
S1		1	13:07	Al	Ca	Cu Fe	Mg	V
AL IEC		1	13:12	Al	Ca	Cu Fe	Mg	V
FE IEC		1	13:21	Al	Ca	Cu Fe	Mg	V
ICV		1	13:29	Al	Ca	Cu Fe	Mg	V
ICB		1	13:35	Al	Ca	Cu Fe	Mg	V
PQL		1	13:40	Al	Ca	Cu Fe	Mg	V
CRI		1	13:46	Al	Ca	Cu Fe	Mg	V
ICSA		1	13:52	Al	Ca	Cu Fe	Mg	V
ICSAB		1	13:57	Al	Ca	Cu Fe	Mg	V
CCV		1	14:03	Al	Ca	Cu Fe	Mg	V
CCB		1	14:09	Al	Ca	Cu Fe	Mg	V
ZZZZZZ		1	14:14					
ZZZZZZ		1	14:20					
ZZZZZZ		1	14:26					
ZZZZZZ		1	14:31					
ZZZZZZ		1	14:37					
CCV		1	14:43	Al	Ca	Cu Fe	Mg	V
CCB		1	14:48	Al	Ca	Cu Fe	Mg	V
CCV		1	15:29	Al	Ca	Cu Fe	Mg	V
CCB		1	15:35	Al	Ca	Cu Fe	Mg	V
ZZZZZZ		1	15:41					
ZZZZZZ		1	15:46					
ZZZZZZ		1	15:53					
ZZZZZZ		10	15:59					
ZZZZZZ		1	16:05					
ZZZZZZ		20	16:11					
ZZZZZZ		1	16:16					
CRI		1	16:28	Al	Ca	Cu Fe	Mg	V
ICSA		1	16:34	Al	Ca	Cu Fe	Mg	V
ICSAB		1	16:40	Al	Ca	Cu Fe	Mg	V
CCV		1	16:45	Al	Ca	Cu Fe	Mg	V
CCB		1	16:51	Al	Ca	Cu Fe	Mg	V
WV0943-001S	PEN43RB0304S	5	16:57					V
ZZZZZZ		5	17:02					
ZZZZZZ		2	17:08					
ZZZZZZ		5	17:14					
ZZZZZZ		1	17:19					
ZZZZZZ		5	17:25					
ZZZZZZ		1	17:30					
ZZZZZZ		1	17:36					
WV0943-003	PEN43SB1101	10	17:42			Cu		
WV0943-012	PEN43SB1401	2	17:47			Cu		V
CCV		1	17:53	Al	Ca	Cu Fe	Mg	V
CCB		1	17:59	Al	Ca	Cu Fe	Mg	V
WV0943-016	PEN43SB1701	2	18:04			Cu		V
WV0943-016L	PEN43SB1701L	10	18:10			Cu		V
WV0943-016P	PEN43SB1701P	2	18:16			Cu		
ZZZZZZ		2	18:21					
ZZZZZZ		5	18:27					

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-2

Instrument ID: TJA 61 ICP **File Name:** BVC28A

Date: 3/28/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
ZZZZZZ		2	18:32						
ZZZZZZ		10	18:38						
ZZZZZZ		2	18:44						
ZZZZZZ		2	18:49						
ZZZZZZ		2	18:55						
CCV		1	19:01	Al	Ca	Cu Fe	Mg		V
CCB		1	19:06	Al	Ca	Cu Fe	Mg		V
ZZZZZZ		2	19:12						
ZZZZZZ		1	19:18						
ZZZZZZ		1	19:23						
ZZZZZZ		1	19:29						
CRI		1	19:34	Al	Ca	Cu Fe	Mg		V
ICSA		1	19:40	Al	Ca	Cu Fe	Mg		V
ICSAB		1	19:46	Al	Ca	Cu Fe	Mg		V
CCV		1	19:51	Al	Ca	Cu Fe	Mg		V
CCB		1	19:57	Al	Ca	Cu Fe	Mg		V

NAS PENSACOLA
SOIL DATA
3552

FRACTION	CHEMICAL	PEN43SB1102	UNITS	PEN43SB110~~1~~2D	RPD	D
M	ARSENIC	ND	MG/KG	0.31	NC	~~NC~~ 0.31
M	BARIUM	1.5	MG/KG	15.1	163.86	13.60
M	COPPER	0.74	MG/KG	2.2	99.32	1.46
M	LEAD	1.4	MG/KG	4	96.30	2.60
M	VANADIUM	2.4	MG/KG	2.3	4.26	0.10

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.
ND = Compound not detected.
NC = Statistic not calculated

NAS PENSACOLA
SOIL DATA
3552

2

FRACTION	CHEMICAL	PEN43SB1102	UNITS	PEN43SB1107D	RPD	D
MISC	TOTAL SOLIDS	95	%	95	0.00	0.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

SDev	.00172	.00089	.00281
%RSD	56.068	25.954	131.16
#1	.00185	-.00279	.00413
#2	.00429	-.00404	.00016

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	360.063	--	--	--	--	--	--
Avge	32246	--	--	--	--	--	--
SDev	57.27565	--	--	--	--	--	--
%RSD	.1776237	--	--	--	--	--	--
#1	32286	--	--	--	--	--	--
#2	32205	--	--	--	--	--	--

Method: NONAK Sample Name: WV0943-012 Operator:
Run Time: 03/30/05 18:00:44 PEN43SB1401 EWF 4/15/05
Comment:
Mode: CONC Corr. Factor: 10

Elem	Al	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	34.279	.14162	13.393	-.00033	.04380	.07334	40.734
SDev	.200	.02167	.072	.00019	.01608	.00148	.185
%RSD	.58203	15.305	.53848	55.796	36.709	2.0171	.45413
#1	34.421	.12629	13.444	-.00047	.03243	.07230	40.865
#2	34.138	.15695	13.342	-.00020	.05517	.07439	40.603

Elem	Cr	Co	Cu	Fe	Mg	Mn	Mo
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.84219	.03948	16.054	425.57	9.3676	5.5024	.02379
SDev	.01008	.00334	.096	1.50	.0448	.0269	.00336
%RSD	1.1971	8.4582	.59629	.35290	.47855	.48958	14.129
#1	.84932	.04184	16.122	426.64	9.3993	5.5215	.02616
#2	.83507	.03712	15.987	424.51	9.3359	5.4834	.02141

Elem	Ni	Ag	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	1.7713	.01790	.43389	.00356	6.9908	.62904	1.9473
SDev	.0021	.01190	.00198	.04625	.0039	.00132	.0047
%RSD	.12131	66.478	.45576	1297.9	.05646	.21036	.24003
#1	1.7698	.02632	.43529	.03627	6.9880	.62998	1.9506
#2	1.7729	.00949	.43250	-.02914	6.9936	.62810	1.9440

Elem	Zn	Pb	Se	Sb	2068/1	2068/2	2203/1
Units	mg/L	mg/L	mg/L	mg/L			
Avge	59.517	77.066	.01468	.21342	.20527	.21748	75.914
SDev	.280	.140	.02708	.05080	.01724	.08477	.043
%RSD	.47070	.18108	184.53	23.805	8.3987	38.979	.05697
#1	59.716	77.165	.03383	.24934	.19308	.27743	75.883
#2	59.319	76.967	-.00447	.17749	.21746	.15754	75.944

Pb = 77.066 mg/L x 1L/1000mL x 100mL/1.63g x 1000g/1kg x 1/0.86 = 5500 mg/kg.

Elem	2203/2	1960/1	1960/2
Units			
Avge	77.641	.00498	.01952
SDev	.231	.04428	.01850
%RSD	.29728	888.92	94.777
#1	77.804	.03629	.03260
#2	77.478	-.02633	.00644

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	360.063	--	--	--	--	--	--
Avge	32768	--	--	--	--	--	--
SDev	26.87006	--	--	--	--	--	--
%RSD	.0820009	--	--	--	--	--	--
#1	32749	--	--	--	--	--	--
#2	32787	--	--	--	--	--	--

Method: NONAK Sample Name: WV0943-013 Operator:
Run Time: 03/30/05 18:07:46
Comment:
Mode: CONC Corr. Factor: 1

Elem	Al	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	19.468	.00331	.10234	.00007	.00612	.00036	2.8789
SDev	.009	.00016	.00005	.00001	.00045	.00018	.0047
%RSD	.04374	4.7796	.05275	7.6640	7.3321	49.623	.16209
#1	19.462	.00319	.10230	.00008	.00580	.00049	2.8822
#2	19.474	.00342	.10238	.00007	.00644	.00024	2.8756

Elem	Cr	Co	Cu	Fe	Mg	Mn	Mo
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.01927	.00136	.06682	15.332	1.0482	.12179	.00340
SDev	.00052	.00018	.00023	.026	.0051	.00008	.00055
%RSD	2.7062	13.582	.35074	.17019	.49109	.06699	16.222
#1	.01890	.00123	.06698	15.351	1.0518	.12185	.00379
#2	.01964	.00149	.06665	15.314	1.0445	.12174	.00301

Elem	Ni	Ag	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.02430	-.00056	.02272	.00867	.03301	.30520	.07280
SDev	.00058	.00029	.00001	.00022	.00081	.00035	.00021
%RSD	2.3700	51.551	.02920	2.4887	2.4693	.11385	.29175
#1	.02389	-.00077	.02273	.00882	.03243	.30544	.07295
#2	.02471	-.00036	.02272	.00852	.03358	.30495	.07265

Elem	Zn	Pb	Se	Sb	2068/1	2068/2	2203/1
Units	mg/L	mg/L	mg/L	mg/L			
Avge	.18259	.12130	.00024	.00061	.00217	-.00017	.11646
SDev	.00087	.00105	.00003	.00105	.00428	.00056	.00035

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**G. WALKER**	**DATE:**	**MAY 27, 2005**
FROM:	**BERNARD F SPADA III**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- SVOC/PAH**
CTO 355, NAS PENSACOLA
SDG 3552

SAMPLES: 1/Aqueous

PEN34RB0304

19/Soil

PEN43SB1101	PEN43SB1102	PEN43SB1102D
PEN43SB1201	PEN43SB1202	PEN43SB1301
PEN43SB1302	PEN43SB1401	PEN43SB1402
PEN43SB1501	PEN43SB1502	PEN43SB1601
PEN43SB1602	PEN43SB1701	PEN43SB1702
PEN43SB1801	PEN43SB1802	PEN43SB1901
PEN43SB1902		

OVERVIEW

The sample set for CTO 355, NAS Pensacola, SDG 3552 consists of one (1) aqueous rinse blank, eighteen (18) environmental soil samples, and one (1) field duplicate. All samples were analyzed for semivolatile organic compounds (SVOC) and polynuclear aromatic hydrocarbons (PAH). The field duplicate included in this SDG is PEN43SB1102 and PEN43SB1102D.

The samples were collected by Tetra Tech NUS on March 4, 2005 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8270C and 8270SIM analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- Data completeness
- * Holding times
- * GC/MS Tuning
- Initial and continuing calibration
- Blank results
- Surrogate spike recoveries
- Internal standard recoveries
- Blank Spike/Blank Spike Duplicate Results
- Matrix Spike/Matrix Spike Duplicate Results
- * Compound Quantitation
- * Compound Identification
- * Tentatively Identified Compounds
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified

Analytical results are presented in Appendix A. Results as reported by the laboratory are included in Appendix B.

Semivolatile

The validator noted that the initial submittal of the continuing calibrations (CCAL) performed on March 23 and 25, 2005 included information for benzaldehyde that was inconsistent with the initial calibration. According to the laboratory, the aforementioned CCALs had a retention time shift for benzaldehyde. The CCAL summary forms (Form VII) were regenerated and re-submitted. The laboratory re-submitted a different CCAL to replace the CCAL from March 23. The validator requested that the correct CCAL be re-submitted. The laboratory re-submitted the correct CCAL upon request.

The initial calibration performed on March 15, 2005 on the GCMS-U instrument was below the 0.05 relative response factor (RRF) quality control criterion for benzaldehyde and pentachlorophenol. No action was taken on this basis because only QC samples were associated with this calibration.

The initial calibration performed on March 15, 2005 on the GCMS-U instrument exceeded the 30% relative standard deviation (RSD) quality control criterion for benzaldehyde and pentachlorophenol. No action was taken on this basis because only QC samples were associated with this calibration.

The continuing calibration performed on March 18 at 09:06 on the GCMS-U was below the 0.05 RRF quality control criterion for 4-nitrophenol and pentachlorophenol. No action was taken on this basis because only QC samples were associated with this calibration.

The continuing calibration performed on March 18 at 09:06 on the GCMS-U instrument exceeded the 25% difference quality control criterion for benzaldehyde, 4-nitroaniline, and 2,4-dinitrophenol. No action was taken on this basis because only QC samples were associated with this calibration.

The initial calibration performed on February 23, 2005 on the GCMS-X instrument exceeded the 30% RSD quality control criterion for benzaldehyde, hexachlorocyclopentadiene, and atrazine. No action was taken on this basis because only QC samples were associated with this calibration.

The continuing calibration performed on March 10 at 12:58 on the GCMS-X instrument was below the 0.05 RRF quality control criterion for benzaldehyde. No action was taken on this basis because only QC samples were associated with this calibration.

The continuing calibration performed on March 10 at 12:58 on the GCMS-X instrument exceeded the 25% difference quality control criterion for benzaldehyde, hexachlorocyclopentadiene, 4-nitroaniline, and di-n-octylphthalate. No action was taken on this basis because only QC samples were associated with this calibration.

The initial calibration performed on March 15, 2005 on the GCMS-X instrument was below the 0.05 RRF quality control criterion for benzaldehyde. Non-detected results for benzaldehyde were rejected (UR) in all samples.

The initial calibration performed on March 15, 2005 on the GCMS-X instrument exceeded the 30% RSD quality control criterion for benzaldehyde. No action was taken on this basis because all results for benzaldehyde were rejected for RRF non-compliance.

The continuing calibration performed on March 16 at 10:53 was below the 0.05 RRF quality control criterion for benzaldehyde. The non-detected result for benzaldehyde was rejected (UR) in sample PEN43RB0304.

The continuing calibration performed on March 18 at 10:02 exceeded the 25% difference quality control criterion for benzaldehyde and 2,4-dinitrophenol. No action was taken for benzaldehyde on this basis because all associated samples were rejected for RRF non-compliance. Non-detected results for 2,4-

dinitrophenol were qualified as estimated (UJ) in samples PEN43SB1101, PEN43SB1102, PEN43SB1102D, PEN43SB1201, PEN43SB1202, PEN43SB1301, PEN43SB1302, and PEN43SB1501.

The continuing calibration performed on March 22 at 09:26 exceeded the 25% difference quality control criterion for benzaldehyde. No action was taken for benzaldehyde on this basis because all associated samples were rejected for RRF non-compliance.

The continuing calibration performed on March 23 at 11:42 exceeded the 25% difference quality control criterion for benzaldehyde and bis(2-chloroethyl)ether. No action was taken for benzaldehyde on this basis because all associated results for benzaldehyde were rejected for RRF non-compliance. The associated non-detected results for bis(2-chloroethyl)ether were qualified as estimated (UJ).

The continuing calibration performed on March 25 at 12:22 was below the 0.05 RRF quality control criterion for benzaldehyde. Non-detected results for benzaldehyde were rejected (UR) in all associated samples.

The continuing calibration performed on March 25 at 12:22 exceeded the 25% difference quality control criterion for 4-nitrophenol and bis(2-chloroethyl)ether. The associated non-detected results for 4-nitrophenol and bis(2-chloroethyl)ether were qualified as estimated (UJ).

The following compound was detected in the aqueous method blank:

Compound	Maximum Concentration	Blank Action Level
Di-n-butylphthalate	5.0 µg/L	50 µg/L

Sample aliquot and dilution factors were taken into consideration when applying the blank action levels. No qualifications were made on this basis because the rinse blank was not qualified for method blank contamination.

The surrogate 2,4,6-tribromophenol exceeded the percent recovery quality control criterion in samples PEN43SS1901, PEN43SS1801, and the MS of sample PEN43SS1701. No action was taken on this basis because only one surrogate was non-compliant.

The surrogate terphenyl-d14 exceeded the percent recovery quality control criterion in samples PEN43SB1101, PEN43SB1102, PEN43SB1102D, PEN43SB1201, PEN43SB1202, PEN43SB1301, PEN43SB1302, PEN43SB1501, the method blank WG14977-BLANK, the method blank WG15035-BLANK, and the LCS WG14977-LCS. No action was taken on this basis because only one surrogate was non-compliant.

The surrogates 2,4,6-tribromophenol and terphenyl-d14 exceeded the percent recovery quality control criterion in sample PEN43SB1401. No action was taken on this basis because only one surrogate was non-compliant for each fraction.

The surrogates 2-fluorobiphenyl and terphenyl-d14 exceeded the percent recovery quality control criterion in sample PEN43SB1902. The positive result for di-n-butylphthalate was qualified as estimated (J) in sample PEN43SB1902.

The percent recoveries of 4-chloroaniline, 3-nitroaniline, and N-nitrosodiphenylamine were below the quality control criteria in the LCS (WB15035-LCS). The recovery of 4-chloroaniline was also <10%. Non-detected results for 4-chloroaniline were rejected (UR) in all samples. Non-detected results for 3-nitroanilne and N-nitrosodiphenylamine were qualified as estimated (UJ) in all samples.

The percent recovery of hexachlorobutadiene exceeded the quality control criterion in the LCS (WGS15045-LCS). No action was taken on this basis because all associated results for hexachlorobutadiene were non-detected.

The percent recovery of N-nitrosodiphenylamine was below the quality control criterion in the LCS (WG14977-LCS) and the LCS/LCSD (WG15045-LCS/LCSD). Non-detected results for N-nitrosodiphenylamine were qualified as estimated (UJ) in all samples.

The percent recovery of di-n-octylphthalate exceeded the quality control criterion in the LCS (WG14977-LCS). No action was taken on this basis because all results for di-n-octylphthalate were non-detected.

The percent recoveries of hexachlorobutadiene, 3-nitroaniline, 2,4-dinitrophenol, 4-chloroaniline, 2-chloronaphthalene, 4,6-dinitro-2-methylphenol, and 3,3'-dichlorobenzidine were below the quality control criterion in the MS/MSD of sample PEN43SB1202. No action was taken on this basis.

The percent recoveries of bis(2-chloroethyl)ether, hexachlorocyclopentadiene, 4-chloroaniline, hexachloroethane, 3-nitroaniline, and 3,3'-dichlorobenzidine were below the quality control criterion in the MS/MSD of sample PEN43SB1701. The results for hexachloroethane and hexachlorocyclopentadiene also exceeded the relative percent difference (RPD) quality control criteria in the MS/MSD. No action was taken on this basis.

The percent recoveries of 2,2'-oxybis(1-chloropropane), nitrobenzene, hexachlorobutadiene, and 2,4-dinitrophenol were below the quality control criteria in the MSD of sample PEN43SB1701. The results for 2,2'-oxybis(1-chloropropane) and hexachlorobutadiene also exceeded the relative percent difference (RPD) quality control criteria in the MS/MSD. No action was taken on this basis because the MS percent recoveries were compliant for the aforementioned compounds.

The percent recovery of di-n-octylphthalate exceeded the quality control criterion in the MS of sample PEN43SB1701. No action was taken on this basis because the MSD was compliant.

The percent recovery of di-n-octylphthalate exceeded the quality control criterion in the MS/MSD of sample PEN43SB1202. No action was taken on this basis because the result for di-n-octylphthalate was non-detected in the un-spiked sample.

The percent recovery of 2-chloronaphthalene was below the quality control criterion in the MS and 4,6-dinitro-2-methylphenol was below the criterion in the MSD of sample PEN43SB1202. No action was taken on this basis because either the MS or MSD was compliant for the aforementioned compounds.

PAH

The laboratory included two Form Is and two sets of results in the EDD for samples PEN43SB1101 and PEN43SB1102D, however, there is only one record of the sample shown on the Form Vs. The validator contacted the laboratory to determine the cause of this inconsistency. According to the laboratory, the initial analysis of the sample was performed more than 12-hours after the instrument tune and should not have been reported. The sample marked as a re-analysis (RA) was used for validation.

The continuing calibration performed on March 18 at 09:25 exceeded the 25% difference quality control criterion for benzo(b)fluoranthene. No action was taken on this basis because only QC samples were associated with this calibration were used for validation.

The continuing calibration performed on March 21 at 11:03 exceeded the 25% difference quality control criterion for 2-methylnaphthalene. The positive result for 2-methylnaphthalene was qualified as estimated (J) in sample PEN43SB1101.

The continuing calibration performed on March 22 at 11:03 exceeded the 25% difference quality control criterion for pyrene, benzo(k)fluoranthene, and dibenzo(a,h)anthracene. Positive and non-detected results for pyrene, benzo(k)fluoranthene, and dibenzo(a,h)anthracene were qualified as estimated (J) in samples

PEN43SB1402, PEN43SB1502, PEN43SB1601, PEN43SB1602, PEN43SB1702, PEN43SB1801, PEN43SB1802, PEN43SB1901, and PEN43SB1902.

The continuing calibration performed on March 23 at 11:13 exceeded the 25% difference quality control criterion for pyrene and benzo(g,h,i)perylene. Positive results for pyrene and benzo(g,h,i)perylene were qualified as estimated (J) in samples PEN43SB1701. No action was taken for benzo(g,h,i)perylene in samples PEN43SB1101 and PEN43SB1401 because the results used for validation were not associated with this calibration.

The continuing calibration performed on March 24 at 11:21 exceeded the 25% difference quality control criterion for benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, 1-methylnaphthalene, and benzo(g,h,i)perylene. Positive and non-detected results for the aforementioned compounds were qualified as estimated (J and UJ) in samples PEN43SB1102, PEN43SB1201, PEN43SB1202, PEN43SB1301, PEN43SB1302, PEN43SB1102D, and PEN43SB1501. The result for 1-methylnaphthalene in sample PEN43SB1401 were qualified as estimated (J) on this basis. No action was taken for benzo(b)fluoranthene, benzo(g,h,i)perylene, and indeno(1,2,3-cd)pyrene on this basis in sample PEN43SB1401 because the results used for validation were not associated with this calibration.

The surrogates 2-methylnaphthalene-d1, fluorene-d10, and pyrene-d10 were not recovered in either analysis of sample PEN43SB1401. No action was taken on this basis because the sample was analyzed at 10X and 200X dilutions.

The percent recoveries of benzo(a)anthracene and benzo(b)fluoranthene exceeded the quality control criterion in the LCS (WG15034-LCS). Positive results for the aforementioned compounds were qualified as estimated (J) in all samples. No action was taken on this basis for non-detected results of the aforementioned compounds.

The percent recovery of phenanthrene exceeded the quality control criterion in the MSD of sample PEN43SB1701. No action was taken on this basis because the MS was compliant.

The percent recoveries of benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene were either <10% or were not calculated by the laboratory in the MS/MSD of sample PEN43SB1701. No action was taken on this basis because the concentrations of the aforementioned compounds in the un-spiked sample 2X the spiked concentration.

The internal standard perylene-d12 exceeded the percent recovery quality control criterion in sample PEN43SB1101. The sample was re-analyzed with similar results. The original analysis was used for validation. The positive results for benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene were qualified as estimated (J) in sample PEN43SB1101. No action was taken for benzo(b)fluoranthene and benzo(a)pyrene on this basis because the results were taken from the diluted anlaysis which was compliant.

The internal standard perylene-d12 was below the percent recovery quality control criterion in the 5X dilution of sample PEN43SB1701. Positive results for benzo(b)fluoranthene and benzo(a)pyrene were qualified as estimated (J) on this basis. No further qualifications were made on this basis because the remaining associated compounds were reported from the un-diluted anlaysis.

The internal standard chrysene-d12 was below the percent recovery quality control criterion in the 200X dilution of sample PEN43SB1401. The results for pyrene, bezno(a)anthracene, and chrysene were qualified as estimated (J) in sample PEN43SB1401.

Sample PEN43SB1401 was analyzed at 10X and 200X dilutions because the concentration of target analytes exceeded the linear calibration range of the instrument. The sample was not analyzed un-

diluted. This accounts for the elevated reporting limit for acenaphthylene. No action was taken on this basis.

Samples PEN43SB1101 and PEN43SB1701 were re-analyzed at 3X and 5X dilutions respectively, because the concentration of target analytes exceeded the linear calibration range of the instrument. The results for benzo(a)pyrene, benzo(b)fluoranthene, and fluoranthene from the 3X dilution of PEN43SB1101 and benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene from the 5X dilution of PEN43SB1701 were used for validation.

The results for benzo(g,h,i)perylene and naphthalene were qualified as estimated (J) in the 10X dilution of sample PEN43SB1401 because the results exceeded the linear calibration range of the instrument. The results from the 200X dilution were not used for validation because they were below the adjusted reporting limit.

Positive results below the reporting limit were qualified as estimated (J) due to uncertainty near the detection limit.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Qualifications were made based on calibration non-compliances, surrogate recovery non-compliances, LCS recovery non-compliances, and internal standard recovery non-compliances. Di-n-butylphthalate was detected in the aqueous method blank.

Other Factors Affecting Data Quality: Qualifications were made based on MS/MSD non-compliances.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the NFESC guidelines. The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC guidelines and the Quality Assurance Project Plan (QAPP)."

Bernard F. Spada III

Tetra Tech NUS
Bernard F. Spada III
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 4821

SDG: 3552 MEDIA: WATER DATA FRACTION: OS

nsample	PEN43RB0304	nsample	PEN43RB0304
samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-2	lab_id	WV0943-2
qc_type	NM	qc_type	NM
units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	5	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	2	U	
2,4,5-TRICHLOROPHENOL	7	U	
2,4,6-TRICHLOROPHENOL	7	U	
2,4-DICHLOROPHENOL	6	U	
2,4-DIMETHYLPHENOL	8	U	
2,4-DINITROPHENOL	5	U	
2,4-DINITROTOLUENE	4	U	
2,6-DINITROTOLUENE	3	U	
2-CHLORONAPHTHALENE	3	U	
2-CHLOROPHENOL	5	U	
2-METHYLPHENOL	5	U	
2-NITROANILINE	3	U	
2-NITROPHENOL	5	U	
3,3'-DICHLOROBENZIDINE	4	U	
3-NITROANILINE	3	U	
4,6-DINITRO-2-METHYLPHENOL	10	U	
4-BROMOPHENYL PHENYL ETHER	4	U	
4-CHLORO-3-METHYLPHENOL	6	U	
4-CHLOROANILINE	4	U	
4-CHLOROPHENYL PHENYL ETHER	3	U	
4-METHYLPHENOL	5	U	
4-NITROANILINE	5	U	
4-NITROPHENOL	5	U	
ACETOPHENONE	5	U	
ATRAZINE	5	U	
BENZALDEHYDE	5	UR	C
BIS(2-CHLOROETHOXY)METHANE	2	U	
BIS(2-CHLOROETHYL)ETHER	3	U	
BIS(2-ETHYLHEXYL)PHTHALATE	7	U	
BUTYL BENZYL PHTHALATE	3	U	
CAPROLACTAM	5	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	4	U	
DIBENZOFURAN	3	U	
DIETHYL PHTHALATE	2	U	
DIMETHYL PHTHALATE	3	U	
DI-N-BUTYL PHTHALATE	2	U	
DI-N-OCTYL PHTHALATE	3	U	
HEXACHLOROBENZENE	4	U	
HEXACHLOROBUTADIENE	4	U	
HEXACHLOROCYCLOPENTADIENE	2	U	
HEXACHLOROETHANE	2	U	
ISOPHORONE	2	U	
NITROBENZENE	2	U	
N-NITROSO-DI-N-PROPYLAMINE	2	U	
N-NITROSODIPHENYLAMINE	8	UJ	E
PENTACHLOROPHENOL	9	UR	C
PHENOL	6	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1101	nsample	PEN43SB1101	nsample	PEN43SB1102
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-35	lab_id	WV0943-35	lab_id	WV0943-37
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	88.6	Pct_Solids	88.6	Pct_Solids	95.2
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	190	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	34	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	150	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	70	UJ	C
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	87	U	
2-CHLORONAPHTHALENE	54	U	
2-CHLOROPHENOL	100	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	85	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	150	U	
3-NITROANILINE	80	U	
4,6-DINITRO-2-METHYLPHENOL	230	U	
4-BROMOPHENYL PHENYL ETHER	63	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	60	U	
4-CHLOROPHENYL PHENYL ETHER	57	U	
4-METHYLPHENOL	170	U	
4-NITROANILINE	97	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	64	U	
ATRAZINE	190	U	
BENZALDEHYDE	190	UR	C
BIS(2-CHLOROETHOXY)METHANE	59	U	
BIS(2-CHLOROETHYL)ETHER	37	U	
BIS(2-ETHYLHEXYL)PHTHALATE	84	U	
BUTYL BENZYL PHTHALATE	77	U	
CAPROLACTAM	190	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	68	U	
DIBENZOFURAN	70	U	
DIETHYL PHTHALATE	120	U	
DIMETHYL PHTHALATE	70	U	
DI-N-BUTYL PHTHALATE	95	U	
DI-N-OCTYL PHTHALATE	83	U	
HEXACHLOROBENZENE	260	U	
HEXACHLOROBUTADIENE	49	U	
HEXACHLOROCYCLOPENTADIENE	85	U	
HEXACHLOROETHANE	68	U	
ISOPHORONE	59	U	
NITROBENZENE	84	U	
N-NITROSO-DI-N-PROPYLAMINE	64	U	
N-NITROSODIPHENYLAMINE	81	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	100	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	81	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	94	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	58	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	90	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	71	U	
CAPROLACTAM	170	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1102	nsample	PEN43SB1102D	nsample	PEN43SB1102D
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-37	lab_id	WV0943-36	lab_id	WV0943-36
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	95.2	Pct_Solids	94.6	Pct_Solids	94.6
DUP_OF:		DUP_OF:	PEN43SB1102	DUP_OF:	PEN43SB1102

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	65	U	
DI-N-BUTYL PHTHALATE	88	U	
DI-N-OCTYL PHTHALATE	77	U	
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1201	nsample	PEN43SB1201	nsample	PEN43SB1202
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-38	lab_id	WV0943-38	lab_id	WV0943-39
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	92.9	Pct_Solids	92.9	Pct_Solids	93.1
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	66	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	97	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	81	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	77	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	U	
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	61	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	36	U	
BIS(2-ETHYLHEXYL)PHTHALATE	80	U	
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	67	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	91	U	
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	81	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	61	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	66	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	97	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	U	
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	80	U	
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1202
samp_date	3/4/2005
lab_id	WV0943-39
qc_type	NM
units	UG/KG
Pct_Solids	93.1
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	90	U	
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	80	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

nsample	PEN43SB1301
samp_date	3/4/2005
lab_id	WV0943-40
qc_type	NM
units	UG/KG
Pct_Solids	94.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

nsample	PEN43SB1301
samp_date	3/4/2005
lab_id	WV0943-40
qc_type	NM
units	UG/KG
Pct_Solids	94.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1302	nsample	PEN43SB1302	nsample	PEN43SB1401
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-41	lab_id	WV0943-41	lab_id	WV0943-44
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.3	Pct_Solids	93.3	Pct_Solids	86.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	66	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	96	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	U	
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	80	U	
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	90	U	
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	80	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	280	J	P
2,2'-OXYBIS(1-CHLOROPROPANE)	36	U	
2,4,5-TRICHLOROPHENOL	210	U	
2,4,6-TRICHLOROPHENOL	140	U	
2,4-DICHLOROPHENOL	160	U	
2,4-DIMETHYLPHENOL	140	U	
2,4-DINITROPHENOL	72	U	
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	90	U	
2-CHLORONAPHTHALENE	56	U	
2-CHLOROPHENOL	100	U	
2-METHYLPHENOL	160	U	
2-NITROANILINE	87	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	160	U	
3-NITROANILINE	83	UJ	E
4,6-DINITRO-2-METHYLPHENOL	240	U	
4-BROMOPHENYL PHENYL ETHER	65	U	
4-CHLORO-3-METHYLPHENOL	140	U	
4-CHLOROANILINE	62	UR	E
4-CHLOROPHENYL PHENYL ETHER	58	U	
4-METHYLPHENOL	170	U	
4-NITROANILINE	100	U	
4-NITROPHENOL	180	UJ	C
ACETOPHENONE	66	U	
ATRAZINE	190	U	
BENZALDEHYDE	190	UR	C
BIS(2-CHLOROETHOXY)METHANE	61	U	
BIS(2-CHLOROETHYL)ETHER	38	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	86	U	
BUTYL BENZYL PHTHALATE	79	U	
CAPROLACTAM	190	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1401
samp_date	3/4/2005
lab_id	WV0943-44
qc_type	NM
units	UG/KG
Pct_Solids	86.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	2800		
DIBENZOFURAN	1700		
DIETHYL PHTHALATE	120	U	
DIMETHYL PHTHALATE	72	U	
DI-N-BUTYL PHTHALATE	98	U	
DI-N-OCTYL PHTHALATE	86	U	
HEXACHLOROBENZENE	270	U	
HEXACHLOROBUTADIENE	51	U	
HEXACHLOROCYCLOPENTADIENE	87	U	
HEXACHLOROETHANE	70	U	
ISOPHORONE	60	U	
NITROBENZENE	86	U	
N-NITROSO-DI-N-PROPYLAMINE	66	U	
N-NITROSODIPHENYLAMINE	84	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	110	U	

nsample	PEN43SB1402
samp_date	3/4/2005
lab_id	WV0943-45
qc_type	NM
units	UG/KG
Pct_Solids	92.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	66	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	97	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	81	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	77	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	58	UR	E
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	93	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	61	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	36	U	
BIS(2-ETHYLHEXYL)PHTHALATE	80	U	
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	U	

nsample	PEN43SB1402
samp_date	3/4/2005
lab_id	WV0943-45
qc_type	NM
units	UG/KG
Pct_Solids	92.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	65	U	
DIBENZOFURAN	67	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	91	U	
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	81	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	61	U	
N-NITROSODIPHENYLAMINE	78	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1501	nsample	PEN43SB1501	nsample	PEN43SB1502
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-42	lab_id	WV0943-42	lab_id	WV0943-43
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	94.6	Pct_Solids	94.6	Pct_Solids	95.3
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	81	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	94	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	58	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	UR	E
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	90	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	71	U	
CAPROLACTAM	170	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1502	nsample	PEN43SB1601	nsample	PEN43SB1601
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-43	lab_id	WV0943-46	lab_id	WV0943-46
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	95.3	Pct_Solids	95.6	Pct_Solids	95.6
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	65	U	
DI-N-BUTYL PHTHALATE	88	U	
DI-N-OCTYL PHTHALATE	77	U	
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	54	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	64	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	81	U	
2-CHLORONAPHTHALENE	50	U	
2-CHLOROPHENOL	94	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	78	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	58	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	UR	E
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	90	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	34	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	71	U	
CAPROLACTAM	170	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	65	U	
DI-N-BUTYL PHTHALATE	88	U	
DI-N-OCTYL PHTHALATE	77	U	
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	78	U	
HEXACHLOROETHANE	63	U	
ISOPHORONE	54	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	75	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1602
samp_date	3/4/2005
lab_id	WV0943-47
qc_type	NM
units	UG/KG
Pct_Solids	90.4
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	34	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	150	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	68	U	
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	86	U	
2-CHLORONAPHTHALENE	53	U	
2-CHLOROPHENOL	100	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	83	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	150	U	
3-NITROANILINE	79	UJ	E
4,6-DINITRO-2-METHYLPHENOL	230	U	
4-BROMOPHENYL PHENYL ETHER	62	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	59	UR	E
4-CHLOROPHENYL PHENYL ETHER	56	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	95	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	62	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	58	U	
BIS(2-CHLOROETHYL)ETHER	36	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	82	U	
BUTYL BENZYL PHTHALATE	75	U	
CAPROLACTAM	180	U	

nsample	PEN43SB1602
samp_date	3/4/2005
lab_id	WV0943-47
qc_type	NM
units	UG/KG
Pct_Solids	90.4
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	66	U	
DIBENZOFURAN	68	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	69	U	
DI-N-BUTYL PHTHALATE	93	U	
DI-N-OCTYL PHTHALATE	81	U	
HEXACHLOROBENZENE	260	U	
HEXACHLOROBUTADIENE	48	U	
HEXACHLOROCYCLOPENTADIENE	83	U	
HEXACHLOROETHANE	67	U	
ISOPHORONE	58	U	
NITROBENZENE	82	U	
N-NITROSO-DI-N-PROPYLAMINE	62	U	
N-NITROSODIPHENYLAMINE	80	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	100	U	

nsample	PEN43SB1701
samp_date	3/4/2005
lab_id	WV0943-48
qc_type	NM
units	UG/KG
Pct_Solids	90.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	34	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	150	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	68	U	
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	85	U	
2-CHLORONAPHTHALENE	53	U	
2-CHLOROPHENOL	99	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	83	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	150	U	
3-NITROANILINE	79	UJ	E
4,6-DINITRO-2-METHYLPHENOL	230	U	
4-BROMOPHENYL PHENYL ETHER	61	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	59	UR	E
4-CHLOROPHENYL PHENYL ETHER	56	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	95	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	62	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	58	U	
BIS(2-CHLOROETHYL)ETHER	36	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	82	U	
BUTYL BENZYL PHTHALATE	75	U	
CAPROLACTAM	180	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1701	nsample	PEN43SB1702	nsample	PEN43SB1702
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-48	lab_id	WV0943-49	lab_id	WV0943-49
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	90.6	Pct_Solids	95.2	Pct_Solids	95.2
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	66	U	
DIBENZOFURAN	68	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	69	U	
DI-N-BUTYL PHTHALATE	93	U	
DI-N-OCTYL PHTHALATE	81	U	
HEXACHLOROBENZENE	260	U	
HEXACHLOROBUTADIENE	48	U	
HEXACHLOROCYCLOPENTADIENE	83	U	
HEXACHLOROETHANE	67	U	
ISOPHORONE	57	U	
NITROBENZENE	82	U	
N-NITROSO-DI-N-PROPYLAMINE	62	U	
N-NITROSODIPHENYLAMINE	79	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	100	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	81	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	94	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	58	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	UR	E
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	90	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	71	U	
CAPROLACTAM	170	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	65	U	
DI-N-BUTYL PHTHALATE	88	U	
DI-N-OCTYL PHTHALATE	77	U	
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1801
samp_date	3/4/2005
lab_id	WV0943-50
qc_type	NM
units	UG/KG
Pct_Solids	93.1
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	66	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	97	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	77	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	UR	E
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	80	U	
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	U	

nsample	PEN43SB1801
samp_date	3/4/2005
lab_id	WV0943-50
qc_type	NM
units	UG/KG
Pct_Solids	93.1
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	90	U	
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	80	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

nsample	PEN43SB1802
samp_date	3/4/2005
lab_id	WV0943-51
qc_type	NM
units	UG/KG
Pct_Solids	94.5
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	UR	E
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1802
samp_date	3/4/2005
lab_id	WV0943-51
qc_type	NM
units	UG/KG
Pct_Solids	94.5
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

nsample	PEN43SB1901
samp_date	3/4/2005
lab_id	WV0943-68
qc_type	NM
units	UG/KG
Pct_Solids	94.9
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	81	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	UR	E
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

nsample	PEN43SB1901
samp_date	3/4/2005
lab_id	WV0943-68
qc_type	NM
units	UG/KG
Pct_Solids	94.9
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1902	nsample	PEN43SB1902
samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-69	lab_id	WV0943-69
qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG
Pct_Solids	94.9	Pct_Solids	94.9
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	UR	E
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	1000	J	R
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB1101	nsample	PEN43SB1102	nsample	PEN43SB1102D
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-3RA	lab_id	WV0943-5RA	lab_id	WV0943-4RA
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	88.6	Pct_Solids	95.2	Pct_Solids	94.6
DUP_OF:		DUP_OF:		DUP_OF:	PEN43SB1102

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	U	
2-METHYLNAPHTHALENE	3	J	CP
ACENAPHTHENE	3	J	P
ACENAPHTHYLENE	8	J	P
ANTHRACENE	15	J	P
BENZO(A)ANTHRACENE	250		
BENZO(A)PYRENE	280		
BENZO(B)FLUORANTHENE	460	J	E
BENZO(G,H,I)PERYLENE	110	J	N
BENZO(K)FLUORANTHENE	96	J	N
CHRYSENE	190		
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	280		
FLUORENE	2	J	P
INDENO(1,2,3-CD)PYRENE	91	J	N
NAPHTHALENE	4	J	P
PHENANTHRENE	58		
PYRENE	230		

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	UJ	C
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	UJ	C
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB1201	nsample	PEN43SB1202	nsample	PEN43SB1301
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-6RA	lab_id	WV0943-7RA	lab_id	WV0943-8RA
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	92.9	Pct_Solids	93.1	Pct_Solids	94.6
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	2	J	P
BENZO(A)ANTHRACENE	18	J	EP
BENZO(A)PYRENE	12	J	P
BENZO(B)FLUORANTHENE	25	J	CE
BENZO(G,H,I)PERYLENE	7	J	CP
BENZO(K)FLUORANTHENE	7	J	P
CHRYSENE	10	J	P
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	18	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	5	J	CP
NAPHTHALENE	1	U	
PHENANTHRENE	8	J	P
PYRENE	13	J	P

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	8	J	EP
BENZO(A)PYRENE	2	J	P
BENZO(B)FLUORANTHENE	8	J	CEP
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	2	J	P
CHRYSENE	3	J	P
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	4	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	1	J	P
NAPHTHALENE	1	U	
PHENANTHRENE	2	J	P
PYRENE	3	J	P

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	UJ	CE
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	UJ	C
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB1302	nsample	PEN43SB1401	nsample	PEN43SB1402
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-9RA	lab_id	WV0943-12DL	lab_id	WV0943-13
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.3	Pct_Solids	86.0	Pct_Solids	92.7
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	UJ	C
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	UJ	C
NAPHTHALENE	1	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	540	J	C
2-METHYLNAPHTHALENE	670		
ACENAPHTHENE	1800		
ACENAPHTHYLENE	6	U	
ANTHRACENE	8000		
BENZO(A)ANTHRACENE	15000	J	EN
BENZO(A)PYRENE	10000		
BENZO(B)FLUORANTHENE	16000	J	E
BENZO(G,H,I)PERYLENE	4600	J	CP
BENZO(K)FLUORANTHENE	5700		
CHRYSENE	8700	J	N
DIBENZO(A,H)ANTHRACENE	1100		
FLUORANTHENE	30000		
FLUORENE	1700		
INDENO(1,2,3-CD)PYRENE	5000		
NAPHTHALENE	2400	J	P
PHENANTHRENE	28000		
PYRENE	17000	J	N

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	UJ	C
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	1	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB1501	nsample	PEN43SB1502	nsample	PEN43SB1601
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-10RA	lab_id	WV0943-11	lab_id	WV0943-14
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	94.6	Pct_Solids	95.3	Pct_Solids	95.6
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	UJ	C
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	UJ	C
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	UJ	C
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	UJ	C
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	UJ	C
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB1602	nsample	PEN43SB1701	nsample	PEN43SB1702
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-15	lab_id	WV0943-16	lab_id	WV0943-17
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	90.4	Pct_Solids	90.6	Pct_Solids	95.2
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	UJ	C
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	U	
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	1	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	2	J	P
2-METHYLNAPHTHALENE	2	J	P
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	7	J	P
ANTHRACENE	7	J	P
BENZO(A)ANTHRACENE	320	J	P
BENZO(A)PYRENE	340		
BENZO(B)FLUORANTHENE	670	J	P
BENZO(G,H,I)PERYLENE	150	J	C
BENZO(K)FLUORANTHENE	130		
CHRYSENE	170		
DIBENZO(A,H)ANTHRACENE	36		
FLUORANTHENE	160		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	150		
NAPHTHALENE	2	J	P
PHENANTHRENE	34		
PYRENE	110	J	C

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	UJ	C
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB1801	nsample	PEN43SB1802	nsample	PEN43SB1901
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0943-18	lab_id	WV0943-19	lab_id	WV0943-20
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.1	Pct_Solids	94.5	Pct_Solids	94.9
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	7	J	EP
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	UJ	C
CHRYSENE	1	J	P
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	1	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	6	J	EP
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	UJ	C
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	J	P
BENZO(A)ANTHRACENE	7	J	EP
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	UJ	C
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	5	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	4	J	P
PYRENE	3	J	CP

PROJ_NO: 4821

SDG: 3552 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB1902
samp_date	3/4/2005
lab_id	WV0943-21
qc_type	NM
units	UG/KG
Pct_Solids	94.9
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	UJ	C
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/11/05
Analysis Date: 16-MAR-2005 17:18
Report Date: 03/29/2005
Matrix: WATER
% Solids: NA

Lab ID: WV0943-2
Client ID: PEN43RB0304
SDG: CTO355-2
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15045
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	5	1.0	10	10	5
108-95-2	Phenol	U	6	1.0	10	10	6
111-44-4	Bis(2-Chloroethyl)ether	U	3	1.0	10	10	3
95-57-8	2-Chlorophenol	U	5	1.0	10	10	5
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	2	1.0	10	10	2
95-48-7	2-Methylphenol	U	5	1.0	10	10	5
67-72-1	Hexachloroethane	U	2	1.0	10	10	2
621-64-7	N-Nitroso-di-n-propylamine	U	2	1.0	10	10	2
106-44-5	4-Methylphenol	U	5	1.0	10	10	5
98-95-3	Nitrobenzene	U	2	1.0	10	10	2
78-59-1	Isophorone	U	2	1.0	10	10	2
88-75-5	2-Nitrophenol	U	5	1.0	10	10	5
105-67-9	2,4-Dimethylphenol	U	8	1.0	10	10	8
105-60-2	Caprolactam	U	5	1.0	10	10	5
111-91-1	Bis(2-Chloroethoxy)methane	U	2	1.0	10	10	2
120-83-2	2,4-Dichlorophenol	U	6	1.0	10	10	6
92-52-4	1,1'-Biphenyl	U	5	1.0	10	10	5
106-47-8	4-Chloroaniline	U	4	1.0	10	10	4
87-68-3	Hexachlorobutadiene	U	4	1.0	10	10	4
59-50-7	4-Chloro-3-Methylphenol	U	6	1.0	10	10	6
77-47-4	Hexachlorocyclopentadiene	U	2	1.0	10	10	2
88-06-2	2,4,6-Trichlorophenol	U	7	1.0	10	10	7
95-95-4	2,4,5-Trichlorophenol	U	7	1.0	25	25	7
91-58-7	2-Chloronaphthalene	U	3	1.0	10	10	3
88-74-4	2-Nitroaniline	U	3	1.0	25	25	3
131-11-3	Dimethyl Phthalate	U	3	1.0	10	10	3
606-20-2	2,6-Dinitrotoluene	U	3	1.0	10	10	3
99-09-2	3-Nitroaniline	U	3	1.0	25	25	3
51-28-5	2,4-Dinitrophenol	U	5	1.0	25	25	5
132-64-9	Dibenzofuran	U	3	1.0	10	10	3
100-02-7	4-Nitrophenol	U	5	1.0	25	25	5
121-14-2	2,4-Dinitrotoluene	U	4	1.0	10	10	4
1912-24-9	Atrazine	U	5	1.0	10	10	5
84-66-2	Diethylphthalate	U	2	1.0	10	10	2
7005-72-3	4-Chlorophenyl-phenylether	U	3	1.0	10	10	3
100-01-6	4-Nitroaniline	U	5	1.0	25	25	5
534-52-1	4,6-Dinitro-2-Methylphenol	U	10	1.0	25	25	10
86-30-6	N-Nitrosodiphenylamine	U	8	1.0	10	10	8
101-55-3	4-Bromophenyl-phenylether	U	4	1.0	10	10	4
118-74-1	Hexachlorobenzene	U	4	1.0	10	10	4
87-86-5	Pentachlorophenol	U	9	1.0	25	25	9
86-74-8	Carbazole	U	4	1.0	10	10	4
84-74-2	Di-n-butylphthalate	U	2	1.0	10	10	2

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/11/05
Analysis Date: 16-MAR-2005 17:18
Report Date: 03/29/2005
Matrix: WATER
% Solids: NA

Lab ID: WV0943-2
Client ID: PEN43RB0304
SDG: CTO355-2
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15045
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	3	1.0	10	10	3
91-94-1	3,3'-Dichlorobenzidine	U	4	1.0	10	10	4
117-81-7	bis(2-Ethylhexyl)phthalate	U	7	1.0	10	10	7
117-84-0	Di-n-octylphthalate	U	3	1.0	10	10	3
98-96-2	Acetophenone	U	5	1.0	10	10	5
367-12-4	2-Fluorophenol		67%				
13127-88-3	Phenol-D6		41%				
4165-60-0	Nitrobenzene-D5		79%				
321-60-8	2-Fluorobiphenyl		94%				
118-79-6	2,4,6-Tribromophenol		125%				
1718-51-0	Terphenyl-D14		112%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 12:13
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 88.6

Lab ID: WV0943-35
Client ID: PEN43SB1101
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	190	1.0	330	370	190
108-95-2	Phenol	U	100	1.0	330	370	100
111-44-4	Bis(2-Chloroethyl)ether	U	37	1.0	330	370	37
95-57-8	2-Chlorophenol	U	100	1.0	330	370	100
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	34	1.0	330	370	34
95-48-7	2-Methylphenol	U	150	1.0	330	370	150
67-72-1	Hexachloroethane	U	68	1.0	330	370	68
621-64-7	N-Nitroso-di-n-propylamine	U	64	1.0	330	370	64
106-44-5	4-Methylphenol	U	170	1.0	330	370	170
98-95-3	Nitrobenzene	U	84	1.0	330	370	84
78-59-1	Isophorone	U	59	1.0	330	370	59
88-75-5	2-Nitrophenol	U	120	1.0	330	370	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	370	130
105-60-2	Caprolactam	U	190	1.0	330	370	190
111-91-1	Bis(2-Chloroethoxy)methane	U	59	1.0	330	370	59
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	370	150
92-52-4	1,1'-Biphenyl	U	190	1.0	330	370	190
106-47-8	4-Chloroaniline	U	60	1.0	330	370	60
87-68-3	Hexachlorobutadiene	U	49	1.0	330	370	49
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	370	130
77-47-4	Hexachlorocyclopentadiene	U	85	1.0	330	370	85
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	370	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	370	200
91-58-7	2-Chloronaphthalene	U	54	1.0	330	370	54
88-74-4	2-Nitroaniline	U	85	1.0	330	370	85
131-11-3	Dimethyl Phthalate	U	70	1.0	330	370	70
606-20-2	2,6-Dinitrotoluene	U	87	1.0	330	370	87
99-09-2	3-Nitroaniline	U	80	1.0	330	370	80
51-28-5	2,4-Dinitrophenol	U	70	1.0	330	370	70
132-64-9	Dibenzofuran	U	70	1.0	330	370	70
100-02-7	4-Nitrophenol	U	170	1.0	330	370	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	370	110
1912-24-9	Atrazine	U	190	1.0	330	370	190
84-66-2	Diethylphthalate	U	120	1.0	330	370	120
7005-72-3	4-Chlorophenyl-phenylether	U	57	1.0	330	370	57
100-01-6	4-Nitroaniline	U	97	1.0	330	370	97
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	370	230
86-30-6	N-Nitrosodiphenylamine	U	81	1.0	330	370	81
101-55-3	4-Bromophenyl-phenylether	U	63	1.0	330	370	63
118-74-1	Hexachlorobenzene	U	260	1.0	330	370	260
87-86-5	Pentachlorophenol	U	160	1.0	330	370	160
86-74-8	Carbazole	U	68	1.0	330	370	68
84-74-2	Di-n-butylphthalate	U	95	1.0	330	370	95

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 12:13
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 88.6

Lab ID: WV0943-35
Client ID: PEN43SB1101
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	77	1.0	330	370	77
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	370	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	84	1.0	330	370	84
117-84-0	Di-n-octylphthalate	U	83	1.0	330	370	83
98-96-2	Acetophenone	U	64	1.0	330	370	64
367-12-4	2-Fluorophenol		94%				
13127-88-3	Phenol-D6		103%				
4165-60-0	Nitrobenzene-D5		79%				
321-60-8	2-Fluorobiphenyl		93%				
118-79-6	2,4,6-Tribromophenol		91%				
1718-51-0	Terphenyl-D14		J126%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 13:37
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 95.2

Lab ID: WV0943-37
Client ID: PEN43SB1102
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	94	1.0	330	350	94
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	65	1.0	330	350	65
606-20-2	2,6-Dinitrotoluene	U	81	1.0	330	350	81
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	90	1.0	330	350	90
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	58	1.0	330	350	58
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	88	1.0	330	350	88

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 13:37
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 95.2

Lab ID: WV0943-37
Client ID: PEN43SB1102
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	71	1.0	330	350	71
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	77	1.0	330	350	77
98-96-2	Acetophenone	U	59	1.0	330	350	59
367-12-4	2-Fluorophenol		75%				
13127-88-3	Phenol-D6		81%				
4165-60-0	Nitrobenzene-D5		62%				
321-60-8	2-Fluorobiphenyl		70%				
118-79-6	2,4,6-Tribromophenol		81%				
1718-51-0	Terphenyl-D14		J118%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 12:54
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0943-36 2
Client ID: PEN43SB110~~X~~D
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 12:54
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0943-36
Client ID: PEN43SB1101D
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		88%				
13127-88-3	Phenol-D6		93%				
4165-60-0	Nitrobenzene-D5		72%				
321-60-8	2-Fluorobiphenyl		78%				
118-79-6	2,4,6-Tribromophenol		75%				
1718-51-0	Terphenyl-D14		J113%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 14:19
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 92.9

Lab ID: WV0943-38
Client ID: PEN43SB1201
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	98	1.0	330	360	98
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	97	1.0	330	360	97
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	360	33
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	65	1.0	330	360	65
621-64-7	N-Nitroso-di-n-propylamine	U	61	1.0	330	360	61
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	80	1.0	330	360	80
78-59-1	Isophorone	U	56	1.0	330	360	56
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	360	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	360	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	57	1.0	330	360	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	360	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	81	1.0	330	360	81
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	360	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	360	52
88-74-4	2-Nitroaniline	U	81	1.0	330	360	81
131-11-3	Dimethyl Phthalate	U	67	1.0	330	360	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	360	83
99-09-2	3-Nitroaniline	U	77	1.0	330	360	77
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	360	66
132-64-9	Dibenzofuran	U	67	1.0	330	360	67
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	360	100
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	360	54
100-01-6	4-Nitroaniline	U	92	1.0	330	360	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	360	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	360	77
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	360	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	360	250
87-86-5	Pentachlorophenol	U	150	1.0	330	360	150
86-74-8	Carbazole	U	64	1.0	330	360	64
84-74-2	Di-n-butylphthalate	U	91	1.0	330	360	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 14:19
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 92.9

Lab ID: WV0943-38
Client ID: PEN43SB1201
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	360	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	360	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	80	1.0	330	360	80
117-84-0	Di-n-octylphthalate	U	79	1.0	330	360	79
98-96-2	Acetophenone	U	61	1.0	330	360	61
367-12-4	2-Fluorophenol		99%				
13127-88-3	Phenol-D6		102%				
4165-60-0	Nitrobenzene-D5		80%				
321-60-8	2-Fluorobiphenyl		87%				
118-79-6	2,4,6-Tribromophenol		78%				
1718-51-0	Terphenyl-D14		J112%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 15:02
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 93.1

Lab ID: WV0943-39
Client ID: PEN43SB1202
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	98	1.0	330	350	98
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	97	1.0	330	350	97
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	150	1.0	330	350	150
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	80	1.0	330	350	80
78-59-1	Isophorone	U	56	1.0	330	350	56
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	67	1.0	330	350	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	350	83
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	170	1.0	330	350	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	350	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 15:02
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 93.1

Lab ID: WV0943-39
Client ID: PEN43SB1202
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	350	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	80	1.0	330	350	80
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		95%				
13127-88-3	Phenol-D6		98%				
4165-60-0	Nitrobenzene-D5		80%				
321-60-8	2-Fluorobiphenyl		92%				
118-79-6	2,4,6-Tribromophenol		86%				
1718-51-0	Terphenyl-D14		J122%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 15:44
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0943-40
Client ID: PEN43SB1301
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 15:44
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0943-40
Client ID: PEN43SB1301
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		76%				
13127-88-3	Phenol-D6		81%				
4165-60-0	Nitrobenzene-D5		66%				
321-60-8	2-Fluorobiphenyl		75%				
118-79-6	2,4,6-Tribromophenol		62%				
1718-51-0	Terphenyl-D14		J112%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 16:27
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 93.3

Lab ID: WV0943-41
Client ID: PEN43SB1302
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	98	1.0	330	350	98
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	80	1.0	330	350	80
78-59-1	Isophorone	U	56	1.0	330	350	56
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	67	1.0	330	350	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	350	83
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	170	1.0	330	350	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	350	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 16:27
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 93.3

Lab ID: WV0943-41
Client ID: PEN43SB1302
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	350	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	80	1.0	330	350	80
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		84%				
13127-88-3	Phenol-D6		91%				
4165-60-0	Nitrobenzene-D5		70%				
321-60-8	2-Fluorobiphenyl		76%				
118-79-6	2,4,6-Tribromophenol		62%				
1718-51-0	Terphenyl-D14		J113%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 25-MAR-2005 23:01
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 86.0

Lab ID: WV0943-44
Client ID: PEN43SB1401
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	190	1.0	330	380	190
108-95-2	Phenol	U	110	1.0	330	380	110
111-44-4	Bis(2-Chloroethyl)ether	U	38	1.0	330	380	38
95-57-8	2-Chlorophenol	U	100	1.0	330	380	100
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	36	1.0	330	380	36
95-48-7	2-Methylphenol	U	160	1.0	330	380	160
67-72-1	Hexachloroethane	U	70	1.0	330	380	70
621-64-7	N-Nitroso-di-n-propylamine	U	66	1.0	330	380	66
106-44-5	4-Methylphenol	U	170	1.0	330	380	170
98-95-3	Nitrobenzene	U	86	1.0	330	380	86
78-59-1	Isophorone	U	60	1.0	330	380	60
88-75-5	2-Nitrophenol	U	120	1.0	330	380	120
105-67-9	2,4-Dimethylphenol	U	140	1.0	330	380	140
105-60-2	Caprolactam	U	190	1.0	330	380	190
111-91-1	Bis(2-Chloroethoxy)methane	U	61	1.0	330	380	61
120-83-2	2,4-Dichlorophenol	U	160	1.0	330	380	160
92-52-4	1,1'-Biphenyl	I	280	1.0	330	380	190
106-47-8	4-Chloroaniline	U	62	1.0	330	380	62
87-68-3	Hexachlorobutadiene	U	51	1.0	330	380	51
59-50-7	4-Chloro-3-Methylphenol	U	140	1.0	330	380	140
77-47-4	Hexachlorocyclopentadiene	U	87	1.0	330	380	87
88-06-2	2,4,6-Trichlorophenol	U	140	1.0	330	380	140
95-95-4	2,4,5-Trichlorophenol	U	210	1.0	330	380	210
91-58-7	2-Chloronaphthalene	U	56	1.0	330	380	56
88-74-4	2-Nitroaniline	U	87	1.0	330	380	87
131-11-3	Dimethyl Phthalate	U	72	1.0	330	380	72
606-20-2	2,6-Dinitrotoluene	U	90	1.0	330	380	90
99-09-2	3-Nitroaniline	U	83	1.0	330	380	83
51-28-5	2,4-Dinitrophenol	U	72	1.0	330	380	72
132-64-9	Dibenzofuran		1700	1.0	330	380	72
100-02-7	4-Nitrophenol	U	180	1.0	330	380	180
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	380	110
1912-24-9	Atrazine	U	190	1.0	330	380	190
84-66-2	Diethylphthalate	U	120	1.0	330	380	120
7005-72-3	4-Chlorophenyl-phenylether	U	58	1.0	330	380	58
100-01-6	4-Nitroaniline	U	100	1.0	330	380	100
534-52-1	4,6-Dinitro-2-Methylphenol	U	240	1.0	330	380	240
86-30-6	N-Nitrosodiphenylamine	U	84	1.0	330	380	84
101-55-3	4-Bromophenyl-phenylether	U	65	1.0	330	380	65
118-74-1	Hexachlorobenzene	U	270	1.0	330	380	270
87-86-5	Pentachlorophenol	U	160	1.0	330	380	160
86-74-8	Carbazole		2800	1.0	330	380	70
84-74-2	Di-n-butylphthalate	U	98	1.0	330	380	98

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 25-MAR-2005 23:01
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 86.0

Lab ID: WV0943-44
Client ID: PEN43SB1401
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	79	1.0	330	380	79
91-94-1	3,3'-Dichlorobenzidine	U	160	1.0	330	380	160
117-81-7	bis(2-Ethylhexyl)phthalate	U	86	1.0	330	380	86
117-84-0	Di-n-octylphthalate	U	86	1.0	330	380	86
98-96-2	Acetophenone	U	66	1.0	330	380	66
367-12-4	2-Fluorophenol		69%				
13127-88-3	Phenol-D6		82%				
4165-60-0	Nitrobenzene-D5		55%				
321-60-8	2-Fluorobiphenyl		74%				
118-79-6	2,4,6-Tribromophenol		J135%				
1718-51-0	Terphenyl-D14		J136%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 17:55
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 92.7

Lab ID: WV0943-45
Client ID: PEN43SB1402
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	98	1.0	330	360	98
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	97	1.0	330	360	97
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	360	33
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	65	1.0	330	360	65
621-64-7	N-Nitroso-di-n-propylamine	U	61	1.0	330	360	61
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	80	1.0	330	360	80
78-59-1	Isophorone	U	56	1.0	330	360	56
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	360	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	360	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	58	1.0	330	360	58
87-68-3	Hexachlorobutadiene	U	47	1.0	330	360	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	81	1.0	330	360	81
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	360	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	360	52
88-74-4	2-Nitroaniline	U	81	1.0	330	360	81
131-11-3	Dimethyl Phthalate	U	67	1.0	330	360	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	360	83
99-09-2	3-Nitroaniline	U	77	1.0	330	360	77
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	360	66
132-64-9	Dibenzofuran	U	67	1.0	330	360	67
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	360	100
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	360	54
100-01-6	4-Nitroaniline	U	93	1.0	330	360	93
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	360	220
86-30-6	N-Nitrosodiphenylamine	U	78	1.0	330	360	78
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	360	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	360	250
87-86-5	Pentachlorophenol	U	150	1.0	330	360	150
86-74-8	Carbazole	U	65	1.0	330	360	65
84-74-2	Di-n-butylphthalate	U	91	1.0	330	360	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 17:55
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 92.7

Lab ID: WV0943-45
Client ID: PEN43SB1402
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	360	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	360	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	80	1.0	330	360	80
117-84-0	Di-n-octylphthalate	U	79	1.0	330	360	79
98-96-2	Acetophenone	U	61	1.0	330	360	61
367-12-4	2-Fluorophenol		77%				
13127-88-3	Phenol-D6		85%				
4165-60-0	Nitrobenzene-D5		56%				
321-60-8	2-Fluorobiphenyl		70%				
118-79-6	2,4,6-Tribromophenol		73%				
1718-51-0	Terphenyl-D14		90%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 17:09
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0943-42
Client ID: PEN43SB1501
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 17:09
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0943-42
Client ID: PEN43SB1501
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		87%				
13127-88-3	Phenol-D6		92%				
4165-60-0	Nitrobenzene-D5		74%				
321-60-8	2-Fluorobiphenyl		83%				
118-79-6	2,4,6-Tribromophenol		67%				
1718-51-0	Terphenyl-D14		J122%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 17:13
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 95.3

Lab ID: WV0943-43
Client ID: PEN43SB1502
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	94	1.0	330	350	94
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	54	1.0	330	350	54
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	65	1.0	330	350	65
606-20-2	2,6-Dinitrotoluene	U	81	1.0	330	350	81
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	90	1.0	330	350	90
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	58	1.0	330	350	58
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	88	1.0	330	350	88

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 17:13
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 95.3

Lab ID: WV0943-43
Client ID: PEN43SB1502
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	71	1.0	330	350	71
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	77	1.0	330	350	77
98-96-2	Acetophenone	U	59	1.0	330	350	59
367-12-4	2-Fluorophenol		90%				
13127-88-3	Phenol-D6		95%				
4165-60-0	Nitrobenzene-D5		74%				
321-60-8	2-Fluorobiphenyl		79%				
118-79-6	2,4,6-Tribromophenol		87%				
1718-51-0	Terphenyl-D14		98%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 20:01
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 95.6

Lab ID: WV0943-46
Client ID: PEN43SB1601
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	340	170
108-95-2	Phenol	U	96	1.0	330	340	96
111-44-4	Bis(2-Chloroethyl)ether	U	34	1.0	330	340	34
95-57-8	2-Chlorophenol	U	94	1.0	330	340	94
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	340	32
95-48-7	2-Methylphenol	U	140	1.0	330	340	140
67-72-1	Hexachloroethane	U	63	1.0	330	340	63
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	340	59
106-44-5	4-Methylphenol	U	160	1.0	330	340	160
98-95-3	Nitrobenzene	U	78	1.0	330	340	78
78-59-1	Isophorone	U	54	1.0	330	340	54
88-75-5	2-Nitrophenol	U	110	1.0	330	340	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	340	120
105-60-2	Caprolactam	U	170	1.0	330	340	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	340	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	340	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	340	170
106-47-8	4-Chloroaniline	U	56	1.0	330	340	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	340	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	340	120
77-47-4	Hexachlorocyclopentadiene	U	78	1.0	330	340	78
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	340	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	340	190
91-58-7	2-Chloronaphthalene	U	50	1.0	330	340	50
88-74-4	2-Nitroaniline	U	78	1.0	330	340	78
131-11-3	Dimethyl Phthalate	U	65	1.0	330	340	65
606-20-2	2,6-Dinitrotoluene	U	81	1.0	330	340	81
99-09-2	3-Nitroaniline	U	75	1.0	330	340	75
51-28-5	2,4-Dinitrophenol	U	64	1.0	330	340	64
132-64-9	Dibenzofuran	U	65	1.0	330	340	65
100-02-7	4-Nitrophenol	U	160	1.0	330	340	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	340	100
1912-24-9	Atrazine	U	170	1.0	330	340	170
84-66-2	Diethylphthalate	U	110	1.0	330	340	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	340	53
100-01-6	4-Nitroaniline	U	90	1.0	330	340	90
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	340	220
86-30-6	N-Nitrosodiphenylamine	U	75	1.0	330	340	75
101-55-3	4-Bromophenyl-phenylether	U	58	1.0	330	340	58
118-74-1	Hexachlorobenzene	U	240	1.0	330	340	240
87-86-5	Pentachlorophenol	U	150	1.0	330	340	150
86-74-8	Carbazole	U	63	1.0	330	340	63
84-74-2	Di-n-butylphthalate	U	88	1.0	330	340	88

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 20:01
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 95.6

Lab ID: WV0943-46
Client ID: PEN43SB1601
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	71	1.0	330	340	71
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	340	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	340	78
117-84-0	Di-n-octylphthalate	U	77	1.0	330	340	77
98-96-2	Acetophenone	U	59	1.0	330	340	59
367-12-4	2-Fluorophenol		85%				
13127-88-3	Phenol-D6		91%				
4165-60-0	Nitrobenzene-D5		69%				
321-60-8	2-Fluorobiphenyl		74%				
118-79-6	2,4,6-Tribromophenol		79%				
1718-51-0	Terphenyl-D14		94%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 17:26
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 90.4

Lab ID: WV0943-47
Client ID: PEN43SB1602
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	100	1.0	330	360	100
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	100	1.0	330	360	100
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	34	1.0	330	360	34
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	67	1.0	330	360	67
621-64-7	N-Nitroso-di-n-propylamine	U	62	1.0	330	360	62
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	82	1.0	330	360	82
78-59-1	Isophorone	U	58	1.0	330	360	58
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	58	1.0	330	360	58
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	360	150
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	59	1.0	330	360	59
87-68-3	Hexachlorobutadiene	U	48	1.0	330	360	48
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	83	1.0	330	360	83
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	360	200
91-58-7	2-Chloronaphthalene	U	53	1.0	330	360	53
88-74-4	2-Nitroaniline	U	83	1.0	330	360	83
131-11-3	Dimethyl Phthalate	U	69	1.0	330	360	69
606-20-2	2,6-Dinitrotoluene	U	86	1.0	330	360	86
99-09-2	3-Nitroaniline	U	79	1.0	330	360	79
51-28-5	2,4-Dinitrophenol	U	68	1.0	330	360	68
132-64-9	Dibenzofuran	U	68	1.0	330	360	68
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	360	110
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	56	1.0	330	360	56
100-01-6	4-Nitroaniline	U	95	1.0	330	360	95
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	360	230
86-30-6	N-Nitrosodiphenylamine	U	80	1.0	330	360	80
101-55-3	4-Bromophenyl-phenylether	U	62	1.0	330	360	62
118-74-1	Hexachlorobenzene	U	260	1.0	330	360	260
87-86-5	Pentachlorophenol	U	160	1.0	330	360	160
86-74-8	Carbazole	U	66	1.0	330	360	66
84-74-2	Di-n-butylphthalate	U	93	1.0	330	360	93

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 17:26
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 90.4

Lab ID: WV0943-47
Client ID: PEN43SB1602
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	75	1.0	330	360	75
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	360	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	82	1.0	330	360	82
117-84-0	Di-n-octylphthalate	U	81	1.0	330	360	81
98-96-2	Acetophenone	U	62	1.0	330	360	62
367-12-4	2-Fluorophenol		81%				
13127-88-3	Phenol-D6		90%				
4165-60-0	Nitrobenzene-D5		67%				
321-60-8	2-Fluorobiphenyl		77%				
118-79-6	2,4,6-Tribromophenol		94%				
1718-51-0	Terphenyl-D14		91%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 20:18
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 90.6

Lab ID: WV0943-48
Client ID: PEN43SB1701
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	100	1.0	330	360	100
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	99	1.0	330	360	99
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	34	1.0	330	360	34
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	67	1.0	330	360	67
621-64-7	N-Nitroso-di-n-propylamine	U	62	1.0	330	360	62
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	82	1.0	330	360	82
78-59-1	Isophorone	U	57	1.0	330	360	57
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	58	1.0	330	360	58
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	360	150
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	59	1.0	330	360	59
87-68-3	Hexachlorobutadiene	U	48	1.0	330	360	48
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	83	1.0	330	360	83
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	360	200
91-58-7	2-Chloronaphthalene	U	53	1.0	330	360	53
88-74-4	2-Nitroaniline	U	83	1.0	330	360	83
131-11-3	Dimethyl Phthalate	U	69	1.0	330	360	69
606-20-2	2,6-Dinitrotoluene	U	85	1.0	330	360	85
99-09-2	3-Nitroaniline	U	79	1.0	330	360	79
51-28-5	2,4-Dinitrophenol	U	68	1.0	330	360	68
132-64-9	Dibenzofuran	U	68	1.0	330	360	68
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	360	110
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	56	1.0	330	360	56
100-01-6	4-Nitroaniline	U	95	1.0	330	360	95
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	360	230
86-30-6	N-Nitrosodiphenylamine	U	79	1.0	330	360	79
101-55-3	4-Bromophenyl-phenylether	U	61	1.0	330	360	61
118-74-1	Hexachlorobenzene	U	260	1.0	330	360	260
87-86-5	Pentachlorophenol	U	160	1.0	330	360	160
86-74-8	Carbazole	U	66	1.0	330	360	66
84-74-2	Di-n-butylphthalate	U	93	1.0	330	360	93

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 20:18
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 90.6

Lab ID: WV0943-48
Client ID: PEN43SB1701
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	75	1.0	330	360	75
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	360	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	82	1.0	330	360	82
117-84-0	Di-n-octylphthalate	U	81	1.0	330	360	81
98-96-2	Acetophenone	U	62	1.0	330	360	62
367-12-4	2-Fluorophenol		74%				
13127-88-3	Phenol-D6		84%				
4165-60-0	Nitrobenzene-D5		68%				
321-60-8	2-Fluorobiphenyl		85%				
118-79-6	2,4,6-Tribromophenol		88%				
1718-51-0	Terphenyl-D14		108%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 18:37
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 95.2

Lab ID: WV0943-49
Client ID: PEN43SB1702
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	94	1.0	330	350	94
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	65	1.0	330	350	65
606-20-2	2,6-Dinitrotoluene	U	81	1.0	330	350	81
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	90	1.0	330	350	90
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	58	1.0	330	350	58
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	88	1.0	330	350	88

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 18:37
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 95.2

Lab ID: WV0943-49
Client ID: PEN43SB1702
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	71	1.0	330	350	71
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	77	1.0	330	350	77
98-96-2	Acetophenone	U	59	1.0	330	350	59
367-12-4	2-Fluorophenol		91%				
13127-88-3	Phenol-D6		102%				
4165-60-0	Nitrobenzene-D5		75%				
321-60-8	2-Fluorobiphenyl		80%				
118-79-6	2,4,6-Tribromophenol		83%				
1718-51-0	Terphenyl-D14		94%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 19:35
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 93.1

Lab ID: WV0943-50
Client ID: PEN43SB1801
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	98	1.0	330	350	98
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	97	1.0	330	350	97
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	150	1.0	330	350	150
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	80	1.0	330	350	80
78-59-1	Isophorone	U	56	1.0	330	350	56
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	350	130
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	350	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	67	1.0	330	350	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	350	83
99-09-2	3-Nitroaniline	U	77	1.0	330	350	77
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	170	1.0	330	350	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	350	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 19:35
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 93.1

Lab ID: WV0943-50
Client ID: PEN43SB1801
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	350	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	80	1.0	330	350	80
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		80%				
13127-88-3	Phenol-D6		89%				
4165-60-0	Nitrobenzene-D5		67%				
321-60-8	2-Fluorobiphenyl		77%				
118-79-6	2,4,6-Tribromophenol		J103%				
1718-51-0	Terphenyl-D14		89%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 18:52
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.5

Lab ID: WV0943-51
Client ID: PEN43SB1802
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 18:52
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.5

Lab ID: WV0943-51
Client ID: PEN43SB1802
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		80%				
13127-88-3	Phenol-D6		88%				
4165-60-0	Nitrobenzene-D5		67%				
321-60-8	2-Fluorobiphenyl		77%				
118-79-6	2,4,6-Tribromophenol		93%				
1718-51-0	Terphenyl-D14		90%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 18:09
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.9

Lab ID: WV0943-68
Client ID: PEN43SB1901
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	81	1.0	330	350	81
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 18:09
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.9

Lab ID: WV0943-68
Client ID: PEN43SB1901
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	59	1.0	330	350	59
367-12-4	2-Fluorophenol		88%				
13127-88-3	Phenol-D6		98%				
4165-60-0	Nitrobenzene-D5		75%				
321-60-8	2-Fluorobiphenyl		82%				
118-79-6	2,4,6-Tribromophenol		J103%				
1718-51-0	Terphenyl-D14		91%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 19:18
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.8

Lab ID: WV0943-69
Client ID: PEN43SB1902
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate		1000	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 19:18
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.8

Lab ID: WV0943-69
Client ID: PEN43SB1902
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	59	1.0	330	350	59
367-12-4	2-Fluorophenol		86%				
13127-88-3	Phenol-D6		94%				
4165-60-0	Nitrobenzene-D5		123%				
321-60-8	2-Fluorobiphenyl		J131%				
118-79-6	2,4,6-Tribromophenol		76%				
1718-51-0	Terphenyl-D14		J163%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/11/05
Analysis Date: 17-MAR-2005 23:35
Report Date: 03/30/2005
Matrix: WATER
% Solids: NA

Lab ID: WV0943-1
Client ID: PEN43RB0304
SDG: CTO355-2
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15046
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.05	1.0	0.2	0.2	0.05
91-57-6	2-Methylnaphthalene	U	0.06	1.0	0.2	0.2	0.06
208-96-8	Acenaphthylene	U	0.04	1.0	0.2	0.2	0.04
83-32-9	Acenaphthene	U	0.08	1.0	0.2	0.2	0.08
86-73-7	Fluorene	U	0.06	1.0	0.2	0.2	0.06
85-01-8	Phenanthrene	U	0.08	1.0	0.2	0.2	0.08
120-12-7	Anthracene	U	0.07	1.0	0.2	0.2	0.07
206-44-0	Fluoranthene	U	0.07	1.0	0.2	0.2	0.07
129-00-0	Pyrene	U	0.08	1.0	0.2	0.2	0.08
56-55-3	Benzo(a)anthracene	U	0.08	1.0	0.2	0.2	0.08
218-01-9	Chrysene	U	0.05	1.0	0.2	0.2	0.05
205-99-2	Benzo(b)fluoranthene	U	0.08	1.0	0.2	0.2	0.08
207-08-9	Benzo(k)fluoranthene	U	0.10	1.0	0.2	0.2	0.10
50-32-8	Benzo(a)pyrene	U	0.08	1.0	0.2	0.2	0.08
193-39-5	Indeno(1,2,3-cd)pyrene	U	0.07	1.0	0.2	0.2	0.07
53-70-3	Dibenzo(a,h)anthracene	U	0.1	1.0	0.2	0.2	0.1
191-24-2	Benzo(g,h,i)perylene	U	0.1	1.0	0.2	0.2	0.1
90-12-0	1-Methylnaphthalene	U	0.10	1.0	0.2	0.2	0.10
7297-45-2	2-Methylnaphthalene-d10		87%				
81103-79-9	Fluorene-d10		70%				
1718-52-1	Pyrene-d10		85%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 21-MAR-2005 19:16
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 88.6

Lab ID: WV0943-3RA
Client ID: PEN43SB1101
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	4	1.0	20	22	1
91-57-6	2-Methylnaphthalene	I	3	1.0	20	22	0.6
208-96-8	Acenaphthylene	I	8	1.0	20	22	0.6
83-32-9	Acenaphthene	I	3	1.0	20	22	0.8
86-73-7	Fluorene	I	2	1.0	20	22	0.7
85-01-8	Phenanthrene		58	1.0	20	22	2
120-12-7	Anthracene	I	15	1.0	20	22	0.9
206-44-0	Fluoranthene	L	190	1.0	20	22	2
129-00-0	Pyrene	L	230	1.0	20	22	2
56-55-3	Benzo(a)anthracene	L	220	1.0	20	22	1
218-01-9	Chrysene	L	190	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene	L	310	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene		96	1.0	20	22	2
50-32-8	Benzo(a)pyrene	L	220	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		91	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene		110	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		96%				
81103-79-9	Fluorene-d10		79%				
1718-52-1	Pyrene-d10		104%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 23-MAR-2005 21:56
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 88.6

Lab ID: WV0943-3DL
Client ID: PEN43SB1101
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	5	3.0	20	68	3
91-57-6	2-Methylnaphthalene	U	2	3.0	20	68	2
208-96-8	Acenaphthylene	I	20	3.0	20	68	2
83-32-9	Acenaphthene	I	4	3.0	20	68	2
86-73-7	Fluorene	U	2	3.0	20	68	2
85-01-8	Phenanthrene		73	3.0	20	68	5
120-12-7	Anthracene	I	15	3.0	20	68	3
206-44-0	Fluoranthene		280	3.0	20	68	6
129-00-0	Pyrene		230	3.0	20	68	6
56-55-3	Benzo(a)anthracene		250	3.0	20	68	3
218-01-9	Chrysene		190	3.0	20	68	4
205-99-2	Benzo(b)fluoranthene		460	3.0	20	68	7
207-08-9	Benzo(k)fluoranthene		130	3.0	20	68	4
50-32-8	Benzo(a)pyrene		280	3.0	20	68	2
193-39-5	Indeno(1,2,3-cd)pyrene		110	3.0	20	68	7
53-70-3	Dibenzo(a,h)anthracene	I	66	3.0	20	68	7
191-24-2	Benzo(g,h,i)perylene		130	3.0	20	68	6
90-12-0	1-Methylnaphthalene	U	34	3.0	20	68	34
7297-45-2	2-Methylnaphthalene-d10		125%				
81103-79-9	Fluorene-d10		115%				
1718-52-1	Pyrene-d10		100%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 21:22
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 88.6

Lab ID: WV0943-3
Client ID: PEN43SB1101
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	6	1.0	20	22	1
91-57-6	2-Methylnaphthalene	I	3	1.0	20	22	0.6
208-96-8	Acenaphthylene	I	12	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	I	3	1.0	20	22	0.7
85-01-8	Phenanthrene		61	1.0	20	22	2
120-12-7	Anthracene	I	14	1.0	20	22	0.9
206-44-0	Fluoranthene	L	200	1.0	20	22	2
129-00-0	Pyrene		180	1.0	20	22	2
56-55-3	Benzo(a)anthracene		160	1.0	20	22	1
218-01-9	Chrysene		140	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene	L	270	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene		82	1.0	20	22	2
50-32-8	Benzo(a)pyrene	L	190	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		100	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene		85	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene		120	1.0	20	22	2
90-12-0	1-Methylnaphthalene	I	2	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		93%				
81103-79-9	Fluorene-d10		88%				
1718-52-1	Pyrene-d10		85%				

OUTSIDE 12 hour time

DO NOT USE

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 24-MAR-2005 12:12
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 95.2

Lab ID: WV0943-5RA
Client ID: PEN43SB1102
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		74%				
81103-79-9	Fluorene-d10		83%				
1718-52-1	Pyrene-d10		112%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 24-MAR-2005 17:12
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0943-4RA 2
Client ID: PEN43SB110/D
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		79%				
81103-79-9	Fluorene-d10		67%				
1718-52-1	Pyrene-d10		74%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 22:22
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0943-4
Client ID: PEN43SB110/D
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	0.7	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		92%				
81103-79-9	Fluorene-d10		91%				
1718-52-1	Pyrene-d10		79%				

OUTSIDE TEMP

DO NOT USE

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 24-MAR-2005 13:02
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 92.9

Lab ID: WV0943-6RA
Client ID: PEN43SB1201
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	22	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.6	1.0	20	22	0.6
85-01-8	Phenanthrene	I	8	1.0	20	22	2
120-12-7	Anthracene	I	2	1.0	20	22	0.9
206-44-0	Fluoranthene	I	18	1.0	20	22	2
129-00-0	Pyrene	I	13	1.0	20	22	2
56-55-3	Benzo(a)anthracene	I	18	1.0	20	22	1
218-01-9	Chrysene	I	10	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene		25	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene	I	7	1.0	20	22	1
50-32-8	Benzo(a)pyrene	I	12	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	5	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene	I	7	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		90%				
81103-79-9	Fluorene-d10		90%				
1718-52-1	Pyrene-d10		92%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 24-MAR-2005 13:52
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 93.1

Lab ID: WV0943-7RA
Client ID: PEN43SB1202
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	21	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	21	0.8
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	2	1.0	20	21	2
120-12-7	Anthracene	U	0.9	1.0	20	21	0.9
206-44-0	Fluoranthene	I	4	1.0	20	21	2
129-00-0	Pyrene	I	3	1.0	20	21	2
56-55-3	Benzo(a)anthracene	I	8	1.0	20	21	1
218-01-9	Chrysene	I	3	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	I	8	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	I	2	1.0	20	21	1
50-32-8	Benzo(a)pyrene	I	2	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	1	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		98%				
81103-79-9	Fluorene-d10		77%				
1718-52-1	Pyrene-d10		88%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 24-MAR-2005 14:42
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0943-8RA
Client ID: PEN43SB1301
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		87%				
81103-79-9	Fluorene-d10		72%				
1718-52-1	Pyrene-d10		88%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 24-MAR-2005 15:33
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 93.3

Lab ID: WV0943-9RA
Client ID: PEN43SB1302
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	21	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.9	1.0	20	21	0.9
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		87%				
81103-79-9	Fluorene-d10		83%				
1718-52-1	Pyrene-d10		85%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 18:02
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 86.0

Lab ID: WV0943-12DL
Client ID: PEN43SB1401
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	L	2100	10	20	230	10
91-57-6	2-Methylnaphthalene		670	10	20	230	6
208-96-8	Acenaphthylene	U	6	10	20	230	6
83-32-9	Acenaphthene		1800	10	20	230	8
86-73-7	Fluorene		1700	10	20	230	7
85-01-8	Phenanthrene	L	20000	10	20	230	17
120-12-7	Anthracene	L	5500	10	20	230	9
206-44-0	Fluoranthene	L	22000	10	20	230	19
129-00-0	Pyrene	L	19000	10	20	230	21
56-55-3	Benzo(a)anthracene	JL	16000	10	20	230	12
218-01-9	Chrysene	L	9700	10	20	230	14
205-99-2	Benzo(b)fluoranthene	JL	13000	10	20	230	24
207-08-9	Benzo(k)fluoranthene	L	4100	10	20	230	16
50-32-8	Benzo(a)pyrene	L	8200	10	20	230	9
193-39-5	Indeno(1,2,3-cd)pyrene	L	3700	10	20	230	23
53-70-3	Dibenzo(a,h)anthracene		1100	10	20	230	23
191-24-2	Benzo(g,h,i)perylene	L	3600	10	20	230	20
90-12-0	1-Methylnaphthalene		540	10	20	230	120
7297-45-2	2-Methylnaphthalene-d10		D				
81103-79-9	Fluorene-d10		D				
1718-52-1	Pyrene-d10		D				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 12:51
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 86.0

Lab ID: WV0943-12DL2
Client ID: PEN43SB1401
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	2400	200	20	4600	210
91-57-6	2-Methylnaphthalene	U	130	200	20	4600	130
208-96-8	Acenaphthylene	U	120	200	20	4600	120
83-32-9	Acenaphthene	I	1700	200	20	4600	160
86-73-7	Fluorene	I	2200	200	20	4600	140
85-01-8	Phenanthrene		28000	200	20	4600	340
120-12-7	Anthracene		8000	200	20	4600	190
206-44-0	Fluoranthene		30000	200	20	4600	380
129-00-0	Pyrene		17000	200	20	4600	420
56-55-3	Benzo(a)anthracene	J	15000	200	20	4600	230
218-01-9	Chrysene		8700	200	20	4600	290
205-99-2	Benzo(b)fluoranthene	J	16000	200	20	4600	480
207-08-9	Benzo(k)fluoranthene		5700	200	20	4600	310
50-32-8	Benzo(a)pyrene		10000	200	20	4600	170
193-39-5	Indeno(1,2,3-cd)pyrene		5000	200	20	4600	470
53-70-3	Dibenzo(a,h)anthracene	U	460	200	20	4600	460
191-24-2	Benzo(g,h,i)perylene	I	4600	200	20	4600	400
90-12-0	1-Methylnaphthalene	U	2300	200	20	4600	2300
7297-45-2	2-Methylnaphthalene-d10		D				
81103-79-9	Fluorene-d10		D				
1718-52-1	Pyrene-d10		D				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 12:43
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 92.7

Lab ID: WV0943-13
Client ID: PEN43SB1402
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	22	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.6	1.0	20	22	0.6
85-01-8	Phenanthrene	U	2	1.0	20	22	2
120-12-7	Anthracene	U	0.9	1.0	20	22	0.9
206-44-0	Fluoranthene	U	2	1.0	20	22	2
129-00-0	Pyrene	U	2	1.0	20	22	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	22	1
218-01-9	Chrysene	U	1	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	22	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		67%				
81103-79-9	Fluorene-d10		76%				
1718-52-1	Pyrene-d10		79%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 24-MAR-2005 16:22
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0943-10RA
Client ID: PEN43SB1501
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		86%				
81103-79-9	Fluorene-d10		84%				
1718-52-1	Pyrene-d10		93%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 11:54
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 95.3

Lab ID: WV0943-11
Client ID: PEN43SB1502
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		87%				
81103-79-9	Fluorene-d10		78%				
1718-52-1	Pyrene-d10		82%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 15:13
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 95.6

Lab ID: WV0943-14
Client ID: PEN43SB1601
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		81%				
81103-79-9	Fluorene-d10		75%				
1718-52-1	Pyrene-d10		78%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 16:03
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 90.4

Lab ID: WV0943-15
Client ID: PEN43SB1602
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	22	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene	U	2	1.0	20	22	2
120-12-7	Anthracene	U	0.9	1.0	20	22	0.9
206-44-0	Fluoranthene	U	2	1.0	20	22	2
129-00-0	Pyrene	U	2	1.0	20	22	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	22	1
218-01-9	Chrysene	U	1	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	22	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		81%				
81103-79-9	Fluorene-d10		80%				
1718-52-1	Pyrene-d10		77%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 12:02
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 90.6

Lab ID: WV0943-16
Client ID: PEN43SB1701
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	2	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	I	2	1.0	20	22	0.6
208-96-8	Acenaphthylene	I	7	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene		34	1.0	20	22	2
120-12-7	Anthracene	I	7	1.0	20	22	0.9
206-44-0	Fluoranthene		160	1.0	20	22	2
129-00-0	Pyrene		110	1.0	20	22	2
56-55-3	Benzo(a)anthracene	JL	250	1.0	20	22	1
218-01-9	Chrysene		170	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene	JL	450	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene		130	1.0	20	22	1
50-32-8	Benzo(a)pyrene	L	250	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		150	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene		36	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene		150	1.0	20	22	2
90-12-0	1-Methylnaphthalene	I	2	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		82%				
81103-79-9	Fluorene-d10		99%				
1718-52-1	Pyrene-d10		82%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 14:29
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 90.6

Lab ID: WV0943-16DL
Client ID: PEN43SB1701
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	5	5.0	20	110	5
91-57-6	2-Methylnaphthalene	I	3	5.0	20	110	3
208-96-8	Acenaphthylene	U	3	5.0	20	110	3
83-32-9	Acenaphthene	U	4	5.0	20	110	4
86-73-7	Fluorene	U	3	5.0	20	110	3
85-01-8	Phenanthrene	I	39	5.0	20	110	8
120-12-7	Anthracene	I	11	5.0	20	110	4
206-44-0	Fluoranthene		210	5.0	20	110	9
129-00-0	Pyrene		170	5.0	20	110	10
56-55-3	Benzo(a)anthracene	J	320	5.0	20	110	6
218-01-9	Chrysene		210	5.0	20	110	7
205-99-2	Benzo(b)fluoranthene	J	670	5.0	20	110	11
207-08-9	Benzo(k)fluoranthene		200	5.0	20	110	7
50-32-8	Benzo(a)pyrene		340	5.0	20	110	4
193-39-5	Indeno(1,2,3-cd)pyrene		140	5.0	20	110	11
53-70-3	Dibenzo(a,h)anthracene	U	11	5.0	20	110	11
191-24-2	Benzo(g,h,i)perylene		110	5.0	20	110	9
90-12-0	1-Methylnaphthalene	U	55	5.0	20	110	55
7297-45-2	2-Methylnaphthalene-d10		133%				
81103-79-9	Fluorene-d10		96%				
1718-52-1	Pyrene-d10		107%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 13:33
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 95.2

Lab ID: WV0943-17
Client ID: PEN43SB1702
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		92%				
81103-79-9	Fluorene-d10		76%				
1718-52-1	Pyrene-d10		82%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 18:30
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 93.1

Lab ID: WV0943-18
Client ID: PEN43SB1801
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	21	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	21	0.8
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.9	1.0	20	21	0.9
206-44-0	Fluoranthene	I	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	IJ	7	1.0	20	21	1
218-01-9	Chrysene	I	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		77%				
81103-79-9	Fluorene-d10		74%				
1718-52-1	Pyrene-d10		82%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 17:41
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 94.5

Lab ID: WV0943-19
Client ID: PEN43SB1802
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	IJ	6	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		78%				
81103-79-9	Fluorene-d10		66%				
1718-52-1	Pyrene-d10		67%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 16:51
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 94.9

Lab ID: WV0943-20
Client ID: PEN43SB1901
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	4	1.0	20	21	2
120-12-7	Anthracene	I	0.9	1.0	20	21	0.8
206-44-0	Fluoranthene	I	5	1.0	20	21	2
129-00-0	Pyrene	I	3	1.0	20	21	2
56-55-3	Benzo(a)anthracene	IJ	7	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		79%				
81103-79-9	Fluorene-d10		82%				
1718-52-1	Pyrene-d10		82%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 14:23
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 94.8

Lab ID: WV0943-21
Client ID: PEN43SB1902
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		82%				
81103-79-9	Fluorene-d10		86%				
1718-52-1	Pyrene-d10		74%				

APPENDIX C

SUPPORT DOCUMENTATION

NAS PENSACOLA
SOIL DATA
3552

FRACTION	CHEMICAL	PEN43SB1102RA	UNITS	PEN43SB1102D	RPD	D
PAH	NAPHTHALENE	ND	UG/KG	0.7 I	NC	NC

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.
ND = Compound not detected.
NC = Statistic not calculated

HOLDTIME

SDG 3551

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB0802	WV0922-006	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB0601	WV0922-001	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB2001	WV0951-004	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB1002	WV0922-010	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB1002	WV0922-010	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB1001	WV0922-009	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB1001	WV0922-009	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB0902	WV0922-008	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB2002	WV0951-005	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB0901	WV0922-007	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB2002	WV0951-005	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB0801	WV0922-005	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB0801	WV0922-005	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB0702	WV0922-004	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB0702	WV0922-004	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB0701	WV0922-003	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB0701	WV0922-003	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB0602	WV0922-002	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB0602	WV0922-002	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB0902	WV0922-008	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB2301	WV0951-010	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB0601	WV0922-001	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB2502	WV0951-003	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2502	WV0951-003	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB2501D	WV0951-002	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
M	MG/KG	PEN43SB2501D	WV0951-002	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2501D	WV0951-002	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB2501	WV0951-001	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
M	MG/KG	PEN43SB2001	WV0951-004	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2301	WV0951-010	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB0802	WV0922-006	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB2202	WV0951-009	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2202	WV0951-009	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB2201	WV0951-008	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2201	WV0951-008	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB2102	WV0951-007	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2102	WV0951-007	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB2101	WV0951-006	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2101	WV0951-006	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB2501	WV0951-001	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB0901	WV0922-007	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
TS	%	PEN43SB2001	WV0951-4	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2002	WV0951-15	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2002	WV0951-5	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2101	WV0951-16	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2101	WV0951-6	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2102	WV0951-17	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2102	WV0951-7	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB0601	WV0922-1	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB2001	WV0951-14	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2202	WV0951-9	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SB2201	WV0951-18	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2301	WV0951-10	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2301	WV0951-20	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2501	WV0951-1	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2501	WV0951-11	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2501D	WV0951-12	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2501D	WV0951-2	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2502	WV0951-3	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2502	WV0951-13	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2201	WV0951-8	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB0602	WV0922-12	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB2202	WV0951-19	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB0601	WV0922-11	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB1002	WV0922-20	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0602	WV0922-2	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0701	WV0922-13	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0701	WV0922-3	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0702	WV0922-14	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SB0702	WV0922-4	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0801	WV0922-15	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0801	WV0922-5	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB1001	WV0922-19	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB1001	WV0922-9	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0902	WV0922-8	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0902	WV0922-18	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0901	WV0922-7	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0901	WV0922-17	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0802	WV0922-6	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0802	WV0922-16	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB1002	WV0922-10	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
OS	%	PEN43SB1002	WV0922-20	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
OS	%	PEN43SB1001RA	WV0922-9RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	%	PEN43SB0701	WV0922-13	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	%	PEN43SB0802	WV0922-16	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	%	PEN43SB1001	WV0922-19	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
OS	%	PEN43SB0902RA	WV0922-8RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	%	PEN43SB0902	WV0922-18	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	%	PEN43SB0901RA	WV0922-7RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	%	PEN43SB0901	WV0922-17	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	%	PEN43SB0802RE	WV0922-16RE	NM	3/3/2005	3/22/2005	3/24/2005	19	2	21
OS	%	PEN43SB0802RA	WV0922-6RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	%	PEN43SB0801RA	WV0922-5RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	%	PEN43SB0801	WV0922-15	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	%	PEN43SB0702RA	WV0922-4RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	%	PEN43SB0601	WV0922-11	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	%	PEN43SB0701	WV0922-3	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
OS	%	PEN43SB2502	WV0951-3	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	%	PEN43SB0602RA	WV0922-2RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	%	PEN43SB0602	WV0922-12	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	%	PEN43SB0601	WV0922-1	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
OS	%	PEN43SB1002RA	WV0922-10RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	%	PEN43SB0702	WV0922-14	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	%	PEN43SB2301	WV0951-10	NM	3/4/2005	3/11/2005	3/28/2005	7	17	24
OS	%	PEN43SB2501D	WV0951-2	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	%	PEN43SB2501D	WV0951-12	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	%	PEN43SB2501	WV0951-11	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	%	PEN43SB2001	WV0951-14	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	%	PEN43SB2301	WV0951-20	NM	3/4/2005	3/11/2005	3/28/2005	7	17	24
OS	%	PEN43SB2502	WV0951-13	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	%	PEN43SB2202RE	WV0951-19RE	NM	3/4/2005	4/1/2005	4/5/2005	28	4	32
OS	%	PEN43SB2202RA	WV0951-19RA	NM	3/4/2005	3/11/2005	3/30/2005	7	19	26
OS	%	PEN43SB2202	WV0951-9	NM	3/4/2005	3/11/2005	3/28/2005	7	17	24
OS	%	PEN43SB2001	WV0951-4	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	%	PEN43SB2201	WV0951-18	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	%	PEN43SB2102	WV0951-7	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB2102	WV0951-17	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	%	PEN43SB2101	WV0951-6	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB2101	WV0951-16	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	%	PEN43SB2002	WV0951-5	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB2002	WV0951-15	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	%	PEN43SB2201	WV0951-8	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	%	PEN43SB2501	WV0951-1	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	PEN43SB2202	WV0951-9	NM	3/4/2005	3/11/2005	3/28/2005	7	17	24
OS	UG/KG	PEN43SB2201	WV0951-8	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB2201	WV0951-18	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	UG/KG	PEN43SB2102	WV0951-7	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB2102	WV0951-17	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	UG/KG	PEN43SB2101	WV0951-6	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB2101	WV0951-16	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	UG/KG	PEN43SB2002	WV0951-15	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	UG/KG	PEN43SB2002	WV0951-5	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB2202RA	WV0951-19RA	NM	3/4/2005	3/11/2005	3/30/2005	7	19	26
OS	UG/KG	PEN43SB2202RE	WV0951-19RE	NM	3/4/2005	4/1/2005	4/5/2005	28	4	32
OS	UG/KG	PEN43SB2301	WV0951-10	NM	3/4/2005	3/11/2005	3/28/2005	7	17	24
OS	UG/KG	PEN43SB2301	WV0951-20	NM	3/4/2005	3/11/2005	3/28/2005	7	17	24
OS	UG/KG	PEN43SB2501	WV0951-1	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB2501	WV0951-11	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	UG/KG	PEN43SB2501D	WV0951-12	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	UG/KG	PEN43SB2501D	WV0951-2	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB2001	WV0951-4	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	PEN43SB2502	WV0951-3	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB0802RA	WV0922-6RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	UG/KG	PEN43SB2502	WV0951-13	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	UG/KG	PEN43SB0802RE	WV0922-16RE	NM	3/3/2005	3/22/2005	3/24/2005	19	2	21
OS	UG/KG	PEN43SB0601	WV0922-11	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	UG/KG	PEN43SB0602	WV0922-12	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	UG/KG	PEN43SB0602RA	WV0922-2RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	UG/KG	PEN43SB0701	WV0922-13	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	UG/KG	PEN43SB0701	WV0922-3	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
OS	UG/KG	PEN43SB0702	WV0922-14	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	UG/KG	PEN43SB0702RA	WV0922-4RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	UG/KG	PEN43SB0801	WV0922-15	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	UG/KG	PEN43SB0901	WV0922-17	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	UG/KG	PEN43SB0802	WV0922-16	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	UG/KG	PEN43SB2001	WV0951-14	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	UG/KG	PEN43SB0601	WV0922-1	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
OS	UG/KG	PEN43SB0901RA	WV0922-7RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	UG/KG	PEN43SB0902	WV0922-18	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	PEN43SB0902RA	WV0922-8RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	UG/KG	PEN43SB1001	WV0922-19	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
OS	UG/KG	PEN43SB1001RA	WV0922-9RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	UG/KG	PEN43SB1002	WV0922-20	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
OS	UG/KG	PEN43SB1002RA	WV0922-10RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	UG/KG	PEN43SB0801RA	WV0922-5RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CTO 355 NAS PENSACOLA
SDG: CTO355-1

Sample Receipt

The following samples were received on March 4 and March 5, 2005 and were logged in under Katahdin Analytical Services work order numbers WV0922 and WV0951 for a hardcopy due date of March 31, 2005.

KATAHDIN Sample No.	TTNUS Sample Identification
WV0922-1	PEN43SB0601
WV0922-2	PEN43SB0602
WV0922-3	PEN43SB0701
WV0922-4	PEN43SB0702
WV0922-5	PEN43SB0801
WV0922-6	PEN43SB0802
WV0922-7	PEN43SB0901
WV0922-8	PEN43SB0902
WV0922-9	PEN43SB1001
WV0922-10	PEN43SB1002
WV0922-11	PEN43SB0601
WV0922-12	PEN43SB0602
WV0922-13	PEN43SB0701
WV0922-14	PEN43SB0702
WV0922-15	PEN43SB0801
WV0922-16	PEN43SB0802
WV0922-17	PEN43SB0901
WV0922-18	PEN43SB0902
WV0922-19	PEN43SB1001
WV0922-20	PEN43SB1002
WV0951-1	PEN43SB2501
WV0951-2	PEN43SB2501D
WV0951-3	PEN43SB2502
WV0951-4	PEN43SB2001
WV0951-5	PEN43SB2002
WV0951-6	PEN43SB2101
WV0951-7	PEN43SB2102
WV0951-8	PEN43SB2201
WV0951-9	PEN43SB2202
WV0951-10	PEN43SB2301
WV0951-11	PEN43SB2501
WV0951-12	PEN43SB2501D
WV0951-13	PEN43SB2502
WV0951-14	PEN43SB2001

WV0951-15	PEN43SB2002
WV0951-16	PEN43SB2101
WV0951-17	PEN43SB2102
WV0951-18	PEN43SB2201
WV0951-19	PEN43SB2202
WV0951-20	PEN43SB2301

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Andrea J. Colby**. This narrative is an integral part of the Report of Analysis.

Organics Laboratory

The samples of SDG CTO355-1 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, and III 1996, Office of Solid Waste and Emergency Response, U.S. EPA, for the specific methods listed below or on the Report of Analysis. Some manual integrations may have been performed due to split peaks and/or corrected baselines. All have been flagged with a "M" (software-generated) on the pertinent quantitation reports.

8270C SIM Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

The initial calibration analyzed on the K instrument on 03/17/05 had %RSD values for three analytes that exceeded the method acceptance limit of 15%. For two analytes, a linear model was used for quantitation instead of an average response factor. The target analyte 1-methylnaphthalene failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. This compound was calibrated using the average model.

The initial calibration standards (files U0471 and U0473) had responses for the internal standards chrysene-d12 and/or perylene-d12, which were all low and outside the method acceptance limits of -50% to +100% of the responses of the mid-level calibration standard from the initial calibration performed on 03/21/05.

8270C Scan Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

There were four initial calibrations performed for this SDG. The initial calibration analyzed on the U instrument on 04/05/05 had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. There were several analytes that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the averaged model. Since these target analytes were not detected of above the PQL in any of the affected samples, these samples were not reanalyzed.

The initial calibration analyzed on the X instrument on 02/23/05 had %RSD values for five analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. There were four analytes that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the averaged model. Since these target analytes were not detected of above the PQL in any of the affected samples, these samples were not reanalyzed.

The initial calibration analyzed on the X instrument on 03/15/05 had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. There were two analytes that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the averaged model. Since these target analytes were not detected of above the PQL in any of the affected samples, these samples were not reanalyzed.

The initial calibration analyzed on the X instrument on 03/28/05 had %RSD values for four analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. There were three analytes that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the averaged model. Since these target analytes were not detected of above the PQL in any of the affected samples, these samples were not reanalyzed.

The calibration verification standard (CV) (file X7425) had a high response for the (CCC) calibration check compound di-n-octylphthalate, which resulted in a %D that was outside the method acceptance limit of 20%D. Since a high response would indicate a high bias and there were no target analytes detected above the PQL in the associated method blank, the sample was not reanalyzed. The associated LCS may be biased high.

The calibration verification standard (CV) (file X7512) had a low response for the (CCC) calibration check compound pentachlorophenol, which resulted in a %D that was outside the method acceptance limit of 20%D.

The calibration verification standard (CV) (file X7572) had a low response for the (CCC) calibration check compound di-n-octylphthalate, which resulted in a %D that was outside the method acceptance limit of 20%D.

Samples WV0922-11, 15, 17 and 19 and WV0951-19RE had high recoveries for one surrogate, which were outside the method established limits. Since a high recovery would indicate a high bias and no target analytes were detected above the PQL, the samples were not reanalyzed.

Samples WV0922-16 and WV0951-19RA had low recoveries for one or more surrogates, which were outside the method established limits. These samples were reextracted five and fourteen days, respectively, out of hold time and analyzed. Results for both analyses are reported.

The laboratory method blanks WG14977-1 and WG15035-1RA had high recoveries for one surrogate, which were outside the laboratory established acceptance limits. Since a high recovery would indicate a high bias and there were no target analytes detected above the PQL, the samples were not reanalyzed.

The laboratory control samples (LCSs) WG14977-2 and WG15659-2 and the laboratory control sample duplicate (LCSD) WG15362-3 had high recoveries for one or more surrogates, which were outside the laboratory established acceptance limits. Since the recoveries of the spiked analytes were acceptable, the LCS/LCSD were not reanalyzed.

The laboratory control sample (LCS) WG15039-2 had a low recovery for one surrogate, which was outside the laboratory established acceptance limits. Since the recoveries of the spiked analytes were acceptable, the LCS was not reanalyzed.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of Katahdin SDG CTO355-1 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Waste", SW-846, November 1986, Third Edition.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Nos. WV0922-(1-10 and WV0951-(1-10) were digested for ICP analysis on 03/09-05 (QC Batch VC09ICS0) in accordance with USEPA Method 3050B. Katahdin Sample No. WV0922-1 was prepared with duplicate matrix-spiked aliquots.

ICP analyses of SDG CTO355-1 sample digestates were performed using a Thermo Jarrell Ash (TJA) Trace ICP spectrometer and a TJA ICAP 61E ICP spectrometer. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following comments or exceptions:

Some of the results for run QC samples (ICV, ICB, CCV, CCB, ICSA, and ICSAB) included in the accompanying data package may have exceeded acceptance limits for some elements. Please note that all client samples and batch QC samples associated with out-of-control results for run QC samples were subsequently reanalyzed for the analytes in question.

Matrix QC Summary

The matrix-spike recoveries for barium for Katahdin Sample No. WV0922-1 are outside the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added). Recoveries for all other elements are acceptable.

The matrix spike duplicate analysis of Katahdin Sample No. WV0922-1 is within the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for all analytes.

The serial dilution analysis of Katahdin Sample No. WV0922-1 is within the laboratory's ICP serial dilution acceptance limit (<10% difference between the original sample result and the result for a 5-fold dilution of the sample, if the result for the dilution is at least ten times the instrument detection limit) for all analytes.

Wet Chemistry Analysis

The samples of SDG CTO355-1 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total solids were performed according to "U.S. EPA Contract Laboratory Program Statement of Work for Inorganic Analysis", SOW 7/88.

All analyses were performed within analytical hold time. All quality control criteria were met.

No deviations were noted by the Wet Chemistry group.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
040705

Leslie Dimond
Quality Assurance Officer

TETRA TECH NUS, INC.

CHAIN OF CUSTODY

WV092

NUMBER 4393

PAGE 1 OF 1

PROJECT NO: N4821	FACILITY: PEN	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX 8428 7247 7067		CITY, STATE Westbrook Me 04092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G

PRESERVATIVE USED: 4° 4°

TYPE OF ANALYSIS: 8270/ 8270 SIM TCL SVOC/ PAHS; 6010B As/Ba/Cu/Pb/Na

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	8270/ TCL SVOC/ PAHS	6010B As/Ba/Cu/Pb/Na	COMMENTS
3/3	1055	PEN43SB0601	SB06	3	4	SO	G	2	1	1	
3/3	1100	PEN43SB0602	SB06	7	9	SO	G	2	1	1	
3/3	1115	PEN43SB0701	SB07	3	5	SO	G	2	1	1	
3/3	1120	PEN43SB0702	SB07	7	9	SO	G	2	1	1	
3/3	1400	PEN43SB0801	SB08	2	3	SO	G	2	1	1	
3/3	1405	PEN43SB0802	SB08	6	8	SO	G	2	1	1	
3/3	1420	PEN43SB0901	SB09	2	4	SO	G	2	1	1	
3/3	1425	PEN43SB0902	SB09	6	8	SO	G	2	1	1	
3/3	1555	PEN43SB1001	SB10	2	4	SO	G	2	1	1	
3/3	1600	PEN43SB1002	SB10	6	8	SO	G	2	1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	3/3/05	1730	1. RECEIVED BY	3/4/05	0910
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

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4/02R
FORM NO. TtNUS-001

000009

WW0943, WW0991

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2601 | PAGE 2 OF 3

PROJECT NO: 4821	FACILITY: PEW 43	PROJECT MANAGER: G. Walker	PHONE NUMBER: 850 385 9899
LABORATORY NAME AND CONTACT: Katahdin Andrea Colby		ADDRESS: 340 County Rd #5	CITY, STATE: Westbrook ME
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER: B. Nelson	PHONE NUMBER: 850 385 9899
CARRIER/WAYBILL NUMBER: FEDEX 8428 7247 7090			

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 6010B As/Ba/Cr/Pb/Va	8270 (SIM) TCL SVOC/PAHS	COMMENTS
3/4	0943	PEW43SB1402		4	6 ~~4~~	~~8~~ SO	G	2	1	1	
3/4	1010	PEW43SB1601		2	3 ~~2~~	~~8~~ SO	G	2	1	1	
3/4	1015	PEW43SB1602		7	7 ~~8~~	~~8~~ SO	G	2	1	1	
3/4	1025	PEW43SB1701		2	3	SO	G	2	1	1	
3/4	1025	PEW43SB1701MS		2	3	SO	G	2	1	1	
3/4	1025	PEW43SB1701MSD		2	3	SO	G	2	1	1	
3/4	1030	PEW43SB1702		5	7	SO	G	2	1	1	
3/4	1050	PEW43SB1801		2	3	SO	G	2	1	1	
3/4	1055	PEW43SB1802		7	9	SO	G	2	1	1	
3/4	1120	PEW43SB1901		2	3	SO	G	2	1	1	
3/4	1125	PEW43SB1902		6	8	SO	G	2	1	1	
3/4	1225	PEW43SB2501		2	3	SO	G	2	1	1	
3/4	1225	PEW43SB250LD		2	3	SO	G	2	1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY: [signature]	3/4/05	1630	1. RECEIVED BY: [signature]	3/5/05	1235
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R

1100000

WV0951, WV0952

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2610 | PAGE 3 OF 3

PROJECT NO: 4821	FACILITY: PEN 43	PROJECT MANAGER G. Werlker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX 8428 7247 7090		CITY, STATE Westbrook me

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 6010B AS/Ba/Cu/Pb/Na	8270/SIM TCL SVOC PAHS								COMMENTS
3/4	1230	PEN 43 SB2502		4	5	SO	G	2	1	1								
3/4	1240	PEN 43SB2001		2	3	SO	G	2	1	1								
3/4	1245	PEN 43 SB2002		5	7	SO	G	2	1	1								
3/4	1305	PEN 43 SB 2101		2	3	SO	G	2	1	1								
3/4	1310	PEN43SB2102		5	7	SO	G	2	1	1								
3/4	1320	PEN 43SB2201		2	3	SO	G	2	1	1								
3/4	1325	PEN43SB2202		7	8	SO	G	2	1	1								
3/4	1335	PEN 43 SB 2301		2	3	SO	G	2	1	1								
3/4	1340	PEN43 SB2302		6 (VOB 3/4/05)	~~7~~ 7	SO	G	2	1	1								
3/4		PEN43SB 2401		~~6~~	~~7~~	SO	G	2	1	1	Sampling 3/7/05							
3/4		PEN 43 SB 2402				SO	G	2	1	1								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	3/4/05	1630	1. RECEIVED BY	3/5/05	1235
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R

000019

Spada, Bernie

From: Andrea Colby [acolby@katahdinlab.com]
Sent: Tuesday, April 26, 2005 1:54 PM
To: 'Spada, Bernie'
Subject: RE: SDG-3551
Attachments: CTO355.pdf

Bernie,
Here are the updated form 6 & 7s for SVOA from 3/23, 3/24 and 3/25/05.
Thanks,
Andrea Colby
Katahdin Analytical

From: Spada, Bernie [mailto:SpadaB@ttnus.com]
Sent: Monday, April 25, 2005 9:30 AM
To: Andrea Colby
Subject: FW: SDG-3551

Andrea,

I'm having the same problem with SDG-3551. The CCAL on 3/24 at 12:21 doesn't match the 3/15 ICAL either.

Bernie

From: Spada, Bernie
Sent: Monday, April 25, 2005 8:33 AM
To: 'Andrea Colby'
Subject: RE: SDG-3554

Andrea,

Does this apply to SDG-3552 also? The ICAL on 3/15/05 don't match the CCALs from 3/23 at 11:42 and 3/25 at 12:22 for benzaldehyde.

Please let me know.

Thank you.

Bernie

From: Andrea Colby [mailto:acolby@katahdinlab.com]
Sent: Wednesday, April 20, 2005 4:59 PM
To: 'Spada, Bernie'
Subject: RE: SDG-3554

Bernie,
Here is additional information for WV0975. There was a missing ICAL and we had to requant a CCV for benzaldehyde. Let me know if we should send a revised hardcopy.
Thanks,

Andrea

From: Spada, Bernie [mailto:SpadaB@ttnus.com]
Sent: Tuesday, April 19, 2005 1:06 PM
To: Andrea Colby
Subject: SDG-3554

Andrea,

I am performing the validation for SDG-3554 and have a question for you. The SVOC fraction has one ICAL and two CCALs associated with it. The ICAL on March 15 on the GCMS-X instrument shows and RRF of 4.2*10-2 for benzaldehyde, however the CCAL from March 25 at 12:22 shows a CCAL RRF of 1.0616 associated to an ICAL RRF of 1.148 that matches the date/time for the ICAL above. The second CCAL appears to match up better with the ICAL. Can you help me out with the CCAL on March 25? Let me know what is correct.

Thank you.

Bernard F Spada III
Bernard F Spada III
Environmental Scientist
TETRA TECH NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220-2745
Telephone: (412) 921-8729
FAX: (412) 921-4040
spadab@ttnus.com
http://www.ttnus.com
http://www.tetratech.com

Spada, Bernie

From: Andrea Colby [acolby@katahdinlab.com]
Sent: Tuesday, April 26, 2005 1:57 PM
To: 'Spada, Bernie'
Subject: RE: SDG-3552

Bernie,
There should only be one form I for WV0943-4. The first run was outside the 12 hour clock and was not reported. The rerun is labeled as WV0943-4RA.
Thanks,
Andrea Colby
Katahdin Analytical

From: Spada, Bernie [mailto:SpadaB@ttnus.com]
Sent: Monday, April 25, 2005 6:56 AM
To: Andrea Colby
Subject: SDG-3552

Andrea,

I'm validating the PAH fraction of SDG-3552 and I have two Form I's and EDD results for sample WV0943-4, but only one record in the data. I have WV0943-4RA shown on the March 24 Form V but nothing for the original analysis or any mention of it in the narrative.

Can you help me out?

Bernard F Spada III
Bernard F Spada III
Environmental Scientist
TETRA TECH NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220-2745
Telephone: (412) 921-8729
FAX: (412) 921-4040
spadab@ttnus.com
http://www.ttnus.com
http://www.tetratech.com

Spada, Bernie

From: Andrea Colby [acolby@katahdinlab.com]
Sent: Wednesday, April 27, 2005 1:30 PM
To: 'Spada, Bernie'
Subject: RE: SDG-3551
Attachments: X7557.pdf

Bernie,
Here is the corrected form VII from 3/23/05 1142. The other CCAL from 3/23/05 1059 was not used and should not have been sent to you. Sorry for the confusion.
Thanks,
Andrea

From: Spada, Bernie [mailto:SpadaB@ttnus.com]
Sent: Wednesday, April 27, 2005 7:59 AM
To: Andrea Colby
Cc: Samchuck, Joseph; Carper, Kelly
Subject: RE: SDG-3551

Andrea,

The replacement CCAL you sent me for 3/23 has a time of 10:59 and the initial was 11:42. Can you requantitate the 11:42 CCAL or explain why a different one was used?

Thank you.

Bernie

From: Andrea Colby [mailto:acolby@katahdinlab.com]
Sent: Tuesday, April 26, 2005 1:54 PM
To: 'Spada, Bernie'
Subject: RE: SDG-3551

Bernie,
Here are the updated form 6 & 7s for SVOA from 3/23, 3/24 and 3/25/05.
Thanks,
Andrea Colby
Katahdin Analytical

From: Spada, Bernie [mailto:SpadaB@ttnus.com]
Sent: Monday, April 25, 2005 9:30 AM
To: Andrea Colby
Subject: FW: SDG-3551

Andrea,

I'm having the same problem with SDG-3551. The CCAL on 3/24 at 12:21 doesn't match the 3/15 ICAL either.

Bernie

From: Spada, Bernie
Sent: Monday, April 25, 2005 8:33 AM
To: 'Andrea Colby'
Subject: RE: SDG-3554

Andrea,

Does this apply to SDG-3552 also? The ICAL on 3/15/05 don't match the CCALs from 3/23 at 11:42 and 3/25 at 12:22 for benzaldehyde.

Please let me know.

Thank you.

Bernie

From: Andrea Colby [mailto:acolby@katahdinlab.com]
Sent: Wednesday, April 20, 2005 4:59 PM
To: 'Spada, Bernie'
Subject: RE: SDG-3554

Bernie,
Here is additional information for WV0975. There was a missing ICAL and we had to requant a CCV for benzaldehyde. Let me know if we should send a revised hardcopy.
Thanks,
Andrea

From: Spada, Bernie [mailto:SpadaB@ttnus.com]
Sent: Tuesday, April 19, 2005 1:06 PM
To: Andrea Colby
Subject: SDG-3554

Andrea,

I am performing the validation for SDG-3554 and have a question for you. The SVOC fraction has one ICAL and two CCALs associated with it. The ICAL on March 15 on the GCMS-X instrument shows and RRF of 4.2*10-2 for benzaldehyde, however the CCAL from March 25 at 12:22 shows a CCAL RRF of 1.0616 associated to an ICAL RRF of 1.148 that matches the date/time for the ICAL above. The second CCAL appears to match up better with the ICAL. Can you help me out with the CCAL on March 25? Let me know what is correct.

Thank you.

Bernard F Spada III
Bernard F Spada III
Environmental Scientist
TETRA TECH NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220-2745
Telephone: (412) 921-8729
FAX: (412) 921-4040

spadab@ttnus.com
http://www.ttnus.com
http://www.tetratech.com

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: XD434 DFTPP Injection Date: 02/23/05

Instrument ID: GCMS-X DFTPP Injection Time: 0939

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	50.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.8
70	Less than 2.0% of mass 69	0.4 (0.7)1
127	40.0 - 60.0% of mass 198	40.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.5
275	10.0 - 30.0% of mass 198	19.6
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	10.1 (84.6)2
442	40.0 - 100.0% of mass 198	58.7
443	17.0 - 23.0% of mass 442	12.0 (20.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD108X0223	X7289	02/23/05	1251
02		SSTD036X0223	X7290	02/23/05	1357
03		SSTD009X0223	X7291	02/23/05	1439
04		SSTD144X0223	X7292	02/23/05	1522
05		SSTD180X0223	X7293	02/23/05	1604
06		SSTD072X0223	X7294	02/23/05	1650
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FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date(s): 02/23/05 02/23/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1251 1650

LAB FILE ID: RF9: X7291 RF36: X7290 RF72: X7294
RF108: X7289 RF144: X7292 RF180: X7293

COMPOUND	RF9	RF36	RF72	RF108	RF144	RF180	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.492	0.064	0.004	0.026	0.053	0.008	AVRG		0.10793365		175.840	15.000	<
Phenol	1.068	1.288	1.162	1.097	1.032	1.043	AVRG		1.11488883		8.686	15.000	
Bis(2-Chloroethyl)ether	1.021	1.115	0.977	0.881	0.807	0.747	AVRG		0.92482857		14.960	15.000	
2-Chlorophenol	1.046	1.115	1.051	0.996	0.961	0.968	AVRG		1.02267591		5.786	15.000	
2,2'-Oxybis(1-Chloropropa	2.583	2.842	2.642	2.691	2.634	2.767	AVRG		2.69305879		3.555	15.000	
2-Methylphenol	0.691	0.844	0.784	0.789	0.749	0.957	AVRG		0.80244189		11.356	15.000	
Hexachloroethane	0.524	0.534	0.504	0.461	0.434	0.424	AVRG		0.48021889		9.746	15.000	
N-Nitroso-di-n-propylamin	0.800	0.870	0.758	0.793	0.772	0.832	AVRG		0.80430881		5.086	15.000	
4-Methylphenol	0.758	0.844	0.824	0.846	0.838	0.883	AVRG		0.83220423		4.976	15.000	
Nitrobenzene	0.324	0.345	0.349	0.322	0.329	0.350	AVRG		0.33669820		3.792	15.000	
Isophorone	0.514	0.590	0.595	0.581	0.596	0.623	AVRG		0.58322323		6.301	15.000	
2-Nitrophenol	0.147	0.181	0.188	0.185	0.189	0.198	AVRG		0.18138932		9.917	15.000	
Caprolactam	0.070	0.078	0.079	0.077	0.086	0.075	AVRG		7.751e-002		6.617	15.000	
Bis(2-Chloroethoxy)methan	0.459	0.386	0.403	0.374	0.400	0.396	AVRG		0.40293804		7.340	15.000	
2,4-Dichlorophenol	0.197	0.251	0.262	0.248	0.252	0.248	AVRG		0.24315751		9.568	15.000	
1,1'-Biphenyl	1.218	1.263	1.275	1.180	1.140	0.972	AVRG		1.17459454		9.481	15.000	
4-Chloroaniline	0.319	0.346	0.355	0.305	0.305	0.308	AVRG		0.32281063		6.828	15.000	
Hexachlorobutadiene	0.198	0.190	0.214	0.182	0.178	0.184	AVRG		0.19085005		6.917	15.000	
4-Chloro-3-Methylphenol	0.207	0.224	0.228	0.231	0.248	0.234	AVRG		0.22851922		5.778	15.000	
Hexachlorocyclopentadiene	0.091	0.197	0.294	0.142	0.120	0.330	AVRG		0.19587165		49.637	15.000	<
2,4,6-Trichlorophenol	0.261	0.334	0.374	0.356	0.364	0.345	AVRG		0.33914757		12.046	15.000	
2,4,5-Trichlorophenol	0.350	0.310	0.354	0.340	0.358	0.327	AVRG		0.33990131		5.402	15.000	
2-Chloronaphthalene	1.417	1.547	1.616	1.437	1.456	1.413	AVRG		1.48115812		5.567	15.000	
2,4-Dimethylphenol	0.242	0.285	0.274	0.270	0.276	0.287	AVRG		0.27232624		5.998	15.000	
2-Nitroaniline	0.279	0.352	0.357	0.369	0.373	0.347	AVRG		0.34618822		9.886	15.000	
Dimethyl Phthalate	1.113	1.131	1.144	1.074	1.131	1.024	AVRG		1.10295485		4.150	15.000	
2,6-Dinitrotoluene	0.238	0.280	0.294	0.265	0.283	0.268	AVRG		0.27145545		7.247	15.000	
3-Nitroaniline	0.248	0.290	0.286	0.272	0.281	0.274	AVRG		0.27516322		5.457	15.000	
2,4-Dinitrophenol	7154	105110	225260	440500	731010	1299100	2ORDR	0.15441613	8.71211609	-4.1110617	0.99587	0.99000	
Dibenzofuran	1.303	1.375	1.396	1.295	1.365	1.457	AVRG		1.36529434		4.442	15.000	
4-Nitrophenol	0.095	0.138	0.133	0.136	0.160	0.128	AVRG		0.13176115		15.905	15.000	<
2,4-Dinitrotoluene	78509	446510	732920	1154900	1693100	2795200	LINR	5.331e-002	2.72684178		0.99785	0.99000	
Atrazine	0.158	0.154	0.151	0.067	0.044	0.112	AVRG		0.11428806		42.834	15.000	<
Diethylphthalate	1.128	1.167	1.127	1.043	1.079	0.972	AVRG		1.08601007		6.489	15.000	
4-Chlorophenyl-phenylethe	0.528	0.527	0.560	0.477	0.504	0.430	AVRG		0.50413672		9.085	15.000	
4-Nitroaniline	59065	331660	526590	975720	1348700	2368900	LINR	0.13058271	3.23629069		0.99423	0.99000	
4,6-Dinitro-2-Methylpheno	27605	202290	379670	679520	999180	1445600	LINR	0.12558377	7.28635130		0.99550	0.99000	
N-Nitrosodiphenylamine	0.547	0.561	0.577	0.536	0.537	0.530	AVRG		0.54808168		3.277	15.000	
4-Bromophenyl-phenylether	0.194	0.195	0.218	0.175	0.200	0.193	AVRG		0.19589471		7.058	15.000	
Hexachlorobenzene	0.254	0.238	0.275	0.224	0.266	0.264	AVRG		0.25369974		7.557	15.000	
Pentachlorophenol	10857	148160	266160	478630	803500	1450600	2ORDR	9.899e-002	12.2590323	-8.2289964	0.99820	0.99000	
Carbazole	0.788	0.849	0.864	0.863	0.951	0.985	AVRG		0.88334008		8.158	15.000	
Di-n-butylphthalate	1.082	1.225	1.271	1.236	1.339	1.275	AVRG		1.23828908		6.963	15.000	
Butylbenzylphthalate	0.502	0.558	0.585	0.591	0.566	0.557	AVRG		0.55982716		5.665	15.000	

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date(s): 02/23/05 02/23/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1251 1650

LAB FILE ID: RF9: X7291 RF36: X7290 RF72: X7294
RF108: X7289 RF144: X7292 RF180: X7293

COMPOUND	RF9	RF36	RF72	RF108	RF144	RF180	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dichlorobenzidine	0.285	0.340	0.347	0.344	0.340	0.309	AVRG		0.32751001		7.576	15.000
bis(2-Ethylhexyl)phthalat	0.703	0.784	0.820	0.838	0.797	0.792	AVRG		0.78893027		5.912	15.000
Di-n-octylphthalate	1.412	1.712	1.975	1.981	1.975	1.705	AVRG		1.79333054		12.734	15.000
Acetophenone	0.358	0.399	0.408	0.397	0.395	0.407	AVRG		0.39382879		4.691	15.000
2-Fluorophenol	0.873	0.970	0.963	0.916	0.858	0.961	AVRG		0.92361698		5.308	15.000
Phenol-D6	1.071	1.233	1.044	0.986	0.960	1.066	AVRG		1.05994828		9.025	15.000
Nitrobenzene-D5	0.294	0.339	0.378	0.331	0.326	0.380	AVRG		0.34138029		9.628	15.000
2-Fluorobiphenyl	1.124	1.161	1.359	1.080	1.090	1.179	AVRG		1.16543471		8.789	15.000
2,4,6-Tribromophenol	0.157	0.173	0.214	0.166	0.207	0.222	AVRG		0.18992634		14.556	15.000
Terphenyl-D14	0.701	0.693	0.845	0.689	0.729	0.797	AVRG		0.74230430		8.679	15.000

Average %RSD test result.

Calculate Average %RSD: 10.39395618
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: XD443 DFTPP Injection Date: 03/10/05

Instrument ID: GCMS-X DFTPP Injection Time: 1239

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	67.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	47.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 30.0% of mass 198	20.9
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	8.1 (91.2)2
442	40.0 - 100.0% of mass 198	42.1
443	17.0 - 23.0% of mass 442	8.8 (21.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD072X0310	X7425	03/10/05	1258
02	WG14977-BLANK	WG14977-1	X7426	03/10/05	1349
03	WG14977-LCS	WG14977-2	X7427	03/10/05	1432
04					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/10/05 Time: 1258

Lab File ID: X7425 Init. Calib. Date(s): 02/23/05 02/23/05

Init. Calib. Times: 1251 1650

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF72.000 or AMOUNT	CCAL RRF72.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Benzaldehyde	0.1080000	8.64e-003	8.64e-003	0.01	-92.00	100.00	AVRG	<-
Phenol	1.1150000	1.0569000	1.0569000	0.01	-5.21	20.00	AVRG	
Bis(2-Chloroethyl)ether	0.9250000	0.8524900	0.8524900	0.01	-7.84	100.00	AVRG	
2-Chlorophenol	1.0230000	0.9596200	0.9596200	0.01	-6.20	100.00	AVRG	
2,2'-Oxybis(1-Chloropropane)	2.6930000	2.3133000	2.3133000	0.01	-14.10	100.00	AVRG	
2-Methylphenol	0.8020000	0.7272800	0.7272800	0.01	-9.32	100.00	AVRG	
Hexachloroethane	0.4800000	0.4539300	0.4539300	0.01	-5.43	100.00	AVRG	
N-Nitroso-di-n-propylamine	0.8040000	0.6857700	0.6857700	0.05	-14.70	100.00	AVRG	
4-Methylphenol	0.8320000	0.7481500	0.7481500	0.01	-10.08	100.00	AVRG	
Nitrobenzene	0.3360000	0.3413600	0.3413600	0.01	1.60	100.00	AVRG	
Isophorone	0.5830000	0.5744300	0.5744300	0.01	-1.47	100.00	AVRG	
2-Nitrophenol	0.1810000	0.1822100	0.1822100	0.01	0.67	20.00	AVRG	
Caprolactam	7.8e-002	6.07e-002	6.07e-002	0.01	-22.18	100.00	AVRG	
Bis(2-Chloroethoxy)methane	0.4030000	0.3616900	0.3616900	0.01	-10.25	100.00	AVRG	
2,4-Dichlorophenol	0.2430000	0.2387100	0.2387100	0.01	-1.76	20.00	AVRG	
1,1'-Biphenyl	1.1750000	1.1857000	1.1857000	0.01	0.91	100.00	AVRG	
4-Chloroaniline	0.3230000	0.2971500	0.2971500	0.01	-8.00	100.00	AVRG	
Hexachlorobutadiene	0.1910000	0.1758600	0.1758600	0.01	-7.93	20.00	AVRG	
4-Chloro-3-Methylphenol	0.2290000	0.1853500	0.1853500	0.01	-19.06	20.00	AVRG	
Hexachlorocyclopentadiene	0.1960000	0.2670500	0.2670500	0.05	36.25	100.00	AVRG	
2,4,6-Trichlorophenol	0.3390000	0.3191500	0.3191500	0.01	-5.86	20.00	AVRG	
2,4,5-Trichlorophenol	0.3400000	0.3265600	0.3265600	0.01	-3.95	100.00	AVRG	
2-Chloronaphthalene	1.4810000	1.4204000	1.4204000	0.01	-4.09	100.00	AVRG	
2,4-Dimethylphenol	0.2720000	0.2606800	0.2606800	0.01	-4.16	100.00	AVRG	
2-Nitroaniline	0.3460000	0.3129900	0.3129900	0.01	-9.54	100.00	AVRG	
Dimethyl Phthalate	1.1030000	1.0508000	1.0508000	0.01	-4.73	100.00	AVRG	
2,6-Dinitrotoluene	0.2710000	0.2473700	0.2473700	0.01	-8.72	100.00	AVRG	
3-Nitroaniline	0.2750000	0.2308200	0.2308200	0.01	-16.06	100.00	AVRG	
2,4-Dinitrophenol	64.567000	72.000000	0.1019100	0.05	-10.32	100.00	2RDR	

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/10/05 Time: 1258

Lab File ID: X7425 Init. Calib. Date(s): 02/23/05 02/23/05

Init. Calib. Times: 1251 1650

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF72.000 or AMOUNT	CCAL RRF72.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	1.3650000	1.2452000	1.2452000	0.01	-8.78	100.00	AVRG	
4-Nitrophenol	0.1320000	0.1013400	0.1013400	0.05	-23.23	100.00	AVRG	
2,4-Dinitrotoluene	61.560000	72.000000	0.3026900	0.01	-14.50	100.00	LINR	
Atrazine	0.1140000	0.1318400	0.1318400	0.01	15.65	100.00	AVRG	
Diethylphthalate	1.0860000	0.9691300	0.9691300	0.01	-10.76	100.00	AVRG	
4-Chlorophenyl-phenylether	0.5040000	0.4529900	0.4529900	0.01	-10.12	100.00	AVRG	
4-Nitroaniline	53.932000	72.000000	0.2090400	0.01	-25.09	100.00	LINR	
4,6-Dinitro-2-Methylphenol	62.757000	72.000000	0.1100500	0.01	-12.84	100.00	LINR	
N-Nitrosodiphenylamine	0.5480000	0.5445600	0.5445600	0.01	-0.63	20.00	AVRG	
4-Bromophenyl-phenylether	0.1960000	0.1885600	0.1885600	0.01	-3.80	100.00	AVRG	
Hexachlorobenzene	0.2540000	0.2116600	0.2116600	0.01	-16.67	100.00	AVRG	
Pentachlorophenol	64.456000	72.000000	7.54e-002	0.01	-10.48	20.00	2RDR	
Carbazole	0.8830000	0.7682600	0.7682600	0.01	-12.99	100.00	AVRG	
Di-n-butylphthalate	1.2380000	1.1414000	1.1414000	0.01	-7.80	100.00	AVRG	
Butylbenzylphthalate	0.5600000	0.5608100	0.5608100	0.01	0.14	100.00	AVRG	
3,3'-Dichlorobenzidine	0.3280000	0.2517600	0.2517600	0.01	-23.24	100.00	AVRG	
bis(2-Ethylhexyl)phthalate	0.7890000	0.7687200	0.7687200	0.01	-2.57	100.00	AVRG	
Di-n-octylphthalate	1.7930000	2.4369000	2.4369000	0.01	35.91	20.00	AVRG	<-
Acetophenone	0.3940000	0.4008100	0.4008100	0.01	1.73	100.00	AVRG	
2-Fluorophenol	0.9240000	0.9387700	0.9387700	0.01	1.60	100.00	AVRG	
Phenol-D6	1.0600000	0.9511800	0.9511800	0.01	-10.27	100.00	AVRG	
Nitrobenzene-D5	0.3410000	0.3597300	0.3597300	0.01	5.49	100.00	AVRG	
2-Fluorobiphenyl	1.1660000	1.2737000	1.2737000	0.01	9.24	100.00	AVRG	
2,4,6-Tribromophenol	0.1900000	0.1411400	0.1411400	0.01	-25.72	100.00	AVRG	
Terphenyl-D14	0.7420000	0.8375400	0.8375400	0.01	12.88	100.00	AVRG	

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/09/05
Analysis Date: 10-MAR-2005 13:49
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG14977-1
Client ID: WG14977-Blank
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/09/05
Analysis Date: 10-MAR-2005 13:49
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG14977-1
Client ID: WG14977-Blank
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	U	74	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-86-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		85%				
13127-88-3	Phenol-D6		88%				
4165-60-0	Nitrobenzene-D5		81%				
321-60-8	2-Fluorobiphenyl		95%				
118-79-6	2,4,6-Tribromophenol		61%				
1718-51-0	Terphenyl-D14		J115%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/09/05
Analysis Date: 03/10/05
Report Date: 03/30/2005
Matrix: SOIL

Lab ID: WG14977-2
Client ID: WG14977-LCS
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Phenol	3333	NA	3180	95	48-106
Bis(2-Chloroethyl)ether	1667	NA	1710	103	42-106
2-Chlorophenol	3333	NA	3150	94	47-106
2,2'-Oxybis(1-Chloropropane)	1667	NA	1450	87	47-100
2-Methylphenol	3333	NA	2910	87	47-106
Hexachloroethane	1667	NA	1510	91	30-101
N-Nitroso-di-n-propylamine	1667	NA	1370	82	48-100
4-Methylphenol	3333	NA	2870	86	47-114
Nitrobenzene	1667	NA	1640	98	47-100
Isophorone	1667	NA	1480	89	46- 94
2-Nitrophenol	3333	NA	3140	94	41-113
Bis(2-Chloroethoxy)methane	1667	NA	1460	88	48- 98
2,4-Dichlorophenol	3333	NA	3140	94	49-106
4-Chloroaniline	1667	NA	294	18	0-100
Hexachlorobutadiene	1667	NA	1550	93	30-110
4-Chloro-3-Methylphenol	3333	NA	3130	94	51-115
Hexachlorocyclopentadiene	1667	NA	1480	89	10-108
2,4,6-Trichlorophenol	3333	NA	3090	93	52-116
2,4,5-Trichlorophenol	3333	NA	3260	98	50-116
2-Chloronaphthalene	1667	NA	1080	65	49-138
2,4-Dimethylphenol	3333	NA	3000	90	54-113
2-Nitroaniline	1667	NA	1530	92	50-123
Dimethyl Phthalate	1667	NA	1720	103	54-112
2,6-Dinitrotoluene	1667	NA	1600	96	44-121
3-Nitroaniline	1667	NA	618	37	0-256
2,4-Dinitrophenol	3333	NA	1170	35	0-123
Dibenzofuran	1667	NA	1570	94	51-108
4-Nitrophenol	3333	NA	2010	60	23-137
2,4-Dinitrotoluene	1667	NA	1610	97	42-121
Diethylphthalate	1667	NA	1720	103	49-114
4-Chlorophenyl-phenylether	1667	NA	1590	95	52-111
4-Nitroaniline	1667	NA	1230	74	0-193
4,6-Dinitro-2-Methylphenol	3333	NA	2680	80	19-137
N-Nitrosodiphenylamine	3333	NA	1420	* 43	56-140
4-Bromophenyl-phenylether	1667	NA	1820	109	48-122
Hexachlorobenzene	1667	NA	1480	89	42-122
Pentachlorophenol	3333	NA	2530	76	31-133
Carbazole	1667	NA	1620	97	37-170
Di-n-butylphthalate	1667	NA	1710	103	49-127
Butylbenzylphthalate	1667	NA	2070	124	50-130
3,3'-Dichlorobenzidine	1667	NA	714	43	0-197
bis(2-Ethylhexyl)phthalate	1667	NA	1980	119	45-129
Di-n-octylphthalate	1667	NA	2950	* 177	38-155

FORM III SV-2
X7427.D

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: XD448 DFTPP Injection Date: 03/17/05

Instrument ID: GCMS-X DFTPP Injection Time: 0926

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	59.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Less than 100.0% of mass 198	58.3	
70	Less than 2.0% of mass 69	0.3	(0.4)1
127	40.0 - 60.0% of mass 198	44.1	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.5	
275	10.0 - 30.0% of mass 198	22.2	
365	1.0 - 100.0% of mass 198	2.3	
441	0.0 - 100.0% of mass 443	11.2	(93.4)2
442	40.0 - 100.0% of mass 198	64.4	
443	17.0 - 23.0% of mass 442	12.0	(18.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD072X0317	X7495	03/17/05	0951
02	PEN43SB1202MS	WG14977-3	X7509	03/17/05	1957
03	PEN43SB1202MSD	WG14977-4	X7510	03/17/05	2040
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/17/05 Time: 0951

Lab File ID: X7495 Init. Calib. Date(s): 02/23/05 02/23/05

Init. Calib. Times: 1251 1650

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF72.000 or AMOUNT	CCAL RRF72.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzaldehyde	0.1080000	1.43e-002	1.43e-002	0.01	-86.76	100.00	AVRG
Phenol	1.1150000	1.1360000	1.1360000	0.01	1.88	20.00	AVRG
Bis(2-Chloroethyl)ether	0.9250000	0.8921600	0.8921600	0.01	-3.55	100.00	AVRG
2-Chlorophenol	1.0230000	0.9802600	0.9802600	0.01	-4.18	100.00	AVRG
2,2'-Oxybis(1-Chloropropane)	2.6930000	2.6414000	2.6414000	0.01	-1.92	100.00	AVRG
2-Methylphenol	0.8020000	0.7190700	0.7190700	0.01	-10.34	100.00	AVRG
Hexachloroethane	0.4800000	0.4512700	0.4512700	0.01	-5.98	100.00	AVRG
N-Nitroso-di-n-propylamine	0.8040000	0.7526200	0.7526200	0.05	-6.39	100.00	AVRG
4-Methylphenol	0.8320000	0.8003100	0.8003100	0.01	-3.81	100.00	AVRG
Nitrobenzene	0.3360000	0.3459300	0.3459300	0.01	2.96	100.00	AVRG
Isophorone	0.5830000	0.5732300	0.5732300	0.01	-1.68	100.00	AVRG
2-Nitrophenol	0.1810000	0.1778200	0.1778200	0.01	-1.76	20.00	AVRG
Caprolactam	7.8e-002	6.69e-002	6.69e-002	0.01	-14.23	100.00	AVRG
Bis(2-Chloroethoxy)methane	0.4030000	0.3618000	0.3618000	0.01	-10.22	100.00	AVRG
2,4-Dichlorophenol	0.2430000	0.2278000	0.2278000	0.01	-6.26	20.00	AVRG
1,1'-Biphenyl	1.1750000	1.1138000	1.1138000	0.01	-5.21	100.00	AVRG
4-Chloroaniline	0.3230000	0.2895400	0.2895400	0.01	-10.36	100.00	AVRG
Hexachlorobutadiene	0.1910000	0.1805500	0.1805500	0.01	-5.47	20.00	AVRG
4-Chloro-3-Methylphenol	0.2290000	0.2061700	0.2061700	0.01	-9.97	20.00	AVRG
Hexachlorocyclopentadiene	0.1960000	0.2460300	0.2460300	0.05	25.53	100.00	AVRG
2,4,6-Trichlorophenol	0.3390000	0.3183200	0.3183200	0.01	-6.10	20.00	AVRG
2,4,5-Trichlorophenol	0.3400000	0.3223200	0.3223200	0.01	-5.20	100.00	AVRG
2-Chloronaphthalene	1.4810000	1.3568000	1.3568000	0.01	-8.39	100.00	AVRG
2,4-Dimethyphenol	0.2800000	0.2704600	0.2704600	0.01	-3.41	100.00	AVRG
2-Nitroaniline	0.3460000	0.3434800	0.3434800	0.01	-0.73	100.00	AVRG
Dimethyl Phthalate	1.1030000	1.0206000	1.0206000	0.01	-7.47	100.00	AVRG
2,6-Dinitrotoluene	0.2710000	0.2523000	0.2523000	0.01	-6.90	100.00	AVRG
3-Nitroaniline	0.2750000	0.2348100	0.2348100	0.01	-14.61	100.00	AVRG
2,4-Dinitrophenol	57.956000	72.000000	8.93e-002	0.05	-19.51	100.00	2RDR

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/17/05 Time: 0951

Lab File ID: X7495 Init. Calib. Date(s): 02/23/05 02/23/05

Init. Calib. Times: 1251 1650

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF72.000 or AMOUNT	CCAL RRF72.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	1.3650000	1.2424000	1.2424000	0.01	-8.98	100.00	AVRG	
4-Nitrophenol	0.1320000	0.1090900	0.1090900	0.05	-17.36	100.00	AVRG	
2,4-Dinitrotoluene	0.3420000	0.3110900	0.3110900	0.01	-9.04	100.00	AVRG	
Atrazine	0.1140000	0.1419200	0.1419200	0.01	24.49	100.00	AVRG	
Diethylphthalate	1.0860000	0.9709600	0.9709600	0.01	-10.59	100.00	AVRG	
4-Chlorophenyl-phenylether	0.5040000	0.4453700	0.4453700	0.01	-11.63	100.00	AVRG	
4-Nitroaniline	0.2680000	0.2295800	0.2295800	0.01	-14.34	100.00	AVRG	
4,6-Dinitro-2-Methylphenol	53.695000	72.000000	9.28e-002	0.01	-25.42	100.00	LINR	
N-Nitrosodiphenylamine	0.5420000	0.5224700	0.5224700	0.01	-3.60	20.00	AVRG	
4-Bromophenyl-phenylether	0.1960000	0.1950300	0.1950300	0.01	-0.49	100.00	AVRG	
Hexachlorobenzene	0.2540000	0.2475300	0.2475300	0.01	-2.55	100.00	AVRG	
Pentachlorophenol	80.786000	72.000000	9.88e-002	0.01	12.20	20.00	2RDR	
Carbazole	0.8830000	0.7807000	0.7807000	0.01	-11.59	100.00	AVRG	
Di-n-butylphthalate	1.2380000	1.1167000	1.1167000	0.01	-9.80	100.00	AVRG	
Butylbenzylphthalate	0.5600000	0.5346200	0.5346200	0.01	-4.53	100.00	AVRG	
3,3'-Dichlorobenzidine	0.3280000	0.2625100	0.2625100	0.01	-19.97	100.00	AVRG	
bis(2-Ethylhexyl)phthalate	0.7890000	0.7689000	0.7689000	0.01	-2.55	100.00	AVRG	
Di-n-octylphthalate	1.7930000	2.3790000	2.3790000	0.01	32.68	20.00	AVRG	<-
Acetophenone	0.3940000	0.3771900	0.3771900	0.01	-4.27	100.00	AVRG	
2-Fluorophenol	0.9240000	0.9292500	0.9292500	0.01	0.57	100.00	AVRG	
Phenol-D6	1.0600000	1.0172000	1.0172000	0.01	-4.04	100.00	AVRG	
Nitrobenzene-D5	0.3410000	0.3581700	0.3581700	0.01	5.04	100.00	AVRG	
2-Fluorobiphenyl	1.1660000	1.2102000	1.2102000	0.01	3.79	100.00	AVRG	
2,4,6-Tribromophenol	0.1900000	0.1920800	0.1920800	0.01	1.09	100.00	AVRG	
Terphenyl-D14	0.7420000	0.7503000	0.7503000	0.01	1.12	100.00	AVRG	

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 03/17/05
Report Date: 04/01/2005
Matrix: SOIL

Lab ID: WG14977-3 & WG14977-4
Client ID: PEN43SB1202MS & PEN43SB1202MSD
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

COMPOUND	MS SPIKE	MSD SPIKE	SAMPLE CONC.	MS CONC.	MSD CONC.	MS %REC.	MSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Phenol	3579	3579	0.00	3080	3200	86	89	4	50	30-118
Bis(2-Chloroethyl)ether	1790	1790	0.00	1670	1660	93	93	0.6	50	60-140
2-Chlorophenol	3579	3579	0.00	2870	2920	80	82	2	50	30-115
2,2'-Oxybis(1-Chloropropane)	1790	1790	0.00	1480	1530	83	85	3	50	60-140
2-Methylphenol	3579	3579	0.00	2860	2870	80	80	0.3	50	60-140
Hexachloroethane	1790	1790	0.00	1210	1240	68	69	2	50	60-140
N-Nitroso-di-n-propylamine	1790	1790	0.00	1360	1410	76	79	4	50	29-117
4-Methylphenol	3579	3579	0.00	2880	3010	80	84	4	50	60-140
Nitrobenzene	1790	1790	0.00	1480	1580	83	88	6	50	60-140
Isophorone	1790	1790	0.00	1380	1460	77	82	6	50	60-140
2-Nitrophenol	3579	3579	0.00	2840	2810	79	78	1	50	60-140
Bis(2-Chloroethoxy)methane	1790	1790	0.00	1360	1450	76	81	6	50	60-140
2,4-Dichlorophenol	3579	3579	0.00	2950	2940	82	82	0.3	50	60-140
4-Chloroaniline	1790	1790	0.00	466	481	* 26	* 27	3	50	60-140
Hexachlorobutadiene	1790	1790	0.00	1340	1290	75	72	4	50	60-140
4-Chloro-3-Methylphenol	3579	3579	0.00	3140	3160	88	88	0.6	50	24-136
Hexachlorocyclopentadiene	1790	1790	0.00	1190	1300	66	73	9	50	60-140
2,4,6-Trichlorophenol	3579	3579	0.00	3110	3380	87	94	8	50	60-140
2,4,5-Trichlorophenol	3579	3579	0.00	3350	3480	94	97	4	50	60-140
2-Chloronaphthalene	1790	1790	0.00	1000	1130	* 56	63	12	50	60-140
2,4-Dimethylphenol	3579	3579	0.00	2870	3020	80	84	5	50	60-140
2-Nitroaniline	1790	1790	0.00	1680	1850	94	103	10	50	60-140
Dimethyl Phthalate	1790	1790	0.00	1670	1780	93	99	6	50	60-140
2,6-Dinitrotoluene	1790	1790	0.00	1490	1670	83	93	11	50	60-140
3-Nitroaniline	1790	1790	0.00	794	716	* 44	* 40	10	50	60-140
2,4-Dinitrophenol	3579	3579	0.00	1450	1340	* 40	* 37	8	50	60-140
Dibenzofuran	1790	1790	0.00	1540	1640	86	92	6	50	60-140
4-Nitrophenol	3579	3579	0.00	2350	2510	66	70	6	50	0-157
2,4-Dinitrotoluene	1790	1790	0.00	1610	1670	90	93	4	50	15-133
Diethylphthalate	1790	1790	0.00	1650	1740	92	97	5	50	60-140
4-Chlorophenyl-phenylether	1790	1790	0.00	1620	1700	90	95	5	50	60-140
4-Nitroaniline	1790	1790	0.00	1350	1470	75	82	8	50	60-140
4,6-Dinitro-2-Methylphenol	3579	3579	0.00	2310	2080	64	* 58	10	50	60-140
N-Nitrosodiphenylamine	1790	1790	0.00	1340	1370	75	76	2	50	60-140
4-Bromophenyl-phenylether	1790	1790	0.00	1920	1890	107	106	2	50	60-140
Hexachlorobenzene	1790	1790	0.00	1780	1730	99	97	3	50	60-140
Pentachlorophenol	3579	3579	0.00	3090	2800	86	78	10	50	0-145
Carbazole	1790	1790	0.00	1660	1670	93	93	0.6	50	60-140
Di-n-butylphthalate	1790	1790	0.00	1740	1730	97	97	0.6	50	60-140
Butylbenzylphthalate	1790	1790	0.00	1910	1960	107	110	2	50	60-140
3,3'-Dichlorobenzidine	1790	1790	0.00	784	885	* 44	* 49	12	50	60-140
bis(2-Ethylhexyl)phthalate	1790	1790	0.00	1980	1940	111	108	2	50	60-140
Di-n-octylphthalate	1790	1790	0.00	2750	2550	* 154	142	8	50	60-140

 FORM III SV-2 X7509.D & X7510.D

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: UD934 DFTPP Injection Date: 03/15/05

Instrument ID: GCMS-U DFTPP Injection Time: 0928

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.5
68	Less than 2.0% of mass 69	0.9 (1.7)1
69	Less than 100.0% of mass 198	53.8
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	59.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.5
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	15.7 (83.6)2
442	40.0 - 100.0% of mass 198	97.7
443	17.0 - 23.0% of mass 442	18.8 (19.2)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U0315	U0407	03/15/05	1043
02		SSTD200U0315	U0408	03/15/05	1126
03		SSTD150U0315	U0409	03/15/05	1209
04		SSTD100U0315	U0410	03/15/05	1252
05		SSTD025U0315	U0411	03/15/05	1335
06		SSTD010U0315	U0412	03/15/05	1418
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-U Calibration Date(s): 03/15/05 03/15/05

Column: RTX-5SILMS ID: 0.25 (mm) Calibration Time(s): 1043 1418

LAB FILE ID: RF10: U0412 RF25: U0411 RF50: U0407
RF100: U0410 RF150: U0409 RF200: U0408

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.016	0.012	0.021	0.035	0.046	0.039	AVRG		2.821e-002		49.127	15.000	<
Phenol	1.328	1.448	1.498	1.364	1.192	1.062	AVRG		1.31526333		12.417	15.000	
Bis(2-Chloroethyl)ether	163780	390110	873000	1417000	1946700	2468000	2ORDR	6.448e-002	0.57189386	0.15721970	0.99887	0.99000	
2-Chlorophenol	152580	436100	944240	1545600	2001900	2403000	2ORDR	0.13976859	0.26000632	0.23529073	0.99258	0.99000	
2,2'-Oxybis(1-Chloropropa	1.397	1.416	1.394	1.236	1.094	0.978	AVRG		1.25261778		14.650	15.000	
2-Methylphenol	118840	372140	946840	1453600	1895100	2501400	2ORDR	8.909e-002	0.51810815	0.16801099	0.99738	0.99000	
Hexachloroethane	0.487	0.509	0.497	0.442	0.402	0.362	AVRG		0.45002425		13.039	15.000	
N-Nitroso-di-n-propylamin	0.762	0.808	0.800	0.742	0.713	0.672	AVRG		0.74974133		6.926	15.000	
4-Methylphenol	0.978	1.171	1.302	1.189	1.098	1.046	AVRG		1.13086324		10.168	15.000	
Nitrobenzene	158820	447310	998680	1403000	1990600	2622200	2ORDR	-1.25e-002	2.67515793	1.19555275	0.99794	0.99000	
Isophorone	0.489	0.555	0.562	0.523	0.481	0.473	AVRG		0.51407390		7.536	15.000	
2-Nitrophenol	0.130	0.166	0.175	0.169	0.155	0.145	AVRG		0.15664884		10.729	15.000	
2,4-Dimethylphenol	0.241	0.293	0.316	0.296	0.275	0.267	AVRG		0.28160583		9.309	15.000	
Caprolactam	0.085	0.104	0.103	0.114	0.106	0.105	AVRG		0.10296826		9.230	15.000	
Bis(2-Chloroethoxy)methan	0.359	0.375	0.376	0.340	0.294	0.274	AVRG		0.33629702		12.748	15.000	
2,4-Dichlorophenol	0.199	0.240	0.256	0.251	0.233	0.220	AVRG		0.23335706		9.012	15.000	
1,1'-Biphenyl	324120	911220	1712200	2468500	3109100	3714200	2ORDR	0.10204745	0.12709184	0.52529544	0.99788	0.99000	
4-Chloroaniline	0.336	0.390	0.396	0.371	0.322	0.304	AVRG		0.35342419		10.723	15.000	
Hexachlorobutadiene	0.115	0.120	0.118	0.107	0.093	0.085	AVRG		0.10626566		13.609	15.000	
4-Chloro-3-Methylphenol	0.199	0.264	0.266	0.252	0.240	0.241	AVRG		0.24364825		10.107	15.000	
Hexachlorocyclopentadiene	4122	57401	255140	459490	711300	962240	LINR	0.12367109	6.33781436		0.99511	0.99000	
2,4,6-Trichlorophenol	0.194	0.249	0.279	0.246	0.223	0.211	AVRG		0.23363669		13.011	15.000	
2,4,5-Trichlorophenol	0.185	0.258	0.304	0.249	0.260	0.258	AVRG		0.25240924		15.175	15.000	<
2-Chloronaphthalene	240270	679240	1349300	1994300	2551200	3088600	2ORDR	9.072e-002	0.35214948	0.68358168	0.99853	0.99000	
2-Nitroaniline	0.218	0.271	0.290	0.270	0.266	0.261	AVRG		0.26263191		9.104	15.000	
Dimethyl Phthalate	1.008	1.061	1.018	0.884	0.808	0.761	AVRG		0.92309428		13.398	15.000	
2,6-Dinitrotoluene	0.222	0.253	0.263	0.244	0.227	0.219	AVRG		0.23806726		7.564	15.000	
3-Nitroaniline	38339	145320	377380	687790	1116400	1479000	LINR	4.978e-002	4.19835609		0.99833	0.99000	
2,4-Dinitrophenol		17417	151320	302930	500750	735230	LINR	0.27403654	8.36191618		0.99178	0.99000	<
Dibenzofuran	341020	987270	2055600	3081800	4168900	5162900	2ORDR	5.233e-002	0.45555207	0.18865916	0.99939	0.99000	
4-Nitrophenol	1553	45726	94550	170690	319220	495070	2ORDR	6.641e-002	17.8519575	-13.302512	0.99640	0.99000	
2,4-Dinitrotoluene	0.228	0.304	0.331	0.312	0.301	0.298	AVRG		0.29551469		11.955	15.000	
Atrazine	0.154	0.173	0.176	0.158	0.155	0.144	AVRG		0.16007356		7.737	15.000	
Diethylphthalate	281200	808120	1634800	2518200	3389600	4217300	2ORDR	4.659e-002	0.58957300	0.27391400	0.99966	0.99000	
4-Chlorophenyl-phenylethe	120720	352980	742990	1153200	1455500	1695400	2ORDR	0.14483976	0.31525381	2.40416894	0.99305	0.99000	
4-Nitroaniline	30258	100100	353810	603440	1091900	1416500	2ORDR	0.11489108	4.42595124	-0.1097926	0.99377	0.99000	
4,6-Dinitro-2-Methylpheno	4062	51298	234130	392320	584420	688300	2ORDR	0.20625869	6.08818502	18.4675631	0.99346	0.99000	
N-Nitrosodiphenylamine	233390	691330	1422100	2080300	2726700	3323000	2ORDR	6.194e-002	0.72345661	1.19094004	0.99880	0.99000	
4-Bromophenyl-phenylether	66333	204340	432650	692010	929560	1153400	2ORDR	5.001e-002	3.45458046	7.66066343	0.99923	0.99000	
Hexachlorobenzene	77226	227800	463370	727090	985920	1194500	2ORDR	5.29e-002	2.86660042	7.79178229	0.99960	0.99000	
Pentachlorophenol		0.005	0.049	0.043	0.059	0.068	AVRG		4.467e-002		54.379	15.000	<
Carbazole	291850	895990	1967400	3058000	4156800	5204200	2ORDR	4.12e-002	0.82414593	0.35857227	0.99906	0.99000	
Di-n-butylphthalate	417460	1302200	2592200	3992400	5437700	6614400	2ORDR	4.529e-002	0.52523732	0.25375884	0.99972	0.99000	
Butylbenzylphthalate	0.475	0.591	0.605	0.582	0.530	0.521	AVRG		0.55057079		9.104	15.000	

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-U Calibration Date(s): 03/15/05 03/15/05

Column: RTX-5SILMS ID: 0.25 (mm) Calibration Time(s): 1043 1418

LAB FILE ID: RF10: U0412 RF25: U0411 RF50: U0407
RF100: U0410 RF150: U0409 RF200: U0408

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dichlorobenzidine	0.205	0.258	0.257	0.247	0.217	0.199	AVRG		0.23029394		11.533	15.000
bis(2-Ethylhexyl)phthalat	0.683	0.828	0.809	0.767	0.684	0.683	AVRG		0.74244910		9.089	15.000
Di-n-octylphthalate	1.302	1.810	1.875	1.768	1.627	1.842	AVRG		1.70422138		12.606	15.000
Acetophenone	1.455	1.563	1.568	1.450	1.297	1.216	AVRG		1.42479093		9.975	15.000
2-Fluorophenol	1.018	1.114	1.153	1.069	0.983	0.908	AVRG		1.04082767		8.624	15.000
Phenol-D6	181330	510470	1108700	1579600	2214400	3099900	2ORDR	-3.68e-002	0.69797404	6.158e-002	0.99614	0.99000
Nitrobenzene-D5	0.314	0.354	0.353	0.335	0.311	0.297	AVRG		0.32741171		7.287	15.000
2-Fluorobiphenyl	315300	901350	1792700	2699300	3567300	4519400	2ORDR	3.222e-002	0.54755519	0.24395457	0.99939	0.99000
2,4,6-Tribromophenol	21062	82644	212310	363950	520250	682840	LINR	-6.49e-002	9.08716178		0.99262	0.99000
Terphenyl-D14	236920	707140	1503000	2170000	2883400	3437000	2ORDR	1.894e-002	0.82554535	0.23958829	0.99677	0.99000

Average %RSD test result.

Calculate Average %RSD: 12.79421425
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: UD937 DFTPP Injection Date: 03/18/05

Instrument ID: GCMS-U DFTPP Injection Time: 0844

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	45.9
68	Less than 2.0% of mass 69	0.4 (0.8)1
69	Less than 100.0% of mass 198	52.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	59.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	21.8
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	13.9 (84.2)2
442	40.0 - 100.0% of mass 198	86.6
443	17.0 - 23.0% of mass 442	16.4 (19.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U0318	U0448	03/18/05	0906
02	WG15035-BLANK	WG15035-1	U0449	03/18/05	0951
03	WG15035-LCS	WG15035-2	U0450	03/18/05	1034
04	PEN43SB1701MS	WG15035-3	U0451	03/18/05	1116
05	PEN43SB1701MSD	WG15035-4	U0452	03/18/05	1200
06					
07					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-U Calibration Date: 03/18/05 Time: 0906

Lab File ID: U0448 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1043 1418

GC Column: RTX-5SILMS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Benzaldehyde	2.8e-002	7.91e-002	7.91e-002	0.01	182.50	100.00	AVRG	<-
Phenol	1.3150000	1.4216000	1.4216000	0.01	8.11	20.00	AVRG	
Bis(2-Chloroethyl)ether	42.671000	50.000000	1.0344000	0.01	-14.66	100.00	2RDR	
2-Chlorophenol	40.746000	50.000000	1.1661000	0.01	-18.51	100.00	2RDR	
2,2'-Oxybis(1-Chloropropane)	1.2520000	1.2992000	1.2992000	0.01	3.77	100.00	AVRG	
2-Methylphenol	42.052000	50.000000	1.0440000	0.01	-15.90	100.00	2RDR	
Hexachloroethane	0.4500000	0.4804100	0.4804100	0.01	6.76	100.00	AVRG	
N-Nitroso-di-n-propylamine	0.7500000	0.7458700	0.7458700	0.05	-0.55	100.00	AVRG	
4-Methylphenol	1.1310000	1.1503000	1.1503000	0.01	1.71	100.00	AVRG	
Nitrobenzene	50.535000	50.000000	0.3232000	0.01	1.07	100.00	2RDR	
Isophorone	0.5140000	0.5454300	0.5454300	0.01	6.11	100.00	AVRG	
2-Nitrophenol	0.1570000	0.1699800	0.1699800	0.01	8.27	20.00	AVRG	
2,4-Dimethylphenol	0.2810000	0.2947500	0.2947500	0.01	4.89	100.00	AVRG	
Caprolactam	0.1030000	9.58e-002	9.58e-002	0.01	-6.99	100.00	AVRG	
Bis(2-Chloroethoxy)methane	0.3360000	0.3715700	0.3715700	0.01	10.59	100.00	AVRG	
2,4-Dichlorophenol	0.2330000	0.2425000	0.2425000	0.01	4.08	20.00	AVRG	
1,1'-Biphenyl	50.394000	50.000000	1.0948000	0.01	0.79	100.00	2RDR	
4-Chloroaniline	0.3530000	0.3627700	0.3627700	0.01	2.77	100.00	AVRG	
Hexachlorobutadiene	0.1060000	0.1225400	0.1225400	0.01	15.60	20.00	AVRG	
4-Chloro-3-Methylphenol	0.2440000	0.2409300	0.2409300	0.01	-1.26	20.00	AVRG	
Hexachlorocyclopentadiene	53.040000	50.000000	0.1517700	0.05	6.08	100.00	LINR	
2,4,6-Trichlorophenol	0.2340000	0.2607400	0.2607400	0.01	11.43	20.00	AVRG	
2,4,5-Trichlorophenol	0.2520000	0.2747000	0.2747000	0.01	9.01	100.00	AVRG	
2-Chloronaphthalene	47.859000	50.000000	0.8320700	0.01	-4.28	100.00	2RDR	
2-Nitroaniline	0.2630000	0.2464900	0.2464900	0.01	-6.28	100.00	AVRG	
Dimethyl Phthalate	0.9230000	0.9748900	0.9748900	0.01	5.62	100.00	AVRG	
2,6-Dinitrotoluene	0.2380000	0.2400300	0.2400300	0.01	0.85	100.00	AVRG	
3-Nitroaniline	39.617000	50.000000	0.1792400	0.01	-20.77	100.00	LINR	
2,4-Dinitrophenol	36.484000	50.000000	6.1e-002	0.05	-27.03	100.00	LINR	

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-U Calibration Date: 03/18/05 Time: 0906

Lab File ID: U0448 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1043 1418

GC Column: RTX-5SILMS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	46.970000	50.000000	1.2110000	0.01	-6.06	100.00	2RDR	
4-Nitrophenol	38.569000	50.000000	4.19e-002	0.05	-22.86	100.00	2RDR	<-
2,4-Dinitrotoluene	0.2960000	0.2793500	0.2793500	0.01	-5.62	100.00	AVRG	
Atrazine	0.1600000	0.1740900	0.1740900	0.01	8.81	100.00	AVRG	
Diethylphthalate	45.245000	50.000000	0.9488000	0.01	-9.51	100.00	2RDR	
4-Chlorophenyl-phenylether	41.786000	50.000000	0.4397700	0.01	-16.43	100.00	2RDR	
4-Nitroaniline	35.904000	50.000000	0.1421000	0.01	-28.19	100.00	2RDR	
4,6-Dinitro-2-Methylphenol	41.911000	50.000000	8.39e-002	0.01	-16.18	100.00	2RDR	
N-Nitrosodiphenylamine	54.329000	50.000000	0.6263000	0.01	8.66	20.00	2RDR	
4-Bromophenyl-phenylether	52.241000	50.000000	0.1903900	0.01	4.48	100.00	2RDR	
Hexachlorobenzene	52.562000	50.000000	0.2067400	0.01	5.12	100.00	2RDR	
Pentachlorophenol	4.5e-002	4.01e-002	4.01e-002	0.01	-10.89	20.00	AVRG	
Carbazole	43.099000	50.000000	0.7222300	0.01	-13.80	100.00	2RDR	
Di-n-butylphthalate	53.697000	50.000000	1.1613000	0.01	7.39	100.00	2RDR	
Butylbenzylphthalate	0.5510000	0.6339200	0.6339200	0.01	15.05	100.00	AVRG	
3,3'-Dichlorobenzidine	0.2300000	0.1984500	0.1984500	0.01	-13.72	100.00	AVRG	
bis(2-Ethylhexyl)phthalate	0.7420000	0.8890400	0.8890400	0.01	19.82	100.00	AVRG	
Di-n-octylphthalate	1.7040000	1.8428000	1.8428000	0.01	8.14	20.00	AVRG	
Acetophenone	1.4250000	1.4691000	1.4691000	0.01	3.09	100.00	AVRG	
2-Fluorophenol	1.0410000	1.0839000	1.0839000	0.01	4.12	100.00	AVRG	
Phenol-D6	46.609000	50.000000	1.2149000	0.01	-6.78	100.00	2RDR	
Nitrobenzene-D5	0.3270000	0.3453400	0.3453400	0.01	5.61	100.00	AVRG	
2-Fluorobiphenyl	51.511000	50.000000	1.1270000	0.01	3.02	100.00	2RDR	
2,4,6-Tribromophenol	45.432000	50.000000	0.1057000	0.01	-9.14	100.00	LINR	
Terphenyl-D14	48.292000	50.000000	0.8742900	0.01	-3.42	100.00	2RDR	

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 18-MAR-2005 09:51
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15035-1
Client ID: WG15035-Blank
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 18-MAR-2005 09:51
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15035-1
Client ID: WG15035-Blank
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	U	74	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-96-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		95%				
13127-88-3	Phenol-D6		110%				
4165-60-0	Nitrobenzene-D5		88%				
321-60-8	2-Fluorobiphenyl		94%				
118-79-6	2,4,6-Tribromophenol		71%				
1718-51-0	Terphenyl-D14		97%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 03/18/05
Report Date: 03/29/2005
Matrix: SOIL

Lab ID: WG15035-2
Client ID: WG15035-LCS
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Phenol	3333	NA	2850	86	48-116
Bis(2-Chloroethyl)ether	1667	NA	1110	67	54-114
2-Chlorophenol	3333	NA	2810	84	60-118
2,2'-Oxybis(1-Chloropropane)	1667	NA	1520	91	49-122
2-Methylphenol	3333	NA	2650	80	53-121
Hexachloroethane	1667	NA	1420	85	40- 99
N-Nitroso-di-n-propylamine	1667	NA	1420	85	36-115
4-Methylphenol	3333	NA	2910	87	59-127
Nitrobenzene	1667	NA	1440	86	49-113
Isophorone	1667	NA	1530	92	46-112
2-Nitrophenol	3333	NA	2980	89	57-120
2,4-Dimethylphenol	3333	NA	2970	89	54-113
Bis(2-Chloroethoxy)methane	1667	NA	1660	100	50-117
2,4-Dichlorophenol	3333	NA	2990	90	59-116
4-Chloroaniline	1667	NA	122	* 7	20-120
Hexachlorobutadiene	1667	NA	1580	95	53-114
4-Chloro-3-Methylphenol	3333	NA	3380	101	62-126
Hexachlorocyclopentadiene	1667	NA	1150	69	28- 73
2,4,6-Trichlorophenol	3333	NA	3300	99	62-120
2,4,5-Trichlorophenol	3333	NA	3270	98	62-124
2-Chloronaphthalene	1667	NA	1490	89	42-160
2-Nitroaniline	1667	NA	1600	96	66-121
Dimethyl Phthalate	1667	NA	1690	101	56-133
2,6-Dinitrotoluene	1667	NA	1640	98	66-127
3-Nitroaniline	1667	NA	743	* 44	57-120
2,4-Dinitrophenol	3333	NA	906	27	3-118
Dibenzofuran	1667	NA	1460	88	66-119
4-Nitrophenol	3333	NA	2860	86	41-149
2,4-Dinitrotoluene	1667	NA	1640	98	60-125
Diethylphthalate	1667	NA	1540	92	57-135
4-Chlorophenyl-phenylether	1667	NA	1310	79	53-133
4-Nitroaniline	1667	NA	1510	91	62-125
4,6-Dinitro-2-Methylphenol	3333	NA	1890	57	46-125
N-Nitrosodiphenylamine	3333	NA	1230	* 37	70-131
4-Bromophenyl-phenylether	1667	NA	1670	100	67-138
Hexachlorobenzene	1667	NA	1650	99	63-131
Pentachlorophenol	3333	NA	3000	90	54-131
Carbazole	1667	NA	1680	101	78-133
Di-n-butylphthalate	1667	NA	1750	105	65-139
Butylbenzylphthalate	1667	NA	1860	112	44-155
3,3'-Dichlorobenzidine	1667	NA	944	57	38-137
bis(2-Ethylhexyl)phthalate	1667	NA	1900	114	45-154
Di-n-octylphthalate	1667	NA	1760	106	53-143

FORM III SV-2
U0450.D

KATAHDIN ANALYTICAL SERVICES
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 03/18/05
Report Date: 03/29/2005
Matrix: SOIL

Lab ID: WG15035-3 & WG15035-4
Client ID: PEN43SB1701MS & PEN43SB1701MSD
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

COMPOUND	MS SPIKE	MSD SPIKE	SAMPLE CONC.	MS CONC.	MSD CONC.	MS %REC.	MSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Phenol	3680	3680	0.00	3040	2990	83	81	2	50	30-118
Bis(2-Chloroethyl)ether	1840	1840	0.00	1040	680	* 56	* 37	42	50	60-140
2-Chlorophenol	3680	3680	0.00	2760	2390	75	65	14	50	30-115
2,2'-Oxybis(1-Chloropropane)	1840	1840	0.00	1370	753	74	* 41	* 58	50	60-140
2-Methylphenol	3680	3680	0.00	2960	2650	80	72	11	50	60-140
Hexachloroethane	1840	1840	0.00	908	190	* 49	* 10	* 130	50	60-140
N-Nitroso-di-n-propylamine	1840	1840	0.00	1420	1290	77	70	10	50	29-117
4-Methylphenol	3680	3680	0.00	3110	2800	84	76	10	50	60-140
Nitrobenzene	1840	1840	0.00	1380	1050	75	* 57	27	50	60-140
Isophorone	1840	1840	0.00	1610	1470	87	80	9	50	60-140
2-Nitrophenol	3680	3680	0.00	3160	2740	86	74	14	50	60-140
2,4-Dimethylphenol	3680	3680	0.00	3420	2800	93	76	20	50	60-140
Bis(2-Chloroethoxy)methane	1840	1840	0.00	1690	1520	92	83	10	50	60-140
2,4-Dichlorophenol	3680	3680	0.00	3450	3080	94	84	11	50	60-140
4-Chloroaniline	1840	1840	0.00	415	398	* 22	* 22	4	50	60-140
Hexachlorobutadiene	1840	1840	0.00	1340	673	73	* 36	* 68	50	60-140
4-Chloro-3-Methylphenol	3680	3680	0.00	3960	3480	108	94	13	50	24-136
Hexachlorocyclopentadiene	1840	1840	0.00	766	415	* 42	* 22	* 59	50	60-140
2,4,6-Trichlorophenol	3680	3680	0.00	3830	3230	104	88	17	50	60-140
2,4,5-Trichlorophenol	3680	3680	0.00	4070	3450	110	94	16	50	60-140
2-Chloronaphthalene	1840	1840	0.00	1580	1340	86	73	16	50	60-140
2-Nitroaniline	1840	1840	0.00	1810	1530	98	83	17	50	60-140
Dimethyl Phthalate	1840	1840	0.00	1930	1660	105	90	15	50	60-140
2,6-Dinitrotoluene	1840	1840	0.00	1870	1590	102	86	16	50	60-140
3-Nitroaniline	1840	1840	0.00	935	873	* 51	* 47	7	50	60-140
2,4-Dinitrophenol	3680	3680	0.00	2990	2040	81	* 55	38	50	60-140
Dibenzofuran	1840	1840	0.00	1660	1400	90	76	17	50	60-140
4-Nitrophenol	3680	3680	0.00	3680	3130	100	85	16	50	0-157
2,4-Dinitrotoluene	1840	1840	0.00	1850	1570	100	85	16	50	15-133
Diethylphthalate	1840	1840	0.00	1730	1480	94	80	16	50	60-140
4-Chlorophenyl-phenylether	1840	1840	0.00	1510	1290	82	70	16	50	60-140
4-Nitroaniline	1840	1840	0.00	1500	1260	82	68	17	50	60-140
4,6-Dinitro-2-Methylphenol	3680	3680	0.00	4510	2860	122	78	45	50	60-140
N-Nitrosodiphenylamine	1840	1840	0.00	1430	1220	78	66	16	50	60-140
4-Bromophenyl-phenylether	1840	1840	0.00	1960	1710	106	93	14	50	60-140
Hexachlorobenzene	1840	1840	0.00	1910	1600	104	87	18	50	60-140
Pentachlorophenol	3680	3680	0.00	3470	2070	94	56	50	50	0-145
Carbazole	1840	1840	0.00	1800	1510	98	82	18	50	60-140
Di-n-butylphthalate	1840	1840	0.00	2030	1700	110	92	18	50	60-140
Butylbenzylphthalate	1840	1840	0.00	2260	2000	123	109	12	50	60-140
3,3'-Dichlorobenzidine	1840	1840	0.00	704	727	* 38	* 40	3	50	60-140
bis(2-Ethylhexyl)phthalate	1840	1840	0.00	2170	1930	118	105	12	50	60-140
Di-n-octylphthalate	1840	1840	0.00	2590	2360	* 141	128	9	50	60-140

FORM III SV-2

U0451.D & U0452.D

FORM 2
WATER SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 2FP#	S2 PHL#	S3 NBZ#	S4 FBP#	S5 TBP#	S6 TPH#	S7 #	S8 #	TOT OUT
01	WG15045-BLANK	WG15045-1	68	45	70	83	112	90			0
02	WG15045-LCS	WG15045-2	67	43	78	83	127	92			0
03	WG15045-LCSD	WG15045-3	62	39	71	78	127	91			0
04	PEN43RB0304	WV0943-2	67	41	79	94	125	112			0
05											
06											
07											
08											
09											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											

		QC LIMITS
S1 (2FP)	= 2-Fluorophenol	(18-103)
S2 (PHL)	= Phenol-D6	(11-117)
S3 (NBZ)	= Nitrobenzene-D5	(48-109)
S4 (FBP)	= 2-Fluorobiphenyl	(37-112)
S5 (TBP)	= 2,4,6-Tribromophenol	(22-145)
S6 (TPH)	= Terphenyl-D14	(39-164)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM 2

SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 2FP#	S2 PHL#	S3 NBZ#	S4 FBP#	S5 TBP#	S6 TPH#	S7 #	S8 #	TOT OUT
01	WG14977-BLANK	WG14977-1	85	88	81	95	61	115J			1
02	WG14977-LCS	WG14977-2	93	90	89	91	81	119J			1
03	PEN43SB1202MS	WG14977-3	83	83	80	84	99	107			0
04	PEN43SB1202MSD	WG14977-4	81	85	80	92	93	104			0
05	WG15035-BLANK	WG15035-1	95	110	88	94	71	97			0
06	WG15035-LCS	WG15035-2	90	90	84	76	96	83			0
07	PEN43SB1701MS	WG15035-3	84	87	75	73	102J	98			1
08	PEN43SB1701MSD	WG15035-4	71	80	58	64	84	86			0
09	PEN43SB1101	WV0943-35	94	103	79	93	91	126J			1
10	PEN43SB1101D	WV0943-36	88	93	72	78	75	113J			1
11	PEN43SB1102	WV0943-37	75	81	62	70	81	118J			1
12	PEN43SB1201	WV0943-38	99	102	80	87	78	112J			1
13	PEN43SB1202	WV0943-39	95	98	80	92	86	122J			1
14	PEN43SB1301	WV0943-40	76	81	66	75	62	120J			1
15	PEN43SB1302	WV0943-41	84	91	70	76	62	113J			1
16	PEN43SB1501	WV0943-42	87	92	74	83	67	122J			1
17	WG15035-BLANK	WG15035-1RA	96	104	82	95	53	130J			1
18	PEN43SB1502	WV0943-43	90	95	74	79	87	98			0
19	PEN43SB1402	WV0943-45	77	85	56	70	73	90			0
20	PEN43SB1702	WV0943-49	91	102	75	80	83	94			0
21	PEN43SB1902	WV0943-69	86	94	123	131J	76	163J			2
22	PEN43SB1601	WV0943-46	85	91	69	74	79	94			0
23	PEN43SB1602	WV0943-47	81	90	67	77	94	91			0
24	PEN43SB1901	WV0943-68	88	98	75	82	103J	91			1
25	PEN43SB1802	WV0943-51	80	88	67	77	93	90			0
26	PEN43SB1801	WV0943-50	80	89	67	77	103J	89			1
27	PEN43SB1701	WV0943-48	74	84	68	85	88	108			0
28	PEN43SB1401	WV0943-44	69	82	55	74	135J	136J			2

		QC LIMITS
S1 (2FP)	= 2-Fluorophenol	(40-130)
S2 (PHL)	= Phenol-D6	(35-120)
S3 (NBZ)	= Nitrobenzene-D5	(35-125)
S4 (FBP)	= 2-Fluorobiphenyl	(34-107)
S5 (TBP)	= 2,4,6-Tribromophenol	(37- 99)
S6 (TPH)	= Terphenyl-D14	(75-111)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: XD446 DFTPP Injection Date: 03/15/05

Instrument ID: GCMS-X DFTPP Injection Time: 1435

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	60.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	41.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	22.0
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	4.8 (35.0)2
442	40.0 - 100.0% of mass 198	71.5
443	17.0 - 23.0% of mass 442	13.8 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0315	X7466	03/15/05	1455
02		SSTD200X0315	X7467	03/15/05	1545
03		SSTD150X0315	X7468	03/15/05	1628
04		SSTD100X0315	X7469	03/15/05	1710
05		SSTD025X0315	X7470	03/15/05	1753
06		SSTD010X0315	X7471	03/15/05	1835
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date(s): 03/15/05 03/15/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1455 1835

LAB FILE ID: RF10: X7471 RF25: X7470 RF50: X7466
RF100: X7469 RF150: X7468 RF200: X7467

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Benzaldehyde	0.023	0.018	0.030	0.049	0.077	0.055	AVRG		4.204e-002		53.339	15.000
Phenol	1.206	1.244	1.302	1.122	0.917	0.706	AVRG		1.08296486		21.060	15.000
Bis(2-Chloroethyl)ether	195060	467530	1035100	1455400	2193100	2741900	2ORDR	0.14973440	0.12576519	0.50013151	0.99207	0.99000
2-Chlorophenol	1.053	1.009	1.100	0.978	0.864	0.765	AVRG		0.96149802		12.994	15.000
2,2'-Oxybis(1-Chloropropa	2.980	2.913	3.120	2.997	2.714	2.539	AVRG		2.87734127		7.386	15.000
2-Methylphenol	0.732	0.738	0.850	0.751	0.699	0.654	AVRG		0.73743574		8.844	15.000
Hexachloroethane	0.504	0.504	0.542	0.489	0.435	0.391	AVRG		0.47761044		11.405	15.000
N-Nitroso-di-n-propylamin	0.848	0.822	0.886	0.807	0.744	0.691	AVRG		0.79955338		8.908	15.000
4-Methylphenol	0.687	0.810	0.909	0.836	0.753	0.717	AVRG		0.78525417		10.503	15.000
Nitrobenzene	0.350	0.349	0.364	0.347	0.307	0.295	AVRG		0.33555281		8.185	15.000
Isophorone	0.583	0.572	0.621	0.577	0.553	0.537	AVRG		0.57378620		4.991	15.000
2-Nitrophenol	0.149	0.174	0.181	0.167	0.167	0.156	AVRG		0.16581372		7.091	15.000
2,4-Dimethylphenol	0.234	0.252	0.286	0.269	0.260	0.222	AVRG		0.25387360		9.212	15.000
Caprolactam	0.053	0.066	0.070	0.069	0.058	0.060	AVRG		6.281e-002		10.818	15.000
Bis(2-Chloroethoxy)methan	0.369	0.370	0.392	0.358	0.331	0.309	AVRG		0.35468405		8.412	15.000
2,4-Dichlorophenol	0.223	0.232	0.263	0.230	0.233	0.207	AVRG		0.23129040		7.917	15.000
1,1'-Biphenyl	303980	793750	1745000	2602500	4488000	5566700	2ORDR	9.954e-002	0.35755052	0.23934715	0.99738	0.99000
4-Chloroaniline	0.268	0.323	0.330	0.317	0.324	0.292	AVRG		0.30887040		7.868	15.000
Hexachlorobutadiene	0.193	0.206	0.198	0.188	0.175	0.153	AVRG		0.18565853		10.276	15.000
4-Chloro-3-Methylphenol	0.186	0.203	0.216	0.217	0.207	0.188	AVRG		0.20267751		6.652	15.000
Hexachlorocyclopentadiene	27936	140060	428640	767580	1692300	2249600	LINR	0.10914853	3.10561830		0.99688	0.99000
2,4,6-Trichlorophenol	0.295	0.342	0.350	0.330	0.310	0.296	AVRG		0.32066683		7.272	15.000
2,4,5-Trichlorophenol	0.243	0.322	0.366	0.348	0.339	0.319	AVRG		0.32306234		13.206	15.000
2-Chloronaphthalene	0.938	0.987	0.988	0.896	0.817	0.754	AVRG		0.89671807		10.556	15.000
2-Nitroaniline	0.303	0.331	0.361	0.360	0.341	0.348	AVRG		0.34079174		6.344	15.000
Dimethyl Phthalate	1.082	1.138	1.138	1.003	0.955	0.899	AVRG		1.03590447		9.578	15.000
2,6-Dinitrotoluene	0.228	0.257	0.273	0.263	0.256	0.246	AVRG		0.25404788		6.055	15.000
3-Nitroaniline	0.184	0.235	0.246	0.238	0.220	0.230	AVRG		0.22536410		9.776	15.000
2,4-Dinitrophenol	5820	47762	152320	296710	781430	1132700	2ORDR	0.16948183	8.25114486	-2.7481004	0.99501	0.99000
Dibenzofuran	1.178	1.321	1.310	1.216	1.148	1.105	AVRG		1.21279322		7.214	15.000
4-Nitrophenol	23267	35709	129150	222460	539180	803010	LINR	0.19276240	9.04102107		0.99118	0.99000
2,4-Dinitrotoluene	0.243	0.316	0.330	0.334	0.333	0.316	AVRG		0.31187212		11.145	15.000
Atrazine	0.147	0.172	0.170	0.171	0.162	0.154	AVRG		0.16260903		6.483	15.000
Diethylphthalate	1.040	1.110	1.072	0.948	0.824	0.783	AVRG		0.96286630		14.024	15.000
4-Chlorophenyl-phenylethe	0.463	0.512	0.493	0.455	0.382	0.365	AVRG		0.44507940		13.265	15.000
4-Nitroaniline	37013	112890	343830	601740	1285700	1870800	LINR	0.11256233	3.87077072		0.99862	0.99000
4,6-Dinitro-2-Methylpheno	18268	76770	232950	468880	979480	1312200	LINR	8.384e-002	8.39263420		0.99634	0.99000
N-Nitrosodiphenylamine	176690	539760	1164000	1882000	3417300	4256600	2ORDR	9.93e-002	0.91798533	0.92247165	0.99761	0.99000
4-Bromophenyl-phenylether	0.182	0.213	0.220	0.202	0.187	0.184	AVRG		0.19815140		8.057	15.000
Hexachlorobenzene	0.237	0.270	0.254	0.252	0.235	0.227	AVRG		0.24598763		6.400	15.000
Pentachlorophenol	7995	70831	220660	403080	1005500	1485000	LINR	0.22179315	7.63202419		0.99352	0.99000
Carbazole	0.710	0.801	0.806	0.783	0.721	0.726	AVRG		0.75769108		5.742	15.000
Di-n-butylphthalate	0.951	1.120	1.175	1.170	1.047	1.008	AVRG		1.07842886		8.455	15.000
Butylbenzylphthalate	0.398	0.483	0.532	0.502	0.510	0.530	AVRG		0.49241492		10.096	15.000

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date(s): 03/15/05 03/15/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1455 1835

LAB FILE ID: RF10: X7471 RF25: X7470 RF50: X7466
RF100: X7469 RF150: X7468 RF200: X7467

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dichlorobenzidine	0.238	0.263	0.232	0.215	0.207	0.202	AVRG		0.22621530		10.129	15.000
bis(2-Ethylhexyl)phthalat	0.553	0.698	0.754	0.713	0.712	0.727	AVRG		0.69302415		10.270	15.000
Di-n-octylphthalate	277910	1090500	2274700	4810300	7852000	1.e+007	LINR	0.14430876	0.41857713		0.99702	0.99000
Acetophenone	1.197	1.267	1.349	1.224	1.162	1.086	AVRG		1.21427333		7.395	15.000
2-Fluorophenol	0.901	0.908	1.038	0.908	0.843	0.739	AVRG		0.88956540		10.993	15.000
Phenol-D6	0.990	1.043	1.197	1.054	0.941	0.857	AVRG		1.01370088		11.376	15.000
Nitrobenzene-D5	0.348	0.357	0.394	0.370	0.351	0.334	AVRG		0.35898591		5.874	15.000
2-Fluorobiphenyl	1.296	1.309	1.287	1.178	1.030	0.957	AVRG		1.17621578		12.820	15.000
2,4,6-Tribromophenol	0.151	0.213	0.202	0.208	0.223	0.221	AVRG		0.20299016		13.167	15.000
Terphenyl-D14	0.668	0.784	0.815	0.763	0.783	0.797	AVRG		0.76823603		6.786	15.000

Average %RSD test result.

Calculate Average %RSD: 10.80202770
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: XD447 DFTPP Injection Date: 03/16/05

Instrument ID: GCMS-X DFTPP Injection Time: 1030

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	48.6	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Less than 100.0% of mass 198	57.1	
70	Less than 2.0% of mass 69	0.2	(0.3)1
127	40.0 - 60.0% of mass 198	41.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0 - 30.0% of mass 198	21.7	
365	1.0 - 100.0% of mass 198	2.3	
441	0.0 - 100.0% of mass 443	13.2	(92.5)2
442	40.0 - 100.0% of mass 198	71.0	
443	17.0 - 23.0% of mass 442	14.2	(20.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0316	X7477	03/16/05	1053
02	WG15045-BLANK	WG15045-1	X7483	03/16/05	1510
03	WG15045-LCS	WG15045-2	X7484	03/16/05	1552
04	WG15045-LCSD	WG15045-3	X7485	03/16/05	1634
05	PEN43RB0304	WV0943-2	X7486	03/16/05	1718
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/16/05 Time: 1053

Lab File ID: X7477 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzaldehyde	4.2e-002	4.28e-002	4.28e-002	0.01	1.90	100.00	AVRG
Phenol	1.0830000	1.1978000	1.1978000	0.01	10.60	20.00	AVRG
Bis(2-Chloroethyl)ether	39.851000	50.000000	0.9450700	0.01	-20.30	100.00	2RDR
2-Chlorophenol	0.9620000	1.0524000	1.0524000	0.01	9.40	100.00	AVRG
2,2'-Oxybis(1-Chloropropane)	2.8770000	2.5365000	2.5365000	0.01	-11.84	100.00	AVRG
2-Methylphenol	0.7370000	0.7699600	0.7699600	0.01	4.47	100.00	AVRG
Hexachloroethane	0.4780000	0.4755300	0.4755300	0.01	-0.52	100.00	AVRG
N-Nitroso-di-n-propylamine	0.8000000	0.7856300	0.7856300	0.05	-1.80	100.00	AVRG
4-Methylphenol	0.7850000	0.7278800	0.7278800	0.01	-7.28	100.00	AVRG
Nitrobenzene	0.3350000	0.3317700	0.3317700	0.01	-0.96	100.00	AVRG
Isophorone	0.5740000	0.5795200	0.5795200	0.01	0.96	100.00	AVRG
2-Nitrophenol	0.1660000	0.1846300	0.1846300	0.01	11.22	20.00	AVRG
2,4-Dimethylphenol	0.2540000	0.2801500	0.2801500	0.01	10.30	100.00	AVRG
Caprolactam	6.3e-002	7.49e-002	7.49e-002	0.01	18.89	100.00	AVRG
Bis(2-Chloroethoxy)methane	0.3550000	0.3650400	0.3650400	0.01	2.83	100.00	AVRG
2,4-Dichlorophenol	0.2310000	0.2728200	0.2728200	0.01	18.10	20.00	AVRG
1,1'-Biphenyl	42.731000	50.000000	1.1193000	0.01	-14.54	100.00	2RDR
4-Chloroaniline	0.3090000	0.3433000	0.3433000	0.01	11.10	100.00	AVRG
Hexachlorobutadiene	0.1860000	0.2056400	0.2056400	0.01	10.56	20.00	AVRG
4-Chloro-3-Methylphenol	0.2030000	0.2205400	0.2205400	0.01	8.64	20.00	AVRG
Hexachlorocyclopentadiene	50.382000	50.000000	0.2963400	0.05	0.76	100.00	LINR
2,4,6-Trichlorophenol	0.3200000	0.3431800	0.3431800	0.01	7.24	20.00	AVRG
2,4,5-Trichlorophenol	0.3230000	0.3381200	0.3381200	0.01	4.68	100.00	AVRG
2-Chloronaphthalene	0.8970000	0.9566700	0.9566700	0.01	6.65	100.00	AVRG
2-Nitroaniline	0.3410000	0.3057500	0.3057500	0.01	-10.34	100.00	AVRG
Dimethyl Phthalate	1.0360000	1.1042000	1.1042000	0.01	6.58	100.00	AVRG
2,6-Dinitrotoluene	0.2540000	0.2581300	0.2581300	0.01	1.63	100.00	AVRG
3-Nitroaniline	0.2260000	0.2426000	0.2426000	0.01	7.34	100.00	AVRG
2,4-Dinitrophenol	49.750000	50.000000	0.1091100	0.05	-0.50	100.00	2RDR

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/16/05 Time: 1053

Lab File ID: X7477 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dibenzofuran	1.2130000	1.2694000	1.2694000	0.01	4.65	100.00	AVRG
4-Nitrophenol	38.446000	50.000000	6.8e-002	0.05	-23.11	100.00	LINR
2,4-Dinitrotoluene	0.3120000	0.3420100	0.3420100	0.01	9.62	100.00	AVRG
Atrazine	0.1630000	0.1694300	0.1694300	0.01	3.94	100.00	AVRG
Diethylphthalate	0.9630000	1.0541000	1.0541000	0.01	9.46	100.00	AVRG
4-Chlorophenyl-phenylether	0.4450000	0.5135400	0.5135400	0.01	15.40	100.00	AVRG
4-Nitroaniline	51.205000	50.000000	0.2413100	0.01	2.41	100.00	LINR
4,6-Dinitro-2-Methylphenol	48.556000	50.000000	0.1077200	0.01	-2.89	100.00	LINR
N-Nitrosodiphenylamine	42.995000	50.000000	0.5158900	0.01	-14.01	20.00	2RDR
4-Bromophenyl-phenylether	0.1980000	0.2164000	0.2164000	0.01	9.29	100.00	AVRG
Hexachlorobenzene	0.2460000	0.2644200	0.2644200	0.01	7.49	100.00	AVRG
Pentachlorophenol	42.674000	50.000000	8.86e-002	0.01	-14.65	20.00	LINR
Carbazole	0.7580000	0.7852000	0.7852000	0.01	3.59	100.00	AVRG
Di-n-butylphthalate	1.0780000	1.0893000	1.0893000	0.01	1.05	100.00	AVRG
Butylbenzylphthalate	0.4920000	0.4731700	0.4731700	0.01	-3.83	100.00	AVRG
3,3'-Dichlorobenzidine	0.2260000	0.2423700	0.2423700	0.01	7.24	100.00	AVRG
bis(2-Ethylhexyl)phthalate	0.6930000	0.6812500	0.6812500	0.01	-1.70	100.00	AVRG
Di-n-octylphthalate	40.576000	50.000000	1.6629000	0.01	-18.85	20.00	LINR
Acetophenone	1.2140000	1.2713000	1.2713000	0.01	4.72	100.00	AVRG
2-Fluorophenol	0.8900000	0.8909100	0.8909100	0.01	0.10	100.00	AVRG
Phenol-D6	1.0140000	1.0496000	1.0496000	0.01	3.51	100.00	AVRG
Nitrobenzene-D5	0.3590000	0.3426100	0.3426100	0.01	-4.56	100.00	AVRG
2-Fluorobiphenyl	1.1760000	1.2332000	1.2332000	0.01	4.86	100.00	AVRG
2,4,6-Tribromophenol	0.2030000	0.2192800	0.2192800	0.01	8.02	100.00	AVRG
Terphenyl-D14	0.7680000	0.7576600	0.7576600	0.01	-1.35	100.00	AVRG

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 16-MAR-2005 15:10
Report Date: 03/29/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15045-1
Client ID: WG15045-Blank
SDG: CTO355-2
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15045
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	5	1.0	10	10	5
108-95-2	Phenol	U	6	1.0	10	10	6
111-44-4	Bis(2-Chloroethyl)ether	U	3	1.0	10	10	3
95-57-8	2-Chlorophenol	U	5	1.0	10	10	5
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	2	1.0	10	10	2
95-48-7	2-Methylphenol	U	5	1.0	10	10	5
67-72-1	Hexachloroethane	U	2	1.0	10	10	2
621-64-7	N-Nitroso-di-n-propylamine	U	2	1.0	10	10	2
106-44-5	4-Methylphenol	U	5	1.0	10	10	5
98-95-3	Nitrobenzene	U	3	1.0	10	10	3
78-59-1	Isophorone	U	2	1.0	10	10	2
88-75-5	2-Nitrophenol	U	6	1.0	10	10	6
105-67-9	2,4-Dimethylphenol	U	8	1.0	10	10	8
105-60-2	Caprolactam	U	5	1.0	10	10	5
111-91-1	Bis(2-Chloroethoxy)methane	U	3	1.0	10	10	3
120-83-2	2,4-Dichlorophenol	U	6	1.0	10	10	6
92-52-4	1,1'-Biphenyl	U	5	1.0	10	10	5
106-47-8	4-Chloroaniline	U	4	1.0	10	10	4
87-68-3	Hexachlorobutadiene	U	4	1.0	10	10	4
59-50-7	4-Chloro-3-Methylphenol	U	6	1.0	10	10	6
77-47-4	Hexachlorocyclopentadiene	U	2	1.0	10	10	2
88-06-2	2,4,6-Trichlorophenol	U	8	1.0	10	10	8
95-95-4	2,4,5-Trichlorophenol	U	7	1.0	25	25	7
91-58-7	2-Chloronaphthalene	U	3	1.0	10	10	3
88-74-4	2-Nitroaniline	U	3	1.0	25	25	3
131-11-3	Dimethyl Phthalate	U	3	1.0	10	10	3
606-20-2	2,6-Dinitrotoluene	U	3	1.0	10	10	3
99-09-2	3-Nitroaniline	U	3	1.0	25	25	3
51-28-5	2,4-Dinitrophenol	U	5	1.0	25	25	5
132-64-9	Dibenzofuran	U	4	1.0	10	10	4
100-02-7	4-Nitrophenol	U	6	1.0	25	25	6
121-14-2	2,4-Dinitrotoluene	U	4	1.0	10	10	4
1912-24-9	Atrazine	U	5	1.0	10	10	5
84-66-2	Diethylphthalate	U	2	1.0	10	10	2
7005-72-3	4-Chlorophenyl-phenylether	U	3	1.0	10	10	3
100-01-6	4-Nitroaniline	U	5	1.0	25	25	5
534-52-1	4,6-Dinitro-2-Methylphenol	U	10	1.0	25	25	10
86-30-6	N-Nitrosodiphenylamine	U	8	1.0	10	10	8
101-55-3	4-Bromophenyl-phenylether	U	5	1.0	10	10	5
118-74-1	Hexachlorobenzene	U	4	1.0	10	10	4
87-86-5	Pentachlorophenol	U	9	1.0	25	25	9
86-74-8	Carbazole	U	4	1.0	10	10	4
84-74-2	Di-n-butylphthalate	I	5	1.0	10	10	2

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 16-MAR-2005 15:10
Report Date: 03/29/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15045-1
Client ID: WG15045-Blank
SDG: CTO355-2
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15045
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	3	1.0	10	10	3
91-94-1	3,3'-Dichlorobenzidine	U	4	1.0	10	10	4
117-81-7	bis(2-Ethylhexyl)phthalate	U	8	1.0	10	10	8
117-84-0	Di-n-octylphthalate	U	3	1.0	10	10	3
98-96-2	Acetophenone	U	5	1.0	10	10	5
367-12-4	2-Fluorophenol		68%				
13127-88-3	Phenol-D6		45%				
4165-60-0	Nitrobenzene-D5		70%				
321-60-8	2-Fluorobiphenyl		83%				
118-79-6	2,4,6-Tribromophenol		112%				
1718-51-0	Terphenyl-D14		90%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 03/16/05
Report Date: 03/29/2005
Matrix: WATER

Lab ID: WG15045-2 & WG15045-3
Client ID: WG15045-LCS & WG15045-LCSD
SDG: CTO355-2
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15045
Units: ug/L

COMPOUND	LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS CONC.	LCSD CONC.	LCS %REC.	LCSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Phenol	100	100	NA	46	42	46	42	8	30	0-140
Bis(2-Chloroethyl)ether	50	50	NA	37	32	75	64	15	30	51-125
2-Chlorophenol	100	100	NA	99	89	99	89	11	30	59-127
2,2'-Oxybis(1-Chloropropane)	50	50	NA	41	37	83	74	12	30	52-120
2-Methylphenol	100	100	NA	85	81	85	81	5	30	59-122
Hexachloroethane	50	50	NA	42	36	83	72	14	30	23- 98
N-Nitroso-di-n-propylamine	50	50	NA	39	36	79	71	10	30	55-109
4-Methylphenol	100	100	NA	78	72	78	72	7	30	46-139
Nitrobenzene	50	50	NA	44	40	88	80	8	30	66-114
Isophorone	50	50	NA	39	37	78	74	5	30	59-114
2-Nitrophenol	100	100	NA	100	94	100	94	7	30	18-162
2,4-Dimethylphenol	100	100	NA	97	88	97	88	10	30	73-109
Bis(2-Chloroethoxy)methane	50	50	NA	46	42	93	84	11	30	60-122
2,4-Dichlorophenol	100	100	NA	99	95	99	95	4	30	60-125
4-Chloroaniline	50	50	NA	24	32	49	63	25	30	21-142
Hexachlorobutadiene	50	50	NA	51	46	103	91	12	30	37-102
4-Chloro-3-Methylphenol	100	100	NA	95	94	95	94	0.1	30	74-120
Hexachlorocyclopentadiene	50	50	NA	32	29	65	57	12	30	6- 67
2,4,6-Trichlorophenol	100	100	NA	101	97	101	97	4	30	67-128
2,4,5-Trichlorophenol	100	100	NA	110	105	110	105	5	30	61-136
2-Chloronaphthalene	50	50	NA	49	45	98	90	8	30	53-153
2-Nitroaniline	50	50	NA	41	40	83	79	4	30	76-118
Dimethyl Phthalate	50	50	NA	44	44	88	89	0.7	30	38-131
2,6-Dinitrotoluene	50	50	NA	47	45	95	90	5	30	71-127
3-Nitroaniline	50	50	NA	26	29	51	59	13	30	12-178
2,4-Dinitrophenol	100	100	NA	88	87	88	87	0.6	30	53-130
Dibenzofuran	50	50	NA	50	48	100	96	4	30	73-120
4-Nitrophenol	100	100	NA	42	42	42	42	0.0	30	0-169
2,4-Dinitrotoluene	50	50	NA	51	49	102	99	3	30	68-120
Diethylphthalate	50	50	NA	49	48	99	96	2	30	70-120
4-Chlorophenyl-phenylether	50	50	NA	56	52	112	104	8	30	61-134
4-Nitroaniline	50	50	NA	46	44	91	89	3	30	32-127
4,6-Dinitro-2-Methylphenol	100	100	NA	97	101	97	101	4	30	61-148
N-Nitrosodiphenylamine	100	100	NA	29	30	* 29	* 30	4	30	31-177
4-Bromophenyl-phenylether	50	50	NA	54	53	108	105	3	30	65-149
Hexachlorobenzene	50	50	NA	56	55	112	110	2	30	57-154
Pentachlorophenol	100	100	NA	93	97	93	97	4	30	25-173
Carbazole	50	50	NA	49	50	97	100	2	30	36-170
Di-n-butylphthalate	50	50	NA	48	49	96	98	2	30	67-137
Butylbenzylphthalate	50	50	NA	44	45	89	90	2	30	60-130
3,3'-Dichlorobenzidine	50	50	NA	39	51	78	103	28	30	68-173
bis(2-Ethylhexyl)phthalate	50	50	NA	46	47	92	94	2	30	49-150
Di-n-octylphthalate	50	50	NA	42	44	85	88	3	30	58-147

 FORM III SV-1 X7484.D & X7485.D

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: XD449 DFTPP Injection Date: 03/18/05

Instrument ID: GCMS-X DFTPP Injection Time: 0855

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	49.7	
68	Less than 2.0% of mass 69	0.3	(0.6)1
69	Less than 100.0% of mass 198	55.0	
70	Less than 2.0% of mass 69	0.2	(0.3)1
127	40.0 - 60.0% of mass 198	40.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	7.3	
275	10.0 - 30.0% of mass 198	21.4	
365	1.0 - 100.0% of mass 198	2.2	
441	0.0 - 100.0% of mass 443	11.4	(90.2)2
442	40.0 - 100.0% of mass 198	66.9	
443	17.0 - 23.0% of mass 442	12.7	(19.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0318	X7512	03/18/05	1002
02	PEN43SB1101	WV0943-35	X7515	03/18/05	1213
03	PEN43SB1101AD	WV0943-36	X7516	03/18/05	1254
04	PEN43SB1102	WV0943-37	X7517	03/18/05	1337
05	PEN43SB1201	WV0943-38	X7518	03/18/05	1419
06	PEN43SB1202	WV0943-39	X7519	03/18/05	1502
07	PEN43SB1301	WV0943-40	X7520	03/18/05	1544
08	PEN43SB1302	WV0943-41	X7521	03/18/05	1627
09	PEN43SB1501	WV0943-42	X7522	03/18/05	1709
10	WG15035-BLANK	WG15035-1RA	X7523	03/18/05	1751
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/18/05 Time: 1002

Lab File ID: X7512 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzaldehyde	4.2e-002	7.66e-002	7.66e-002	0.01	82.38	100.00	AVRG
Phenol	1.0830000	1.1821000	1.1821000	0.01	9.15	20.00	AVRG
Bis(2-Chloroethyl)ether	39.093000	50.000000	0.9334100	0.01	-21.81	100.00	2RDR
2-Chlorophenol	0.9620000	1.0166000	1.0166000	0.01	5.68	100.00	AVRG
2,2'-Oxybis(1-Chloropropane)	2.8770000	2.7531000	2.7531000	0.01	-4.31	100.00	AVRG
2-Methylphenol	0.7370000	0.7526700	0.7526700	0.01	2.13	100.00	AVRG
Hexachloroethane	0.4780000	0.4738900	0.4738900	0.01	-0.86	100.00	AVRG
N-Nitroso-di-n-propylamine	0.8000000	0.8008000	0.8008000	0.05	0.10	100.00	AVRG
4-Methylphenol	0.7850000	0.7171900	0.7171900	0.01	-8.64	100.00	AVRG
Nitrobenzene	0.3350000	0.3476800	0.3476800	0.01	3.78	100.00	AVRG
Isophorone	0.5740000	0.5845200	0.5845200	0.01	1.83	100.00	AVRG
2-Nitrophenol	0.1660000	0.1757200	0.1757200	0.01	5.86	20.00	AVRG
2,4-Dimethylphenol	0.2540000	0.2716500	0.2716500	0.01	6.95	100.00	AVRG
Caprolactam	6.3e-002	6.79e-002	6.79e-002	0.01	7.78	100.00	AVRG
Bis(2-Chloroethoxy)methane	0.3550000	0.3723200	0.3723200	0.01	4.88	100.00	AVRG
2,4-Dichlorophenol	0.2310000	0.2238300	0.2238300	0.01	-3.10	20.00	AVRG
1,1'-Biphenyl	43.459000	50.000000	1.1334000	0.01	-13.08	100.00	2RDR
4-Chloroaniline	0.3090000	0.3113500	0.3113500	0.01	0.76	100.00	AVRG
Hexachlorobutadiene	0.1860000	0.1931100	0.1931100	0.01	3.82	20.00	AVRG
4-Chloro-3-Methylphenol	0.2030000	0.1882700	0.1882700	0.01	-7.26	20.00	AVRG
Hexachlorocyclopentadiene	41.610000	50.000000	0.2398500	0.05	-16.78	100.00	LINR
2,4,6-Trichlorophenol	0.3200000	0.3217900	0.3217900	0.01	0.56	20.00	AVRG
2,4,5-Trichlorophenol	0.3230000	0.3174100	0.3174100	0.01	-1.73	100.00	AVRG
2-Chloronaphthalene	0.8970000	0.9354800	0.9354800	0.01	4.29	100.00	AVRG
2-Nitroaniline	0.3410000	0.3330300	0.3330300	0.01	-2.34	100.00	AVRG
Dimethyl Phthalate	1.0360000	1.0757000	1.0757000	0.01	3.83	100.00	AVRG
2,6-Dinitrotoluene	0.2540000	0.2523900	0.2523900	0.01	-0.63	100.00	AVRG
3-Nitroaniline	0.2260000	0.2230100	0.2230100	0.01	-1.32	100.00	AVRG
2,4-Dinitrophenol	35.820000	50.000000	7.26e-002	0.05	-28.36	100.00	2RDR

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/18/05 Time: 1002

Lab File ID: X7512 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	1.2130000	1.2456000	1.2456000	0.01	2.69	100.00	AVRG	
4-Nitrophenol	43.337000	50.000000	7.88e-002	0.05	-13.33	100.00	LINR	
2,4-Dinitrotoluene	0.3120000	0.3049400	0.3049400	0.01	-2.26	100.00	AVRG	
Atrazine	0.1630000	0.1632800	0.1632800	0.01	0.17	100.00	AVRG	
Diethylphthalate	0.9630000	1.0306000	1.0306000	0.01	7.02	100.00	AVRG	
4-Chlorophenyl-phenylether	0.4450000	0.4704400	0.4704400	0.01	5.72	100.00	AVRG	
4-Nitroaniline	40.006000	50.000000	0.1834500	0.01	-19.99	100.00	LINR	
4,6-Dinitro-2-Methylphenol	42.378000	50.000000	9.3e-002	0.01	-15.24	100.00	LINR	
N-Nitrosodiphenylamine	43.721000	50.000000	0.5227500	0.01	-12.56	20.00	2RDR	
4-Bromophenyl-phenylether	0.1980000	0.2004600	0.2004600	0.01	1.24	100.00	AVRG	
Hexachlorobenzene	0.2460000	0.2398900	0.2398900	0.01	-2.48	100.00	AVRG	
Pentachlorophenol	38.843000	50.000000	7.85e-002	0.01	-22.31	20.00	LINR	<-
Carbazole	0.7580000	0.7539800	0.7539800	0.01	-0.53	100.00	AVRG	
Di-n-butylphthalate	1.0780000	1.1075000	1.1075000	0.01	2.74	100.00	AVRG	
Butylbenzylphthalate	0.4920000	0.5356800	0.5356800	0.01	8.88	100.00	AVRG	
3,3'-Dichlorobenzidine	0.2260000	0.2488300	0.2488300	0.01	10.10	100.00	AVRG	
bis(2-Ethylhexyl)phthalate	0.6930000	0.7722400	0.7722400	0.01	11.43	100.00	AVRG	
Di-n-octylphthalate	58.008000	50.000000	2.4959000	0.01	16.02	20.00	LINR	
Acetophenone	1.2140000	1.2368000	1.2368000	0.01	1.88	100.00	AVRG	
2-Fluorophenol	0.8900000	0.9011200	0.9011200	0.01	1.25	100.00	AVRG	
Phenol-D6	1.0140000	1.0240000	1.0240000	0.01	0.99	100.00	AVRG	
Nitrobenzene-D5	0.3590000	0.3541600	0.3541600	0.01	-1.35	100.00	AVRG	
2-Fluorobiphenyl	1.1760000	1.2241000	1.2241000	0.01	4.09	100.00	AVRG	
2,4,6-Tribromophenol	0.2030000	0.1734500	0.1734500	0.01	-14.56	100.00	AVRG	
Terphenyl-D14	0.7680000	0.8094000	0.8094000	0.01	5.39	100.00	AVRG	

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 18-MAR-2005 17:51
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15035-1RA
Client ID: WG15035-Blank
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 18-MAR-2005 17:51
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15035-1RA
Client ID: WG15035-Blank
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	U	74	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-96-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		96%				
13127-88-3	Phenol-D6		104%				
4165-60-0	Nitrobenzene-D5		82%				
321-60-8	2-Fluorobiphenyl		95%				
118-79-6	2,4,6-Tribromophenol		53%				
1718-51-0	Terphenyl-D14		J130%				

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: XD451 DFTPP Injection Date: 03/22/05

Instrument ID: GCMS-X DFTPP Injection Time: 0907

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.0
68	Less than 2.0% of mass 69	0.2 (0.3)1
69	Less than 100.0% of mass 198	67.2
70	Less than 2.0% of mass 69	0.2 (0.2)1
127	40.0 - 60.0% of mass 198	46.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	20.1
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	9.9 (79.2)2
442	40.0 - 100.0% of mass 198	63.9
443	17.0 - 23.0% of mass 442	12.5 (19.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0322	X7540	03/22/05	0926
02	PEN43SB1502	WV0943-43	X7551	03/22/05	1713
03	PEN43SB1402	WV0943-45	X7552	03/22/05	1755
04	PEN43SB1702	WV0943-49	X7553	03/22/05	1837
05	PEN43SB1902	WV0943-69	X7554	03/22/05	1918
06	PEN43SB1601	WV0943-46	X7555	03/22/05	2001
07					
08					
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13					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/22/05 Time: 0926

Lab File ID: X7540 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Benzaldehyde	4.2e-002	9.7e-002	9.7e-002	0.01	130.95	100.00	AVRG	<-
Phenol	1.0830000	1.2074000	1.2074000	0.01	11.49	20.00	AVRG	
Bis(2-Chloroethyl)ether	37.771000	50.000000	0.9127600	0.01	-24.46	100.00	2RDR	
2-Chlorophenol	0.9620000	0.9417900	0.9417900	0.01	-2.10	100.00	AVRG	
2,2'-Oxybis(1-Chloropropane)	2.8770000	2.6120000	2.6120000	0.01	-9.21	100.00	AVRG	
2-Methylphenol	0.7370000	0.7457200	0.7457200	0.01	1.18	100.00	AVRG	
Hexachloroethane	0.4780000	0.4662100	0.4662100	0.01	-2.47	100.00	AVRG	
N-Nitroso-di-n-propylamine	0.8000000	0.7948600	0.7948600	0.05	-0.64	100.00	AVRG	
4-Methylphenol	0.7850000	0.8310400	0.8310400	0.01	5.86	100.00	AVRG	
Nitrobenzene	0.3350000	0.3316900	0.3316900	0.01	-0.99	100.00	AVRG	
Isophorone	0.5740000	0.5648600	0.5648600	0.01	-1.59	100.00	AVRG	
2-Nitrophenol	0.1660000	0.1597500	0.1597500	0.01	-3.76	20.00	AVRG	
2,4-Dimethylphenol	0.2540000	0.2499000	0.2499000	0.01	-1.61	100.00	AVRG	
Caprolactam	6.3e-002	6.83e-002	6.83e-002	0.01	8.41	100.00	AVRG	
Bis(2-Chloroethoxy)methane	0.3550000	0.3593700	0.3593700	0.01	1.23	100.00	AVRG	
2,4-Dichlorophenol	0.2310000	0.2220600	0.2220600	0.01	-3.87	20.00	AVRG	
1,1'-Biphenyl	38.666000	50.000000	1.0382000	0.01	-22.67	100.00	2RDR	
4-Chloroaniline	0.3090000	0.2966000	0.2966000	0.01	-4.01	100.00	AVRG	
Hexachlorobutadiene	0.1860000	0.1523200	0.1523200	0.01	-18.11	20.00	AVRG	
4-Chloro-3-Methylphenol	0.2030000	0.2004400	0.2004400	0.01	-1.26	20.00	AVRG	
Hexachlorocyclopentadiene	45.670000	50.000000	0.2660000	0.05	-8.66	100.00	LINR	
2,4,6-Trichlorophenol	0.3200000	0.2905000	0.2905000	0.01	-9.22	20.00	AVRG	
2,4,5-Trichlorophenol	0.3230000	0.2905000	0.2905000	0.01	-10.06	100.00	AVRG	
2-Chloronaphthalene	0.8970000	0.8401000	0.8401000	0.01	-6.34	100.00	AVRG	
2-Nitroaniline	0.3410000	0.3172200	0.3172200	0.01	-6.97	100.00	AVRG	
Dimethyl Phthalate	1.0360000	0.9701400	0.9701400	0.01	-6.36	100.00	AVRG	
2,6-Dinitrotoluene	0.2540000	0.2372400	0.2372400	0.01	-6.60	100.00	AVRG	
3-Nitroaniline	0.2260000	0.2168700	0.2168700	0.01	-4.04	100.00	AVRG	
2,4-Dinitrophenol	43.919000	50.000000	9.37e-002	0.05	-12.16	100.00	2RDR	

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/22/05 Time: 0926

Lab File ID: X7540 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dibenzofuran	1.2130000	1.0887000	1.0887000	0.01	-10.25	100.00	AVRG
4-Nitrophenol	55.960000	50.000000	0.1067300	0.05	11.92	100.00	LINR
2,4-Dinitrotoluene	0.3120000	0.2873400	0.2873400	0.01	-7.90	100.00	AVRG
Atrazine	0.1630000	0.1480500	0.1480500	0.01	-9.17	100.00	AVRG
Diethylphthalate	0.9630000	0.9317300	0.9317300	0.01	-3.25	100.00	AVRG
4-Chlorophenyl-phenylether	0.4450000	0.3954300	0.3954300	0.01	-11.14	100.00	AVRG
4-Nitroaniline	45.427000	50.000000	0.2114500	0.01	-9.15	100.00	LINR
4,6-Dinitro-2-Methylphenol	47.580000	50.000000	0.1053900	0.01	-4.84	100.00	LINR
N-Nitrosodiphenylamine	42.202000	50.000000	0.5083300	0.01	-15.60	20.00	2RDR
4-Bromophenyl-phenylether	0.1980000	0.1757000	0.1757000	0.01	-11.26	100.00	AVRG
Hexachlorobenzene	0.2460000	0.1995500	0.1995500	0.01	-18.88	100.00	AVRG
Pentachlorophenol	44.034000	50.000000	9.21e-002	0.01	-11.93	20.00	LINR
Carbazole	0.7580000	0.7409000	0.7409000	0.01	-2.26	100.00	AVRG
Di-n-butylphthalate	1.0780000	1.0854000	1.0854000	0.01	0.69	100.00	AVRG
Butylbenzylphthalate	0.4920000	0.5364600	0.5364600	0.01	9.04	100.00	AVRG
3,3'-Dichlorobenzidine	0.2260000	0.2169400	0.2169400	0.01	-4.01	100.00	AVRG
bis(2-Ethylhexyl)phthalate	0.6930000	0.7526800	0.7526800	0.01	8.61	100.00	AVRG
Di-n-octylphthalate	42.684000	50.000000	1.7637000	0.01	-14.63	20.00	LINR
Acetophenone	1.2140000	1.2002000	1.2002000	0.01	-1.14	100.00	AVRG
2-Fluorophenol	0.8900000	0.8908800	0.8908800	0.01	0.10	100.00	AVRG
Phenol-D6	1.0140000	1.0115000	1.0115000	0.01	-0.25	100.00	AVRG
Nitrobenzene-D5	0.3590000	0.3452500	0.3452500	0.01	-3.83	100.00	AVRG
2-Fluorobiphenyl	1.1760000	1.1096000	1.1096000	0.01	-5.65	100.00	AVRG
2,4,6-Tribromophenol	0.2030000	0.1339500	0.1339500	0.01	-34.02	100.00	AVRG
Terphenyl-D14	0.7680000	0.6891700	0.6891700	0.01	-10.26	100.00	AVRG

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: XD452 DFTPP Injection Date: 03/23/05

Instrument ID: GCMS-X DFTPP Injection Time: 1041

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	62.3
70	Less than 2.0% of mass 69	0.5 (0.9)1
127	40.0 - 60.0% of mass 198	43.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.1
275	10.0 - 30.0% of mass 198	21.4
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	11.8 (94.8)2
442	40.0 - 100.0% of mass 198	66.7
443	17.0 - 23.0% of mass 442	12.4 (18.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0323	X7557	03/23/05	1142
02	PEN43SB1602	WV0943-47	X7565	03/23/05	1726
03	PEN43SB1901	WV0943-68	X7566	03/23/05	1809
04	PEN43SB1802	WV0943-51	X7567	03/23/05	1852
05	PEN43SB1801	WV0943-50	X7568	03/23/05	1935
06	PEN43SB1701	WV0943-48	X7569	03/23/05	2018
07					
08					
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18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/23/05 Time: 1142

Lab File ID: X7557 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Benzaldehyde	4.2e-002	0.1083400	0.1083400	0.01	157.95	100.00	AVRG	<-
Phenol	1.0830000	1.0353000	1.0353000	0.01	-4.40	20.00	AVRG	
Bis(2-Chloroethyl)ether	30.849000	50.000000	0.7968700	0.01	-38.30	100.00	2RDR	
2-Chlorophenol	0.9620000	0.9596900	0.9596900	0.01	-0.24	100.00	AVRG	
2,2'-Oxybis(1-Chloropropane)	2.8770000	2.5063000	2.5063000	0.01	-12.88	100.00	AVRG	
2-Methylphenol	0.7370000	0.7321200	0.7321200	0.01	-0.66	100.00	AVRG	
Hexachloroethane	0.4780000	0.4467400	0.4467400	0.01	-6.54	100.00	AVRG	
N-Nitroso-di-n-propylamine	0.8000000	0.7349200	0.7349200	0.05	-8.14	100.00	AVRG	
4-Methylphenol	0.7850000	0.7707200	0.7707200	0.01	-1.82	100.00	AVRG	
Nitrobenzene	0.3350000	0.3105400	0.3105400	0.01	-7.30	100.00	AVRG	
Isophorone	0.5740000	0.5248300	0.5248300	0.01	-8.57	100.00	AVRG	
2-Nitrophenol	0.1660000	0.1693400	0.1693400	0.01	2.01	20.00	AVRG	
2,4-Dimethylphenol	0.2540000	0.2341400	0.2341400	0.01	-7.82	100.00	AVRG	
Caprolactam	6.3e-002	7.14e-002	7.14e-002	0.01	13.33	100.00	AVRG	
Bis(2-Chloroethoxy)methane	0.3550000	0.3332100	0.3332100	0.01	-6.14	100.00	AVRG	
2,4-Dichlorophenol	0.2310000	0.2163600	0.2163600	0.01	-6.34	20.00	AVRG	
1,1'-Biphenyl	38.178000	50.000000	1.0282000	0.01	-23.64	100.00	2RDR	
4-Chloroaniline	0.3090000	0.3266900	0.3266900	0.01	5.72	100.00	AVRG	
Hexachlorobutadiene	0.1860000	0.1759900	0.1759900	0.01	-5.38	20.00	AVRG	
4-Chloro-3-Methylphenol	0.2030000	0.2161600	0.2161600	0.01	6.48	20.00	AVRG	
Hexachlorocyclopentadiene	45.900000	50.000000	0.2674700	0.05	-8.20	100.00	LINR	
2,4,6-Trichlorophenol	0.3200000	0.2870000	0.2870000	0.01	-10.31	20.00	AVRG	
2,4,5-Trichlorophenol	0.3230000	0.3630900	0.3630900	0.01	12.41	100.00	AVRG	
2-Chloronaphthalene	0.8970000	0.8766300	0.8766300	0.01	-2.27	100.00	AVRG	
2-Nitroaniline	0.3410000	0.3326600	0.3326600	0.01	-2.44	100.00	AVRG	
Dimethyl Phthalate	1.0360000	0.9840500	0.9840500	0.01	-5.01	100.00	AVRG	
2,6-Dinitrotoluene	0.2540000	0.2655100	0.2655100	0.01	4.53	100.00	AVRG	
3-Nitroaniline	0.2260000	0.2456800	0.2456800	0.01	8.71	100.00	AVRG	
2,4-Dinitrophenol	59.758000	50.000000	0.1361300	0.05	19.52	100.00	2RDR	

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date: 03/23/05 Time: 1142

Lab File ID: X7557 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	1.2130000	1.2295000	1.2295000	0.01	1.36	100.00	AVRG	
4-Nitrophenol	42.696000	50.000000	7.74e-002	0.05	-14.61	100.00	LINR	
2,4-Dinitrotoluene	0.3120000	0.3460600	0.3460600	0.01	10.92	100.00	AVRG	
Atrazine	0.1630000	0.1554700	0.1554700	0.01	-4.62	100.00	AVRG	
Diethylphthalate	0.9630000	0.9523700	0.9523700	0.01	-1.10	100.00	AVRG	
4-Chlorophenyl-phenylether	0.4450000	0.4251000	0.4251000	0.01	-4.47	100.00	AVRG	
4-Nitroaniline	58.165000	50.000000	0.2772700	0.01	16.33	100.00	LINR	
4,6-Dinitro-2-Methylphenol	52.706000	50.000000	0.1176100	0.01	5.41	100.00	LINR	
N-Nitrosodiphenylamine	38.227000	50.000000	0.4694700	0.01	-23.55	20.00	2RDR	<-
4-Bromophenyl-phenylether	0.1980000	0.1761200	0.1761200	0.01	-11.05	100.00	AVRG	
Hexachlorobenzene	0.2460000	0.2176700	0.2176700	0.01	-11.52	100.00	AVRG	
Pentachlorophenol	45.577000	50.000000	9.62e-002	0.01	-8.85	20.00	LINR	
Carbazole	0.7580000	0.7729600	0.7729600	0.01	1.97	100.00	AVRG	
Di-n-butylphthalate	1.0780000	1.0856000	1.0856000	0.01	0.70	100.00	AVRG	
Butylbenzylphthalate	0.4920000	0.5464100	0.5464100	0.01	11.06	100.00	AVRG	
3,3'-Dichlorobenzidine	0.2260000	0.1986400	0.1986400	0.01	-12.11	100.00	AVRG	
bis(2-Ethylhexyl)phthalate	0.6930000	0.7716800	0.7716800	0.01	11.35	100.00	AVRG	
Di-n-octylphthalate	51.107000	50.000000	2.1661000	0.01	2.21	20.00	LINR	
Acetophenone	1.2140000	1.1833000	1.1833000	0.01	-2.53	100.00	AVRG	
2-Fluorophenol	0.8900000	0.7949700	0.7949700	0.01	-10.68	100.00	AVRG	
Phenol-D6	1.0140000	0.9872200	0.9872200	0.01	-2.64	100.00	AVRG	
Nitrobenzene-D5	0.3590000	0.3228400	0.3228400	0.01	-10.07	100.00	AVRG	
2-Fluorobiphenyl	1.1760000	1.0621000	1.0621000	0.01	-9.68	100.00	AVRG	
2,4,6-Tribromophenol	0.2030000	0.1740600	0.1740600	0.01	-14.26	100.00	AVRG	
Terphenyl-D14	0.7680000	0.7804000	0.7804000	0.01	1.61	100.00	AVRG	

FORM VII PEST

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: XD454 DFTPP Injection Date: 03/25/05

Instrument ID: GCMS-X DFTPP Injection Time: 1117

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	67.3
70	Less than 2.0% of mass 69	0.3 (0.4)1
127	40.0 - 60.0% of mass 198	45.5
197	Less than 1.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	20.9
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	11.3 (79.3)2
442	40.0 - 100.0% of mass 198	73.5
443	17.0 - 23.0% of mass 442	14.2 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0325	X7589	03/25/05	1222
02	PEN43SB1401	WV0943-44	X7604	03/25/05	2301
03					
04					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/25/05 Time: 1222

Lab File ID: X7589 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzaldehyde	4.2e-002	3.34e-002	3.34e-002	0.01	-20.48	100.00	AVRG
Phenol	1.0830000	1.0867000	1.0867000	0.01	0.34	20.00	AVRG
Bis(2-Chloroethyl)ether	32.681000	50.000000	0.8289400	0.01	-34.64	100.00	2RDR
2-Chlorophenol	0.9620000	0.9124000	0.9124000	0.01	-5.16	100.00	AVRG
2,2'-Oxybis(1-Chloropropane)	2.8770000	2.4429000	2.4429000	0.01	-15.09	100.00	AVRG
2-Methylphenol	0.7370000	0.7185000	0.7185000	0.01	-2.51	100.00	AVRG
Hexachloroethane	0.4780000	0.4525700	0.4525700	0.01	-5.32	100.00	AVRG
N-Nitroso-di-n-propylamine	0.8000000	0.7368000	0.7368000	0.05	-7.90	100.00	AVRG
4-Methylphenol	0.7850000	0.7319500	0.7319500	0.01	-6.76	100.00	AVRG
Nitrobenzene	0.3350000	0.3324300	0.3324300	0.01	-0.77	100.00	AVRG
Isophorone	0.5740000	0.5299900	0.5299900	0.01	-7.67	100.00	AVRG
2-Nitrophenol	0.1660000	0.1602700	0.1602700	0.01	-3.45	20.00	AVRG
2,4-Dimethylphenol	0.2540000	0.2589800	0.2589800	0.01	1.96	100.00	AVRG
Caprolactam	6.3e-002	6.23e-002	6.23e-002	0.01	-1.11	100.00	AVRG
Bis(2-Chloroethoxy)methane	0.3550000	0.3379400	0.3379400	0.01	-4.80	100.00	AVRG
2,4-Dichlorophenol	0.2310000	0.2164800	0.2164800	0.01	-6.28	20.00	AVRG
1,1'-Biphenyl	40.695000	50.000000	1.0792000	0.01	-18.61	100.00	2RDR
4-Chloroaniline	0.3090000	0.2959500	0.2959500	0.01	-4.22	100.00	AVRG
Hexachlorobutadiene	0.1860000	0.1769300	0.1769300	0.01	-4.88	20.00	AVRG
4-Chloro-3-Methylphenol	0.2030000	0.2012100	0.2012100	0.01	-0.88	20.00	AVRG
Hexachlorocyclopentadiene	49.126000	50.000000	0.2882600	0.05	-1.75	100.00	LINR
2,4,6-Trichlorophenol	0.3200000	0.3053700	0.3053700	0.01	-4.57	20.00	AVRG
2,4,5-Trichlorophenol	0.3230000	0.3298400	0.3298400	0.01	2.12	100.00	AVRG
2-Chloronaphthalene	0.8970000	0.8763900	0.8763900	0.01	-2.30	100.00	AVRG
2-Nitroaniline	0.3410000	0.3114000	0.3114000	0.01	-8.68	100.00	AVRG
Dimethyl Phthalate	1.0360000	1.0011000	1.0011000	0.01	-3.37	100.00	AVRG
2,6-Dinitrotoluene	0.2540000	0.2443100	0.2443100	0.01	-3.82	100.00	AVRG
3-Nitroaniline	0.2260000	0.2159600	0.2159600	0.01	-4.44	100.00	AVRG
2,4-Dinitrophenol	48.409000	50.000000	0.1055400	0.05	-3.18	100.00	2RDR

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/25/05 Time: 1222

Lab File ID: X7589 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	1.2130000	1.1935000	1.1935000	0.01	-1.61	100.00	AVRG	
4-Nitrophenol	36.150000	50.000000	6.29e-002	0.05	-27.70	100.00	LINR	
2,4-Dinitrotoluene	0.3120000	0.3002300	0.3002300	0.01	-3.77	100.00	AVRG	
Atrazine	0.1630000	0.1552400	0.1552400	0.01	-4.76	100.00	AVRG	
Diethylphthalate	0.9630000	0.9318400	0.9318400	0.01	-3.24	100.00	AVRG	
4-Chlorophenyl-phenylether	0.4450000	0.4459400	0.4459400	0.01	0.21	100.00	AVRG	
4-Nitroaniline	45.010000	50.000000	0.2093000	0.01	-9.98	100.00	LINR	
4,6-Dinitro-2-Methylphenol	47.502000	50.000000	0.1052100	0.01	-5.00	100.00	LINR	
N-Nitrosodiphenylamine	39.942000	50.000000	0.4864400	0.01	-20.12	20.00	2RDR	<-
4-Bromophenyl-phenylether	0.1980000	0.2004700	0.2004700	0.01	1.25	100.00	AVRG	
Hexachlorobenzene	0.2460000	0.2516600	0.2516600	0.01	2.30	100.00	AVRG	
Pentachlorophenol	42.420000	50.000000	8.79e-002	0.01	-15.16	20.00	LINR	
Carbazole	0.7580000	0.7162800	0.7162800	0.01	-5.50	100.00	AVRG	
Di-n-butylphthalate	1.0780000	1.0234000	1.0234000	0.01	-5.06	100.00	AVRG	
Butylbenzylphthalate	0.4920000	0.4613400	0.4613400	0.01	-6.23	100.00	AVRG	
3,3'-Dichlorobenzidine	0.2260000	0.2128600	0.2128600	0.01	-5.81	100.00	AVRG	
bis(2-Ethylhexyl)phthalate	0.6930000	0.6588400	0.6588400	0.01	-4.93	100.00	AVRG	
Di-n-octylphthalate	41.947000	50.000000	1.7285000	0.01	-16.11	20.00	LINR	
Acetophenone	1.2140000	1.1543000	1.1543000	0.01	-4.92	100.00	AVRG	
2-Fluorophenol	0.8900000	0.8116200	0.8116200	0.01	-8.81	100.00	AVRG	
Phenol-D6	1.0140000	0.9579700	0.9579700	0.01	-5.52	100.00	AVRG	
Nitrobenzene-D5	0.3590000	0.3337800	0.3337800	0.01	-7.02	100.00	AVRG	
2-Fluorobiphenyl	1.1760000	1.1434000	1.1434000	0.01	-2.77	100.00	AVRG	
2,4,6-Tribromophenol	0.2030000	0.2047300	0.2047300	0.01	0.85	100.00	AVRG	
Terphenyl-D14	0.7680000	0.7683600	0.7683600	0.01	0.05	100.00	AVRG	

FORM VII PEST

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE _____ OF _____

CLIENT NAS Pensacola CTO-355	JOB NUMBER Job-4821 SDG-3552
SUBJECT Sample Calculation	
BASED ON	DRAWING NUMBER
BY Bernard F Spada III / CHECKED BY	APPROVED BY / DATE 4/27/05

Sample PEN43SB1902 Di-n-butylphthalate = 1000 ug/kg

$$\text{Di-n-butylphthalate} = \frac{(1902330)(40\ \text{ng/ul})(1000\ \text{ul})}{(2435101)(1.078)(30\text{g})(0.948)} = 1019\ \text{ng/g} = \text{ug/kg}$$

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 19:18
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.8

Lab ID: WV0943-69
Client ID: PEN43SB1902
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate		1000	1.0	330	350	89

Data File: \\Target_server\GG\chem\gcms-x.i\X032205.b\X7554.D
Report Date: 28-Mar-2005 15:44

Katahdin Analytical Services

Data file : \\Target_server\GG\chem\gcms-x.i\X032205.b\X7554.D
Lab Smp Id: WV0943-69 Client Smp ID: PEN43SB1902
Inj Date : 22-MAR-2005 19:18 MS Autotune Date: 28-OCT-2004 15:15
Operator : JCG Inst ID: gcms-x.i
Smp Info : WV0943-69
Misc Info : SW846 8270C
Comment :
Method : \\Target_server\GG\chem\gcms-x.i\X032205.b\X8270C33.m
Meth Date : 25-Mar-2005 16:06 gcms-x.i Quant Type: ISTD
Cal Date : 15-MAR-2005 18:35 Cal File: X7471.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tetrat355001.sub
Target Version: 4.12
Processing Host: TARGET06

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariab

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Volume of final extract (L)
Ws	0.03000	Weight of sample extracted (Kg)
Vi	1.000	Volume injected (uL)
M	5.145	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kg)
$ 4 2-Fluorophenol	112	5.330	5.254	(0.702)	1898006	86.0602	3020
$ 6 Phenol-D6	99	7.196	7.188	(0.948)	2364560	94.0856	3310
* 11 1,4-Dichlorobenzene-D4	152	7.594	7.587	(1.000)	991693	40.0000	
$ 23 Nitrobenzene-D5	82	8.800	8.802	(0.863)	1839033	61.7099	2170
* 32 Naphthalene-D8	136	10.200	10.211	(1.000)	3320607	40.0000	
$ 43 2-Fluorobiphenyl	172	12.610	12.612	(0.904)	3072814	65.5522	2300(R)
* 51 Acenaphthene-D10	164	13.952	13.964	(1.000)	1594123	40.0000	
$ 65 2,4,6-Tribromophenol	330	15.682	15.684	(1.124)	618496	76.4540	2690
* 70 Phenanthrene-D10	188	17.072	17.084	(1.000)	2435101	40.0000	
74 Di-n-butylphthalate	149	18.705	18.707	(1.096)	1902330	28.9759	1020
$ 78 Terphenyl-D14	244	20.650	20.642	(0.907)	2938078	81.4068	2860(R)
* 82 Chrysene-D12	240	22.779	22.780	(1.000)	1879179	40.0000	
* 90 Perylene-D12	264	25.627	25.629	(1.000)	1104980	40.0000	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-X Calibration Date(s): 03/15/05 03/15/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1455 1835

LAB FILE ID: RF10: X7471 RF25: X7470 RF50: X7466
RF100: X7469 RF150: X7468 RF200: X7467

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.023	0.018	0.030	0.049	0.077	0.055	AVRG		4.204e-002		53.339	15.000	<
Phenol	1.206	1.244	1.302	1.122	0.917	0.706	AVRG		1.08296486		21.060	15.000	<
Bis(2-Chloroethyl)ether	195060	467530	1035100	1455400	2193100	2741900	2ORDR	0.14973440	0.12576519	0.50013151	0.99207	0.99000	
2-Chlorophenol	1.053	1.009	1.100	0.978	0.864	0.765	AVRG		0.96149802		12.994	15.000	
2,2'-Oxybis(1-Chloropropa	2.980	2.913	3.120	2.997	2.714	2.539	AVRG		2.87734127		7.386	15.000	
2-Methylphenol	0.732	0.738	0.850	0.751	0.699	0.654	AVRG		0.73743574		8.844	15.000	
Hexachloroethane	0.504	0.504	0.542	0.489	0.435	0.391	AVRG		0.47761044		11.405	15.000	
N-Nitroso-di-n-propylamin	0.848	0.822	0.886	0.807	0.744	0.691	AVRG		0.79955338		8.908	15.000	
4-Methylphenol	0.687	0.810	0.909	0.836	0.753	0.717	AVRG		0.78525417		10.503	15.000	
Nitrobenzene	0.350	0.349	0.364	0.347	0.307	0.295	AVRG		0.33555281		8.185	15.000	
Isophorone	0.583	0.572	0.621	0.577	0.553	0.537	AVRG		0.57378620		4.991	15.000	
2-Nitrophenol	0.149	0.174	0.181	0.167	0.167	0.156	AVRG		0.16581372		7.091	15.000	
2,4-Dimethylphenol	0.234	0.252	0.286	0.269	0.260	0.222	AVRG		0.25387360		9.212	15.000	
Caprolactam	0.053	0.066	0.070	0.069	0.058	0.060	AVRG		6.281e-002		10.818	15.000	
Bis(2-Chloroethoxy)methan	0.369	0.370	0.392	0.358	0.331	0.309	AVRG		0.35468405		8.412	15.000	
2,4-Dichlorophenol	0.223	0.232	0.263	0.230	0.233	0.207	AVRG		0.23129040		7.917	15.000	
1,1'-Biphenyl	303980	793750	1745000	2602500	4488000	5566700	2ORDR	9.954e-002	0.35755052	0.23934715	0.99738	0.99000	
4-Chloroaniline	0.268	0.323	0.330	0.317	0.324	0.292	AVRG		0.30887040		7.868	15.000	
Hexachlorobutadiene	0.193	0.206	0.198	0.188	0.175	0.153	AVRG		0.18565853		10.276	15.000	
4-Chloro-3-Methylphenol	0.186	0.203	0.216	0.217	0.207	0.188	AVRG		0.20267751		6.652	15.000	
Hexachlorocyclopentadiene	27936	140060	428640	767580	1692300	2249600	LINR	0.10914853	3.10561830		0.99688	0.99000	
2,4,6-Trichlorophenol	0.295	0.342	0.350	0.330	0.310	0.296	AVRG		0.32066683		7.272	15.000	
2,4,5-Trichlorophenol	0.243	0.322	0.366	0.348	0.339	0.319	AVRG		0.32306234		13.206	15.000	
2-Chloronaphthalene	0.938	0.987	0.988	0.896	0.817	0.754	AVRG		0.89671807		10.556	15.000	
2-Nitroaniline	0.303	0.331	0.361	0.360	0.341	0.348	AVRG		0.34079174		6.344	15.000	
Dimethyl Phthalate	1.082	1.138	1.138	1.003	0.955	0.899	AVRG		1.03590447		9.578	15.000	
2,6-Dinitrotoluene	0.228	0.257	0.273	0.263	0.256	0.246	AVRG		0.25404788		6.055	15.000	
3-Nitroaniline	0.184	0.235	0.246	0.238	0.220	0.230	AVRG		0.22536410		9.776	15.000	
2,4-Dinitrophenol	5820	47762	152320	296710	781430	1132700	2ORDR	0.16948183	8.25114486	-2.7481004	0.99501	0.99000	
Dibenzofuran	1.178	1.321	1.310	1.216	1.148	1.105	AVRG		1.21279322		7.214	15.000	
4-Nitrophenol	23267	35709	129150	222460	539180	803010	LINR	0.19276240	9.04102107		0.99118	0.99000	
2,4-Dinitrotoluene	0.243	0.316	0.330	0.334	0.333	0.316	AVRG		0.31187212		11.145	15.000	
Atrazine	0.147	0.172	0.170	0.171	0.162	0.154	AVRG		0.16260903		6.483	15.000	
Diethylphthalate	1.040	1.110	1.072	0.948	0.824	0.783	AVRG		0.96286630		14.024	15.000	
4-Chlorophenyl-phenylethe	0.463	0.512	0.493	0.455	0.382	0.365	AVRG		0.44507940		13.265	15.000	
4-Nitroaniline	37013	112890	343830	601740	1285700	1870800	LINR	0.11256233	3.87077072		0.99862	0.99000	
4,6-Dinitro-2-Methylpheno	18268	76770	232950	468880	979480	1312200	LINR	8.384e-002	8.39263420		0.99634	0.99000	
N-Nitrosodiphenylamine	176690	539760	1164000	1882000	3417300	4256600	2ORDR	9.93e-002	0.91798533	0.92247165	0.99761	0.99000	
4-Bromophenyl-phenylether	0.182	0.213	0.220	0.202	0.187	0.184	AVRG		0.19815140		8.057	15.000	
Hexachlorobenzene	0.237	0.270	0.254	0.252	0.235	0.227	AVRG		0.24598763		6.400	15.000	
Pentachlorophenol	7995	70831	220660	403080	1005500	1485000	LINR	0.22179315	7.63202419		0.99352	0.99000	
Carbazole	0.710	0.801	0.806	0.783	0.721	0.726	AVRG		0.75769108		5.742	15.000	
Di-n-butylphthalate	0.951	1.120	1.175	1.170	1.047	1.008	AVRG		1.07842886		8.455	15.000	
Butylbenzylphthalate	0.398	0.483	0.532	0.502	0.510	0.530	AVRG		0.49241492		10.096	15.000	

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: KD510 DFTPP Injection Date: 03/17/05

Instrument ID: GCMS-K DFTPP Injection Time: 1542

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	55.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.6
70	Less than 2.0% of mass 69	0.5 (0.8)1
127	40.0 - 60.0% of mass 198	47.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.4
275	10.0 - 30.0% of mass 198	23.1
365	1.0 - 100.0% of mass 198	3.0
441	0.0 - 100.0% of mass 443	8.1 (75.7)2
442	40.0 - 100.0% of mass 198	50.0
443	17.0 - 23.0% of mass 442	10.6 (21.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0317	K8844	03/17/05	1607
02		SSTD5.00K0317	K8845	03/17/05	1656
03		SSTD3.00K0317	K8846	03/17/05	1747
04		SSTD2.00K0317	K8847	03/17/05	1836
05		SSTD0.50K0317	K8848	03/17/05	1927
06		SSTD0.20K0317	K8849	03/17/05	2015
07	WG15046-BLANK	WG15046-1	K8850	03/17/05	2105
08	WG15046-LCS	WG15046-2	K8851	03/17/05	2155
09	WG15046-LCSD	WG15046-3	K8852	03/17/05	2246
10	PEN43RB0304	WV0943-1	K8853	03/17/05	2335
11	WG14979-BLANK	WG14979-1	K8855	03/18/05	0115
12	WG14979-LCS	WG14979-2	K8856	03/18/05	0206
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-K Calibration Date(s): 03/17/05 03/17/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1607 2015

LAB FILE ID: RF0.2: K8849 RF0.5: K8848 RF1: K8844
RF2: K8847 RF3: K8846 RF5: K8845

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF3	RF5	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2	
Naphthalene	0.784	0.746	0.672	0.662	0.654	0.594	AVRG		0.68545520	9.999	15.000	
2-Methylnaphthalene	0.439	0.431	0.412	0.369	0.466	0.351	AVRG		0.41154927	10.628	15.000	
Acenaphthylene	1.329	1.318	1.337	1.285	1.038	1.222	AVRG		1.25488766	9.100	15.000	
Acenaphthene	0.818	0.806	0.815	0.888	0.621	0.802	AVRG		0.79176438	11.294	15.000	
Fluorene	0.866	0.863	0.946	0.856	0.688	0.872	AVRG		0.84846492	10.068	15.000	
Phenanthrene	0.595	0.595	0.654	0.614	0.620	0.623	AVRG		0.61683770	3.520	15.000	
Anthracene	0.942	0.850	0.891	0.832	0.849	0.872	AVRG		0.87270874	4.555	15.000	
Fluoranthene	0.652	0.625	0.659	0.550	0.677	0.660	AVRG		0.63703182	7.203	15.000	
Pyrene	1.620	1.329	1.404	1.377	1.222	1.277	AVRG		1.37141792	10.106	15.000	
Benzo(a)anthracene	1728	6522	18582	27060	53461	99751	LINR	0.18810650	1.79793739	0.99246	0.99000	
Chrysene	1.458	1.210	1.241	1.195	1.145	1.165	AVRG		1.23554729	9.231	15.000	
Benzo(b)fluoranthene	1520	4187	13844	19725	45987	76636	LINR	0.11729370	1.37987365	0.99682	0.99000	
Benzo(k)fluoranthene	2.143	2.097	2.035	2.016	1.814	1.822	AVRG		1.98795698	6.992	15.000	
Benzo(a)pyrene	1.226	1.118	1.231	1.152	1.118	1.129	AVRG		1.16241804	4.521	15.000	
Indeno(1,2,3-cd)pyrene	1.286	1.196	1.295	1.169	1.225	1.244	AVRG		1.23571521	4.008	15.000	
Dibenzo(a,h)anthracene	1.090	0.911	0.891	0.977	0.942	0.952	AVRG		0.96050835	7.341	15.000	
Benzo(g,h,i)perylene	1.314	1.197	1.253	1.181	1.195	1.205	AVRG		1.22422990	4.134	15.000	
1-Methylnaphthalene	0.496	0.414	0.384	0.337	0.424	0.328	AVRG		0.39724361	15.697	15.000	<-
2-Methylnaphthalene-d10	0.352	0.305	0.295	0.274	0.334	0.248	AVRG		0.30144854	12.581	15.000	
Fluorene-d10	0.942	0.857	1.035	0.956	0.753	0.931	AVRG		0.91227850	10.596	15.000	
Pyrene-d10	1.293	1.159	1.144	1.181	1.011	1.095	AVRG		1.14713989	8.157	15.000	

Average %RSD test result.

Calculate Average %RSD: 9.960339546
Maximum Average %RSD: 30.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 2
SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	WG14979-BLANK	WG14979-1	86	83	97						0
02	WG14979-LCS	WG14979-2	80	78	86						0
03	PEN43SB1202MS	WG14979-3	88	95	105						0
04	PEN43SB1202MSD	WG14979-4	73	71	75						0
05	PEN43SB1101	WV0943-3	93	88	85						0
06	PEN43SB1101	WV0943-3RA	96	79	104						0
07	PEN43SB1502	WV0943-11	87	78	82						0
08	PEN43SB1402	WV0943-13	67	76	79						0
09	PEN43SB1702	WV0943-17	92	76	82						0
10	PEN43SB1902	WV0943-21	82	86	74						0
11	PEN43SB1601	WV0943-14	81	75	78						0
12	PEN43SB1602	WV0943-15	81	80	77						0
13	PEN43SB1901	WV0943-20	79	82	82						0
14	PEN43SB1802	WV0943-19	78	66	67						0
15	PEN43SB1801	WV0943-18	77	74	82						0
16	WG15034-BLANK	WG15034-1	98	79	85						0
17	WG15034-LCS	WG15034-2	88	88	78						0
18	PEN43SB1701MS	WG15034-3	88	94	87						0
19	PEN43SB1701MSD	WG15034-4	84	93	77						0
20	PEN43SB1701	WV0943-16	82	99	82						0
21	PEN43SB1401	WV0943-12DL2	D	D	D						0
22	PEN43SB1701	WV0943-16DL	133	96	107						0
23	PEN43SB1101	WV0943-3DL	125	115	100						0
24	PEN43SB1102	WV0943-5RA	74	83	112						0
25	PEN43SB1201	WV0943-6RA	90	90	92						0
26	PEN43SB1202	WV0943-7RA	98	77	88						0
27	PEN43SB1301	WV0943-8RA	87	72	88						0
28	PEN43SB1302	WV0943-9RA	87	83	85						0

		QC LIMITS
S1	= 2-Methylnaphthalene-d1	(30-150)
S2	= Fluorene-d10	(30-150)
S3	= Pyrene-d10	(30-150)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM 2
SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	PEN43SB1501	WV0943-10RA	86	84	93						0
02	PEN43SB1101D	WV0943-4RA	79	67	74						0
03	PEN43SB1401	WV0943-12DL	D	D	D						0
04											
05											
06											
07											
08											
09											
10											
11											
12											
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21											
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23											
24											
25											
26											
27											
28											

		QC LIMITS
S1	= 2-Methylnaphthalene-d1	(30-150)
S2	= Fluorene-d10	(30-150)
S3	= Pyrene-d10	(30-150)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 17-MAR-2005 21:05
Report Date: 03/30/2005
Matrix: WATER
% Solids: NA

Lab ID: WG15046-1
Client ID: WG15046-Blank
SDG: CTO355-2
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15046
Units: ug/L

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.05	1.0	0.2	0.2	0.05
91-57-6	2-Methylnaphthalene	U	0.06	1.0	0.2	0.2	0.06
208-96-8	Acenaphthylene	U	0.04	1.0	0.2	0.2	0.04
83-32-9	Acenaphthene	U	0.09	1.0	0.2	0.2	0.09
86-73-7	Fluorene	U	0.06	1.0	0.2	0.2	0.06
85-01-8	Phenanthrene	U	0.08	1.0	0.2	0.2	0.08
120-12-7	Anthracene	U	0.07	1.0	0.2	0.2	0.07
206-44-0	Fluoranthene	U	0.07	1.0	0.2	0.2	0.07
129-00-0	Pyrene	U	0.09	1.0	0.2	0.2	0.09
56-55-3	Benzo(a)anthracene	U	0.08	1.0	0.2	0.2	0.08
218-01-9	Chrysene	U	0.05	1.0	0.2	0.2	0.05
205-99-2	Benzo(b)fluoranthene	U	0.08	1.0	0.2	0.2	0.08
207-08-9	Benzo(k)fluoranthene	U	0.1	1.0	0.2	0.2	0.1
50-32-8	Benzo(a)pyrene	U	0.08	1.0	0.2	0.2	0.08
193-39-5	Indeno(1,2,3-cd)pyrene	U	0.07	1.0	0.2	0.2	0.07
53-70-3	Dibenzo(a,h)anthracene	U	0.1	1.0	0.2	0.2	0.1
191-24-2	Benzo(g,h,i)perylene	U	0.2	1.0	0.2	0.2	0.2
90-12-0	1-Methylnaphthalene	U	0.1	1.0	0.2	0.2	0.1
7297-45-2	2-Methylnaphthalene-d10		83%				
81103-79-9	Fluorene-d10		80%				
1718-52-1	Pyrene-d10		105%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 01:15
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG14979-1
Client ID: WG14979-Blank
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	20	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	20	0.6
208-96-8	Acenaphthylene	U	0.5	1.0	20	20	0.5
83-32-9	Acenaphthene	U	0.7	1.0	20	20	0.7
86-73-7	Fluorene	U	0.6	1.0	20	20	0.6
85-01-8	Phenanthrene	U	1	1.0	20	20	1
120-12-7	Anthracene	U	0.8	1.0	20	20	0.8
206-44-0	Fluoranthene	U	2	1.0	20	20	2
129-00-0	Pyrene	U	2	1.0	20	20	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	20	1
218-01-9	Chrysene	U	1	1.0	20	20	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	20	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	20	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	20	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	20	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	20	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	20	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	20	10
7297-45-2	2-Methylnaphthalene-d10		86%				
81103-79-9	Fluorene-d10		83%				
1718-52-1	Pyrene-d10		97%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 03/17/05
Report Date: 03/30/2005
Matrix: WATER

Lab ID: WG15046-2 & WG15046-3
Client ID: WG15046-LCS & WG15046-LCSD
SDG: CTO355-2
Extracted by: AZ
Extraction Method: SW846 3510
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15046
Units: ug/L

COMPOUND	LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS CONC.	LCSD CONC.	LCS %REC.	LCSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Naphthalene	2.0	2.0	NA	1.7	1.8	86	91	5	30	30-150
2-Methylnaphthalene	2.0	2.0	NA	1.8	1.9	88	94	6	30	30-150
Acenaphthylene	2.0	2.0	NA	2.0	1.9	100	96	4	30	30-150
Acenaphthene	2.0	2.0	NA	2.2	2.1	110	107	3	30	30-150
Fluorene	2.0	2.0	NA	2.3	2.3	116	117	0.4	30	30-150
Phenanthrene	2.0	2.0	NA	2.3	2.3	117	116	0.4	30	30-150
Anthracene	2.0	2.0	NA	2.1	2.1	104	104	0.5	30	30-150
Fluoranthene	2.0	2.0	NA	2.2	2.2	112	112	0.0	30	30-150
Pyrene	2.0	2.0	NA	2.1	2.2	103	108	5	30	30-150
Benzo(a)anthracene	2.0	2.0	NA	2.1	2.1	107	105	2	30	30-150
Chrysene	2.0	2.0	NA	2.0	2.0	100	100	0.0	30	30-150
Benzo(b)fluoranthene	2.0	2.0	NA	2.2	2.0	108	102	5	30	30-150
Benzo(k)fluoranthene	2.0	2.0	NA	2.2	2.1	110	104	6	30	30-150
Benzo(a)pyrene	2.0	2.0	NA	2.3	2.2	115	108	7	30	30-150
Indeno(1,2,3-cd)pyrene	2.0	2.0	NA	2.2	2.0	112	99	13	30	30-150
Dibenzo(a,h)anthracene	2.0	2.0	NA	2.1	2.1	106	106	0.9	30	30-150
Benzo(g,h,i)perylene	2.0	2.0	NA	2.2	2.0	112	100	10	30	30-150

FORM III SV-1

K8851.D & K8852.D

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/09/05
Analysis Date: 03/18/05
Report Date: 03/30/2005
Matrix: SOIL

Lab ID: WG14979-2
Client ID: WG14979-LCS
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Naphthalene	67	NA	60	90	30-150
2-Methylnaphthalene	67	NA	66	99	30-150
Acenaphthylene	67	NA	54	81	30-150
Acenaphthene	67	NA	55	83	30-150
Fluorene	67	NA	58	88	30-150
Phenanthrene	67	NA	74	112	30-150
Anthracene	67	NA	64	95	30-150
Fluoranthene	67	NA	76	114	30-150
Pyrene	67	NA	66	99	30-150
Benzo(a)anthracene	67	NA	76	114	30-150
Chrysene	67	NA	62	92	30-150
Benzo(b)fluoranthene	67	NA	79	118	30-150
Benzo(k)fluoranthene	67	NA	73	110	30-150
Benzo(a)pyrene	67	NA	71	107	30-150
Indeno(1,2,3-cd)pyrene	67	NA	72	107	30-150
Dibenzo(a,h)anthracene	67	NA	69	103	30-150
Benzo(g,h,i)perylene	67	NA	71	107	30-150

FORM III SV-2

K8856.D

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: KD511 DFTPP Injection Date: 03/18/05

Instrument ID: GCMS-K DFTPP Injection Time: 0859

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	55.3
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	45.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	23.3
365	1.0 - 100.0% of mass 198	3.1
441	0.0 - 100.0% of mass 443	5.6 (48.3)2
442	40.0 - 100.0% of mass 198	56.1
443	17.0 - 23.0% of mass 442	11.5 (20.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0318	K8857	03/18/05	0925
02	PEN43SB1202MS	WG14979-3	K8858	03/18/05	1013
03	PEN43SB1202MSD	WG14979-4	K8859	03/18/05	1104
04	PEN43SB1101	WV0943-3	K8870	03/18/05	2122
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

outside Tune

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-K Calibration Date: 03/18/05 Time: 0925

Lab File ID: K8857 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.7299600	0.7299600	0.01	6.56	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.4400600	0.4400600	0.01	7.07	100.00	AVRG
Acenaphthylene	1.2550000	1.2760000	1.2760000	0.01	1.67	100.00	AVRG
Acenaphthene	0.7920000	0.7868600	0.7868600	0.01	-0.65	20.00	AVRG
Fluorene	0.8480000	0.9052200	0.9052200	0.01	6.75	100.00	AVRG
Phenanthrene	0.6170000	0.6088800	0.6088800	0.01	-1.32	100.00	AVRG
Anthracene	0.8730000	0.8267500	0.8267500	0.01	-5.30	100.00	AVRG
Fluoranthene	0.6370000	0.6031200	0.6031200	0.01	-5.32	20.00	AVRG
Pyrene	1.3720000	1.4203000	1.4203000	0.01	3.52	100.00	AVRG
Benzo(a)anthracene	0.8115000	1.0000000	0.3676500	0.01	-18.85	100.00	LINR
Chrysene	1.2360000	1.2443000	1.2443000	0.01	0.67	100.00	AVRG
Benzo(b)fluoranthene	0.7143500	1.0000000	0.4496900	0.01	-28.56	100.00	LINR
Benzo(k)fluoranthene	1.9880000	2.0113000	2.0113000	0.01	1.17	100.00	AVRG
Benzo(a)pyrene	1.1620000	1.1133000	1.1133000	0.01	-4.19	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	1.1193000	1.1193000	0.01	-9.44	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.9749100	0.9749100	0.01	1.55	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	1.2181000	1.2181000	0.01	-0.48	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.4287100	0.4287100	0.01	7.99	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3476300	0.3476300	0.01	15.49	100.00	AVRG
Fluorene-d10	0.9120000	1.0137000	1.0137000	0.01	11.15	100.00	AVRG
Pyrene-d10	1.1470000	1.1889000	1.1889000	0.01	3.65	100.00	AVRG

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/09/05
Analysis Date: 03/18/05
Report Date: 03/30/2005
Matrix: SOIL

Lab ID: WG14979-3 & WG14979-4
Client ID: PEN43SB1202MS & PEN43SB1202MSD
SDG: CTO355-2
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

COMPOUND	MS SPIKE	MSD SPIKE	SAMPLE CONC.	MS CONC.	MSD CONC.	MS %REC.	MSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Naphthalene	72	72	0.00	60	56	84	78	8	50	30-150
2-Methylnaphthalene	72	72	0.00	75	63	105	88	18	50	30-150
Acenaphthylene	72	72	0.00	67	51	93	71	27	50	30-150
Acenaphthene	72	72	0.00	67	52	93	72	26	50	30-150
Fluorene	72	72	0.00	72	55	100	77	26	50	30-150
Phenanthrene	72	72	1.9	100	78	137	107	24	50	30-150
Anthracene	72	72	0.00	86	62	120	86	33	50	30-150
Fluoranthene	72	72	4.2	105	75	141	98	34	50	30-150
Pyrene	72	72	2.9	83	66	112	88	23	50	30-150
Benzo(a)anthracene	72	72	8.0	90	72	115	89	23	50	30-150
Chrysene	72	72	2.8	79	58	106	77	31	50	30-150
Benzo(b)fluoranthene	72	72	7.9	91	63	116	77	36	50	30-150
Benzo(k)fluoranthene	72	72	1.8	81	62	110	84	26	50	30-150
Benzo(a)pyrene	72	72	2.3	84	61	115	82	32	50	30-150
Indeno(1,2,3-cd)pyrene	72	72	1.1	77	58	106	80	28	50	30-150
Dibenzo(a,h)anthracene	72	72	0.00	72	66	100	92	8	50	30-150
Benzo(g,h,i)perylene	72	72	0.00	76	55	106	76	33	50	30-150

FORM III SV-2

K8858.D & K8859.D

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID (Standard): K8857 Date Analyzed: 03/18/05

Instrument ID: GCMS-K Time Analyzed: 0925

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD		18308	9.83	67695	12.65	32517	16.79
UPPER LIMIT		36616	10.33	135390	13.15	65034	17.29
LOWER LIMIT		9154	9.33	33848	12.15	16259	16.29
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB1202MS	WG14979-3	24836	9.83	93493	12.65	47010	16.79
02 PEN43SB1202MSD	WG14979-4	25583	9.84	89992	12.65	45180	16.79
03 PEN43SB1101	WV0943-3	29078	9.84	96146	12.65	55145	16.80
04							
05							
06							
07							
08							
09							
10							
11							
12							
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16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID (Standard): K8857 Date Analyzed: 03/18/05

Instrument ID: GCMS-K Time Analyzed: 0925

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD		47827	20.34	21516	26.70	11366	29.90
UPPER LIMIT		95654	20.84	43032	27.20	22732	30.40
LOWER LIMIT		23914	19.84	10758	26.20	5683	29.40
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB1202MS	WG14979-3	62923	20.31	35465	26.68	19232	29.87
02 PEN43SB1202MSD	WG14979-4	62303	20.31	32131	26.68	17946	29.87
03 PEN43SB1101	WV0943-3	64790	20.34	37666	26.69	28739*	29.87
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: KD513 DFTPP Injection Date: 03/21/05

Instrument ID: GCMS-K DFTPP Injection Time: 1037

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.5
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	47.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.5
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	8.1 (88.6)2
442	40.0 - 100.0% of mass 198	44.2
443	17.0 - 23.0% of mass 442	9.1 (20.7)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0321	K8882	03/21/05	1103
02	PEN43SB1101	WV0943-3RA	K8892	03/21/05	1916
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-K Calibration Date: 03/21/05 Time: 1103

Lab File ID: K8882 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.6913600	0.6913600	0.01	0.93	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.3003400	0.3003400	0.01	-26.92	100.00	AVRG
Acenaphthylene	1.2550000	1.1988000	1.1988000	0.01	-4.48	100.00	AVRG
Acenaphthene	0.7920000	0.7663500	0.7663500	0.01	-3.24	20.00	AVRG
Fluorene	0.8480000	0.8061100	0.8061100	0.01	-4.94	100.00	AVRG
Phenanthrene	0.6170000	0.5352400	0.5352400	0.01	-13.25	100.00	AVRG
Anthracene	0.8730000	0.8639400	0.8639400	0.01	-1.04	100.00	AVRG
Fluoranthene	0.6370000	0.5186200	0.5186200	0.01	-18.58	20.00	AVRG
Pyrene	1.3720000	1.3615000	1.3615000	0.01	-0.76	100.00	AVRG
Benzo(a)anthracene	0.7676900	1.0000000	0.3432800	0.01	-23.23	100.00	LINR
Chrysene	1.2360000	1.4045000	1.4045000	0.01	13.63	100.00	AVRG
Benzo(b)fluoranthene	0.7510700	1.0000000	0.4763000	0.01	-24.89	100.00	LINR
Benzo(k)fluoranthene	1.9880000	2.3836000	2.3836000	0.01	19.90	100.00	AVRG
Benzo(a)pyrene	1.1620000	1.2920000	1.2920000	0.01	11.19	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	1.0669000	1.0669000	0.01	-13.68	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.9070200	0.9070200	0.01	-5.52	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	1.1402000	1.1402000	0.01	-6.85	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.4672700	0.4672700	0.01	17.70	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3047800	0.3047800	0.01	1.26	100.00	AVRG
Fluorene-d10	0.9120000	0.8864900	0.8864900	0.01	-2.80	100.00	AVRG
Pyrene-d10	1.1470000	1.1150000	1.1150000	0.01	-2.79	100.00	AVRG

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID (Standard): K8882 Date Analyzed: 03/21/05

Instrument ID: GCMS-K Time Analyzed: 1103

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	19549	9.84	77437	12.67	27766	16.83
UPPER LIMIT	39098	10.34	154874	13.17	55532	17.33
LOWER LIMIT	9775	9.34	38719	12.17	13883	16.33

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	PEN43SB1101	WV0943-3RA	33980	9.84	107311	12.66	53045	16.80
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID (Standard): K8882 Date Analyzed: 03/21/05

Instrument ID: GCMS-K Time Analyzed: 1103

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		36009	20.36	15029	26.72	8215	29.91
UPPER LIMIT		72018	20.86	30058	27.22	16430	30.41
LOWER LIMIT		18005	19.86	7515	26.22	4108	29.41
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB1101	WV0943-3RA	57633	20.34	25690	26.69	20702*	29.87
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: KD514 DFTPP Injection Date: 03/22/05

Instrument ID: GCMS-K DFTPP Injection Time: 1035

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	53.8
70	Less than 2.0% of mass 69	0.4 (0.7)1
127	40.0 - 60.0% of mass 198	44.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	25.5
365	1.0 - 100.0% of mass 198	3.0
441	0.0 - 100.0% of mass 443	9.1 (71.8)2
442	40.0 - 100.0% of mass 198	64.9
443	17.0 - 23.0% of mass 442	12.6 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0322	K8896	03/22/05	1103
02	PEN43SB1502	WV0943-11	K8897	03/22/05	1154
03	PEN43SB1402	WV0943-13	K8898	03/22/05	1243
04	PEN43SB1702	WV0943-17	K8899	03/22/05	1333
05	PEN43SB1902	WV0943-21	K8900	03/22/05	1423
06	PEN43SB1601	WV0943-14	K8901	03/22/05	1513
07	PEN43SB1602	WV0943-15	K8902	03/22/05	1603
08	PEN43SB1901	WV0943-20	K8903	03/22/05	1651
09	PEN43SB1802	WV0943-19	K8904	03/22/05	1741
10	PEN43SB1801	WV0943-18	K8905	03/22/05	1830
11	WG15034-BLANK	WG15034-1	K8906	03/22/05	1919
12	WG15034-LCS	WG15034-2	K8907	03/22/05	2009
13	PEN43SB1701MS	WG15034-3	K8908	03/22/05	2058
14	PEN43SB1701MSD	WG15034-4	K8909	03/22/05	2148
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-K Calibration Date: 03/22/05 Time: 1103

Lab File ID: K8896 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.6523100	0.6523100	0.01	-4.77	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.3632200	0.3632200	0.01	-11.62	100.00	AVRG
Acenaphthylene	1.2550000	1.1780000	1.1780000	0.01	-6.14	100.00	AVRG
Acenaphthene	0.7920000	0.7281800	0.7281800	0.01	-8.06	20.00	AVRG
Fluorene	0.8480000	0.8751300	0.8751300	0.01	3.20	100.00	AVRG
Phenanthrene	0.6170000	0.5321400	0.5321400	0.01	-13.75	100.00	AVRG
Anthracene	0.8730000	0.6847600	0.6847600	0.01	-21.56	100.00	AVRG
Fluoranthene	0.6370000	0.5620200	0.5620200	0.01	-11.77	20.00	AVRG
Pyrene	1.3720000	0.9749300	0.9749300	0.01	-28.94	100.00	AVRG
Benzo(a)anthracene	0.9028400	1.0000000	0.4184500	0.01	-9.72	100.00	LINR
Chrysene	1.2360000	1.0230000	1.0230000	0.01	-17.23	100.00	AVRG
Benzo(b)fluoranthene	0.9309300	1.0000000	0.6066400	0.01	-6.91	100.00	LINR
Benzo(k)fluoranthene	1.9880000	1.4786000	1.4786000	0.01	-25.62	100.00	AVRG
Benzo(a)pyrene	1.1620000	0.9498800	0.9498800	0.01	-18.26	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	0.9631500	0.9631500	0.01	-22.08	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.6443900	0.6443900	0.01	-32.88	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	1.0359000	1.0359000	0.01	-15.37	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.3732000	0.3732000	0.01	-6.00	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3240900	0.3240900	0.01	7.67	100.00	AVRG
Fluorene-d10	0.9120000	0.9389500	0.9389500	0.01	2.96	100.00	AVRG
Pyrene-d10	1.1470000	0.8281400	0.8281400	0.01	-27.80	100.00	AVRG

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 19:19
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15034-1
Client ID: WG15034-Blank
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	20	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	20	0.6
208-96-8	Acenaphthylene	U	0.5	1.0	20	20	0.5
83-32-9	Acenaphthene	U	0.7	1.0	20	20	0.7
86-73-7	Fluorene	U	0.6	1.0	20	20	0.6
85-01-8	Phenanthrene	U	1	1.0	20	20	1
120-12-7	Anthracene	U	0.8	1.0	20	20	0.8
206-44-0	Fluoranthene	U	2	1.0	20	20	2
129-00-0	Pyrene	U	2	1.0	20	20	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	20	1
218-01-9	Chrysene	U	1	1.0	20	20	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	20	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	20	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	20	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	20	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	20	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	20	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	20	10
7297-45-2	2-Methylnaphthalene-d10		98%				
81103-79-9	Fluorene-d10		79%				
1718-52-1	Pyrene-d10		85%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 03/22/05
Report Date: 03/30/2005
Matrix: SOIL

Lab ID: WG15034-2
Client ID: WG15034-LCS
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Naphthalene	67	NA	71	106	30-150
2-Methylnaphthalene	67	NA	85	127	30-150
Acenaphthylene	67	NA	70	104	30-150
Acenaphthene	67	NA	68	103	30-150
Fluorene	67	NA	77	116	30-150
Phenanthrene	67	NA	91	137	30-150
Anthracene	67	NA	69	103	30-150
Fluoranthene	67	NA	98	147	30-150
Pyrene	67	NA	69	103	30-150
Benzo(a)anthracene	67	NA	108	*162	30-150
Chrysene	67	NA	79	119	30-150
Benzo(b)fluoranthene	67	NA	106	*159	30-150
Benzo(k)fluoranthene	67	NA	72	109	30-150
Benzo(a)pyrene	67	NA	82	123	30-150
Indeno(1,2,3-cd)pyrene	67	NA	74	111	30-150
Dibenzo(a,h)anthracene	67	NA	72	108	30-150
Benzo(g,h,i)perylene	67	NA	72	109	30-150

FORM III SV-2

K8907.D

KATAHDIN ANALYTICAL SERVICES
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 03/22/05
Report Date: 03/30/2005
Matrix: SOIL

Lab ID: WG15034-3 & WG15034-4
Client ID: PEN43SB1701MS & PEN43SB1701MSD
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

COMPOUND	MS SPIKE	MSD SPIKE	SAMPLE CONC.	MS CONC.	MSD CONC.	MS %REC.	MSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Naphthalene	74	74	2.4	77	53	101	69	36	50	30-150
2-Methylnaphthalene	74	74	2.3	98	77	129	101	24	50	30-150
Acenaphthylene	74	74	7.0	83	68	103	83	19	50	30-150
Acenaphthene	74	74	0.00	78	64	106	87	20	50	30-150
Fluorene	74	74	0.00	89	71	120	97	22	50	30-150
Phenanthrene	74	74	34	136	145	139	* 151	6	50	30-150
Anthracene	74	74	6.7	92	82	116	102	12	50	30-150
Fluoranthene	74	74	160	195	256	48	130	27	50	30-150
Pyrene	74	74	111	139	170	38	80	20	50	30-150
Benzo(a)anthracene	74	74	251	212	253	NC	* 3	18	50	30-150
Chrysene	74	74	173	144	173	NC	* 0	18	50	30-150
Benzo(b)fluoranthene	74	74	447	217	342	NC	NC	45	50	30-150
Benzo(k)fluoranthene	74	74	134	104	117	NC	NC	12	50	30-150
Benzo(a)pyrene	74	74	252	140	184	NC	NC	27	50	30-150
Indeno(1,2,3-cd)pyrene	74	74	152	113	141	NC	NC	22	50	30-150
Dibenzo(a,h)anthracene	74	74	36	59	62	31	35	5	50	30-150
Benzo(g,h,i)perylene	74	74	147	94	141	NC	NC	40	50	30-150

FORM III SV-2

K8908.D & K8909.D

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID (Standard): K8896 Date Analyzed: 03/22/05

Instrument ID: GCMS-K Time Analyzed: 1103

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		13114	9.82	59737	12.64	27100	16.77
UPPER LIMIT		26228	10.32	119474	13.14	54200	17.27
LOWER LIMIT		6557	9.32	29869	12.14	13550	16.27
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB1502	WV0943-11	21131	9.81	74402	12.64	47831	16.77
02 PEN43SB1402	WV0943-13	17963	9.81	71230	12.64	39925	16.77
03 PEN43SB1702	WV0943-17	23540	9.82	85310	12.64	53865	16.78
04 PEN43SB1902	WV0943-21	18357	9.82	71762	12.64	37316	16.77
05 PEN43SB1601	WV0943-14	21546	9.82	71919	12.65	42454	16.79
06 PEN43SB1602	WV0943-15	21536	9.81	75860	12.64	41302	16.79
07 PEN43SB1901	WV0943-20	20647	9.81	80033	12.64	44149	16.77
08 PEN43SB1802	WV0943-19	21225	9.82	73426	12.64	46070	16.79
09 PEN43SB1801	WV0943-18	22184	9.82	86029	12.64	47279	16.78
10 WG15034-BLANK	WG15034-1	22796	9.82	78343	12.64	47659	16.79
11 WG15034-LCS	WG15034-2	17964	9.82	73709	12.63	38474	16.77
12 PEN43SB1701MS	WG15034-3	17673	9.82	69537	12.63	38607	16.77
13 PEN43SB1701MSD	WG15034-4	17735	9.82	68883	12.64	36406	16.77
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID (Standard): K8896 Date Analyzed: 03/22/05

Instrument ID: GCMS-K Time Analyzed: 1103

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	45782	20.31	27723	26.65	19413	29.84
UPPER LIMIT	91564	20.81	55446	27.15	38826	30.34
LOWER LIMIT	22891	19.81	13862	26.15	9707	29.34

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	PEN43SB1502	WV0943-11	72101	20.31	43877	26.65	29610	29.84
02	PEN43SB1402	WV0943-13	57790	20.31	37231	26.65	28579	29.84
03	PEN43SB1702	WV0943-17	83152	20.31	48361	26.66	35732	29.84
04	PEN43SB1902	WV0943-21	65327	20.31	41628	26.67	28406	29.85
05	PEN43SB1601	WV0943-14	59675	20.31	39505	26.65	29150	29.84
06	PEN43SB1602	WV0943-15	72488	20.31	44279	26.67	31316	29.84
07	PEN43SB1901	WV0943-20	69330	20.31	41489	26.65	35325	29.85
08	PEN43SB1802	WV0943-19	73270	20.31	44659	26.67	32075	29.85
09	PEN43SB1801	WV0943-18	70961	20.31	40753	26.66	30156	29.84
10	WG15034-BLANK	WG15034-1	74030	20.31	44717	26.67	30871	29.85
11	WG15034-LCS	WG15034-2	64535	20.31	43232	26.65	28841	29.84
12	PEN43SB1701MS	WG15034-3	62152	20.31	40568	26.65	30628	29.84
13	PEN43SB1701MSD	WG15034-4	58298	20.31	41101	26.65	24500	29.85
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: KD516 DFTPP Injection Date: 03/24/05

Instrument ID: GCMS-K DFTPP Injection Time: 1055

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	51.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	55.5
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	47.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.3
275	10.0 - 30.0% of mass 198	22.8
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	6.6 (65.4)2
442	40.0 - 100.0% of mass 198	51.2
443	17.0 - 23.0% of mass 442	10.1 (19.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0324	K8929	03/24/05	1121
02	PEN43SB1102	WV0943-5RA	K8930	03/24/05	1212
03	PEN43SB1201	WV0943-6RA	K8931	03/24/05	1302
04	PEN43SB1202	WV0943-7RA	K8932	03/24/05	1352
05	PEN43SB1301	WV0943-8RA	K8933	03/24/05	1442
06	PEN43SB1302	WV0943-9RA	K8934	03/24/05	1533
07	PEN43SB1501	WV0943-10RA	K8935	03/24/05	1622
08	PEN43SB1101D	WV0943-4RA	K8936	03/24/05	1712
09	PEN43SB1401	WV0943-12DL	K8937	03/24/05	1802
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-K Calibration Date: 03/24/05 Time: 1121

Lab File ID: K8929 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.7084600	0.7084600	0.01	3.42	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.3085700	0.3085700	0.01	-24.92	100.00	AVRG
Acenaphthylene	1.2550000	1.2188000	1.2188000	0.01	-2.88	100.00	AVRG
Acenaphthene	0.7920000	0.7705200	0.7705200	0.01	-2.71	20.00	AVRG
Fluorene	0.8480000	0.9301500	0.9301500	0.01	9.69	100.00	AVRG
Phenanthrene	0.6170000	0.6255200	0.6255200	0.01	1.38	100.00	AVRG
Anthracene	0.8730000	0.7985400	0.7985400	0.01	-8.53	100.00	AVRG
Fluoranthene	0.6370000	0.6857700	0.6857700	0.01	7.66	20.00	AVRG
Pyrene	1.3720000	1.1606000	1.1606000	0.01	-15.41	100.00	AVRG
Benzo(a)anthracene	1.2135000	1.0000000	0.5912500	0.01	21.35	100.00	LINR
Chrysene	1.2360000	1.1507000	1.1507000	0.01	-6.90	100.00	AVRG
Benzo(b)fluoranthene	1.2631000	1.0000000	0.8473800	0.01	26.31	100.00	LINR
Benzo(k)fluoranthene	1.9880000	1.8924000	1.8924000	0.01	-4.81	100.00	AVRG
Benzo(a)pyrene	1.1620000	1.2358000	1.2358000	0.01	6.35	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	0.9128900	0.9128900	0.01	-26.14	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.7732400	0.7732400	0.01	-19.45	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	0.8449000	0.8449000	0.01	-30.97	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.5285200	0.5285200	0.01	33.13	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3266200	0.3266200	0.01	8.51	100.00	AVRG
Fluorene-d10	0.9120000	0.9259900	0.9259900	0.01	1.53	100.00	AVRG
Pyrene-d10	1.1470000	0.9580500	0.9580500	0.01	-16.47	100.00	AVRG

FORM VII PEST

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID (Standard): K8929 Date Analyzed: 03/24/05

Instrument ID: GCMS-K Time Analyzed: 1121

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	21589	9.83	89731	12.67	40187	16.81
UPPER LIMIT	43178	10.33	179462	13.17	80374	17.31
LOWER LIMIT	10795	9.33	44866	12.17	20094	16.31

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	PEN43SB1102	WV0943-5RA	24879	9.82	94183	12.65	41520	16.80
02	PEN43SB1201	WV0943-6RA	24817	9.83	92065	12.65	40518	16.80
03	PEN43SB1202	WV0943-7RA	24270	9.83	80873	12.65	46085	16.80
04	PEN43SB1301	WV0943-8RA	23051	9.82	76596	12.65	45362	16.80
05	PEN43SB1302	WV0943-9RA	22954	9.83	72721	12.65	42213	16.80
06	PEN43SB1501	WV0943-10RA	24923	9.82	96248	12.65	50637	16.80
07	PEN43SB1101D	WV0943-4RA	22324	9.82	80525	12.65	41695	16.80
08	PEN43SB1401	WV0943-12DL	13405	9.82	56374	12.65	23779	16.80
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID (Standard): K8929 Date Analyzed: 03/24/05

Instrument ID: GCMS-K Time Analyzed: 1121

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		69847	20.34	44245	26.68	20296	29.87
UPPER LIMIT		139694	20.84	88490	27.18	40592	30.37
LOWER LIMIT		34924	19.84	22123	26.18	10148	29.37
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB1102	WV0943-5RA	67835	20.34	30453	26.69	11379	29.87
02 PEN43SB1201	WV0943-6RA	64269	20.34	37119	26.68	16154	29.86
03 PEN43SB1202	WV0943-7RA	63656	20.34	40377	26.68	19436	29.86
04 PEN43SB1301	WV0943-8RA	65179	20.34	42628	26.69	18133	29.87
05 PEN43SB1302	WV0943-9RA	70342	20.34	47876	26.68	22163	29.87
06 PEN43SB1501	WV0943-10RA	78943	20.34	51139	26.68	23368	29.87
07 PEN43SB1101D	WV0943-4RA	55525	20.34	35104	26.69	14929	29.87
08 PEN43SB1401	WV0943-12DL	35339	20.31	17505*	26.67	11780	29.86
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID: KD515 DFTPP Injection Date: 03/23/05

Instrument ID: GCMS-K DFTPP Injection Time: 0958

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	50.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	53.2
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	45.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.5
275	10.0 - 30.0% of mass 198	26.3
365	1.0 - 100.0% of mass 198	3.2
441	0.0 - 100.0% of mass 443	2.6 (18.3)2
442	40.0 - 100.0% of mass 198	69.3
443	17.0 - 23.0% of mass 442	14.2 (20.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0323	K8914	03/23/05	1113
02	PEN43SB1701	WV0943-16	K8915	03/23/05	1202
03	PEN43SB1401	WV0943-12DL2	K8916	03/23/05	1251
04	PEN43SB1701	WV0943-16DL	K8918	03/23/05	1429
05	PEN43SB1101	WV0943-3DL	K8927	03/23/05	2156
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-K Calibration Date: 03/23/05 Time: 1113

Lab File ID: K8914 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.6355900	0.6355900	0.01	-7.21	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.3324100	0.3324100	0.01	-19.12	100.00	AVRG
Acenaphthylene	1.2550000	1.1632000	1.1632000	0.01	-7.31	100.00	AVRG
Acenaphthene	0.7920000	0.8875500	0.8875500	0.01	12.06	20.00	AVRG
Fluorene	0.8480000	0.8780400	0.8780400	0.01	3.54	100.00	AVRG
Phenanthrene	0.6170000	0.5933600	0.5933600	0.01	-3.83	100.00	AVRG
Anthracene	0.8730000	0.7123200	0.7123200	0.01	-18.40	100.00	AVRG
Fluoranthene	0.6370000	0.6489500	0.6489500	0.01	1.88	20.00	AVRG
Pyrene	1.3720000	0.9662000	0.9662000	0.01	-29.58	100.00	AVRG
Benzo(a)anthracene	1.1404000	1.0000000	0.5506100	0.01	14.04	100.00	LINR
Chrysene	1.2360000	1.1091000	1.1091000	0.01	-10.27	100.00	AVRG
Benzo(b)fluoranthene	1.1280000	1.0000000	0.7494700	0.01	12.80	100.00	LINR
Benzo(k)fluoranthene	1.9880000	1.7656000	1.7656000	0.01	-11.19	100.00	AVRG
Benzo(a)pyrene	1.1620000	1.1246000	1.1246000	0.01	-3.22	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	0.9569300	0.9569300	0.01	-22.58	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.7718200	0.7718200	0.01	-19.60	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	0.8887700	0.8887700	0.01	-27.39	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.4511700	0.4511700	0.01	13.64	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3196200	0.3196200	0.01	6.19	100.00	AVRG
Fluorene-d10	0.9120000	0.9205200	0.9205200	0.01	0.93	100.00	AVRG
Pyrene-d10	1.1470000	0.8374700	0.8374700	0.01	-26.99	100.00	AVRG

FORM VII PEST

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID (Standard): K8914 Date Analyzed: 03/23/05

Instrument ID: GCMS-K Time Analyzed: 1113

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		17558	9.81	77658	12.64	36175	16.80
UPPER LIMIT		35116	10.31	155316	13.14	72350	17.30
LOWER LIMIT		8779	9.31	38829	12.14	18088	16.30
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB1701	WV0943-16	22805	9.81	86491	12.64	39278	16.77
02 PEN43SB1401	WV0943-12DL2	15158	9.81	76145	12.65	42883	16.79
03 PEN43SB1701	WV0943-16DL	19740	9.82	70671	12.65	34377	16.80
04 PEN43SB1101	WV0943-3DL	21161	9.82	74062	12.65	35366	16.80
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Lab File ID (Standard): K8914 Date Analyzed: 03/23/05

Instrument ID: GCMS-K Time Analyzed: 1113

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		64335	20.34	45308	26.67	29955	29.85
UPPER LIMIT		128670	20.84	90616	27.17	59910	30.35
LOWER LIMIT		32168	19.84	22654	26.17	14978	29.35
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB1701	WV0943-16	61938	20.31	43795	26.65	28288	29.84
02 PEN43SB1401	WV0943-12DL2	60182	20.31	41487	26.67	26258	29.85
03 PEN43SB1701	WV0943-16DL	56078	20.34	33200	26.67	14964*	29.85
04 PEN43SB1101	WV0943-3DL	57553	20.34	38360	26.67	15293	29.85
05							
06							
07							
08							
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15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

Semivolatile

~~VOLATIL~~E ORGANIC COMPOUNDS IN WATER
CALCULATION VERIFICATION

Program:	SOUTHDIV	**Sample No.:**	PEN43SS2401
Method:	8270C	**Sample Matrix:**	Soil
Site Name:	NAS Pensacola		
		Analyte Name:	Fluoranthene
Site Location:			
		Spl Delivery Grp:	3552
Project No.	N4821		
		Laboratory:	Katahdin

Equation:

$$Concentration\,(\mu g / L) = \frac{(A_x)(I_s)(Df)}{(A_{is})(RRF)(V_0)}$$

where:

Ax = Area of characteristic ion (EICP) for compound to be measured.
Ais = Area of characteristic ion (EICP) for the specific internal standard (See Tables 3 and 4).
Is = Amount of internal standard added in nanograms (ng).
Vo = Weight of sample in grams (g).
RRF = Relative response factor from ambient temperature purge of calibration standard.
Df = Dilution Factor
= Ratio of number of milliliters (mL) of water purged (i.e., Vo above) to number of mL of the original water sample used for purging.
For example, if 2.0 mL of sample is diluted to 5 mL with reagent water and purged, Df = 5 mL/2.0 m L = 2.5. If no dilution is performed, Df = 1.
%S = Percent solids as a whole number ie (88.2 for 88.2%)

Sample Data:

A_x =	184506
I_s =	800
Df =	200
A_{is} =	60182
RRF =	0.637
V_0 =	30
$\%S$ =	86

Green = inputs
Blue = outputs
Pink = error

	Concentration	Units
Lab Result:	30000	ug/kg
TtNUS Result:	29847.27738	ug/kg

Comments:

Calculations by: Bernard F Spada III **Date:** 20-Apr-05
Reviewed by: **Date:**

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 12:51
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 86.0

Lab ID: WV0943-12DL2
Client ID: PEN43SB1401
SDG: CTO355-2
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	2400	200	20	4600	210
91-57-6	2-Methylnaphthalene	U	130	200	20	4600	130
208-96-8	Acenaphthylene	U	120	200	20	4600	120
83-32-9	Acenaphthene	I	1700	200	20	4600	160
86-73-7	Fluorene	I	2200	200	20	4600	140
85-01-8	Phenanthrene		28000	200	20	4600	340
120-12-7	Anthracene		8000	200	20	4600	190
206-44-0	Fluoranthene		30000	200	20	4600	380
129-00-0	Pyrene		17000	200	20	4600	420
56-55-3	Benzo(a)anthracene	J	15000	200	20	4600	230
218-01-9	Chrysene		8700	200	20	4600	290
205-99-2	Benzo(b)fluoranthene	J	16000	200	20	4600	480
207-08-9	Benzo(k)fluoranthene		5700	200	20	4600	310
50-32-8	Benzo(a)pyrene		10000	200	20	4600	170
193-39-5	Indeno(1,2,3-cd)pyrene		5000	200	20	4600	470
53-70-3	Dibenzo(a,h)anthracene	U	460	200	20	4600	460
191-24-2	Benzo(g,h,i)perylene	I	4600	200	20	4600	400
90-12-0	1-Methylnaphthalene	U	2300	200	20	4600	2300
7297-45-2	2-Methylnaphthalene-d10		D				
81103-79-9	Fluorene-d10		D				
1718-52-1	Pyrene-d10		D				

Data File: \\Target_server\GG\chem\gcms-k.i\K032305.b\K8916.D
Report Date: 30-Mar-2005 09:01

Katahdin Analytical Services

Data file : \\Target_server\GG\chem\gcms-k.i\K032305.b\K8916.D
Lab Smp Id: WV0943-12DL2 Client Smp ID: PEN43SB1401
Inj Date : 23-MAR-2005 12:51 MS Autotune Date: 01-MAR-2004 10:18
Operator : JCG Inst ID: gcms-k.i
Smp Info : WV0943-12DL2
Misc Info : SW846 M8270C
Comment :
Method : \\Target_server\GG\chem\gcms-k.i\K032305.b\ksim023.m
Meth Date : 23-Mar-2005 11:48 kasgc Quant Type: ISTD
Cal Date : 17-MAR-2005 20:15 Cal File: K8849.D
Als bottle: 4
Dil Factor: 200.00000
Integrator: HP RTE Compound Sublist: tetrat355001.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Vo)* 1000 * (100/(100 - M)) * CpndVari

Name	Value	Description
DF	200.000	Dilution Factor
Vt	0.00100	Volume of final extract (L)
Vo	0.03000	Sample Weight
M	14.042	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-D4	152	9.811	9.810	(1.000)	15158	0.80000	
* 2 Naphthalene-D8	136	12.653	12.643	(1.000)	76145	0.80000	
3 Naphthalene	128	12.692	12.682	(1.003)	19880	0.30471	2360(a)
* 8 Acenaphthene-D10	164	16.786	16.799	(1.000)	42883	0.80000	
9 Acenaphthene	153	16.853	16.866	(1.004)	9058	0.21342	1660(aQ)
11 Fluorene	166	18.108	18.108	(1.079)	13174	0.28966	2250(a)
* 14 Phenanthrene-D10	188	20.310	20.336	(1.000)	60182	0.80000	
15 Phenanthrene	178	20.363	20.390	(1.003)	168024	3.62096	28100
16 Anthracene	178	20.498	20.498	(1.009)	67921	1.03457	8020
18 Fluoranthene	202	23.206	23.219	(1.143)	184506	3.85011	29900
20 Pyrene	202	23.745	23.745	(0.890)	157211	2.21050	17100
21 Benzo(a)anthracene	228	26.631	26.643	(0.999)	51317	1.92964	15000(M)
* 22 Chrysene-D12	240	26.665	26.666	(1.000)	41487	0.80000	
23 Chrysene	228	26.723	26.724	(1.002)	72052	1.12451	8720
25 Benzo(b)fluoranthene	252	29.049	29.049	(0.973)	46785	2.06070	16000(M)
26 Benzo(k)fluoranthene	252	29.107	29.107	(0.975)	47890	0.73395	5690(MH)
27 Benzo(a)pyrene	252	29.720	29.732	(0.996)	49662	1.30164	10100
* 28 Perylene-D12	264	29.847	29.847	(1.000)	26258	0.80000	
29 Indeno(1,2,3-cd)pyrene	276	31.884	31.892	(1.068)	25916	0.63897	4960
31 Benzo(g,h,i)perylene	276	32.426	32.426	(1.086)	23796	0.59220	4590(a)

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-2

Instrument ID: GCMS-K Calibration Date(s): 03/17/05 03/17/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1607 2015

LAB FILE ID: RF0.2: K8849 RF0.5: K8848 RF1: K8844
RF2: K8847 RF3: K8846 RF5: K8845

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF3	RF5	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2
Naphthalene	0.784	0.746	0.672	0.662	0.654	0.594	AVRG		0.68545520	9.999	15.000
2-Methylnaphthalene	0.439	0.431	0.412	0.369	0.466	0.351	AVRG		0.41154927	10.628	15.000
Acenaphthylene	1.329	1.318	1.337	1.285	1.038	1.222	AVRG		1.25488766	9.100	15.000
Acenaphthene	0.818	0.806	0.815	0.888	0.621	0.802	AVRG		0.79176438	11.294	15.000
Fluorene	0.866	0.863	0.946	0.856	0.688	0.872	AVRG		0.84846492	10.068	15.000
Phenanthrene	0.595	0.595	0.654	0.614	0.620	0.623	AVRG		0.61683770	3.520	15.000
Anthracene	0.942	0.850	0.891	0.832	0.849	0.872	AVRG		0.87270874	4.555	15.000
Fluoranthene	0.652	0.625	0.659	0.550	0.677	0.660	AVRG		0.63703182	7.203	15.000
Pyrene	1.620	1.329	1.404	1.377	1.222	1.277	AVRG		1.37141792	10.106	15.000
Benzo(a)anthracene	1728	6522	18582	27060	53461	99751	LINR	0.18810650	1.79793739	0.99246	0.99000
Chrysene	1.458	1.210	1.241	1.195	1.145	1.165	AVRG		1.23554729	9.231	15.000
Benzo(b)fluoranthene	1520	4187	13844	19725	45987	76636	LINR	0.11729370	1.37987365	0.99682	0.99000
Benzo(k)fluoranthene	2.143	2.097	2.035	2.016	1.814	1.822	AVRG		1.98795698	6.992	15.000
Benzo(a)pyrene	1.226	1.118	1.231	1.152	1.118	1.129	AVRG		1.16241804	4.521	15.000
Indeno(1,2,3-cd)pyrene	1.286	1.196	1.295	1.169	1.225	1.244	AVRG		1.23571521	4.008	15.000
Dibenzo(a,h)anthracene	1.090	0.911	0.891	0.977	0.942	0.952	AVRG		0.96050835	7.341	15.000
Benzo(g,h,i)perylene	1.314	1.197	1.253	1.181	1.195	1.205	AVRG		1.22422990	4.134	15.000
1-Methylnaphthalene	0.496	0.414	0.384	0.337	0.424	0.328	AVRG		0.39724361	15.697	15.000 <-
2-Methylnaphthalene-d10	0.352	0.305	0.295	0.274	0.334	0.248	AVRG		0.30144854	12.581	15.000
Fluorene-d10	0.942	0.857	1.035	0.956	0.753	0.931	AVRG		0.91227850	10.596	15.000
Pyrene-d10	1.293	1.159	1.144	1.181	1.011	1.095	AVRG		1.14713989	8.157	15.000

Average %RSD test result.

Calculate Average %RSD: 9.960339546
Maximum Average %RSD: 30.00000000

Note: Passes Average %RSD Test.

FORM VI SV

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**G. WALKER**	**DATE:**	**APRIL 22, 2005**
FROM:	**ERIN M. FAUST**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – METALS**
CTO – 355 NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – 3551

SAMPLES: 20/Soil/

PEN43SB0601	PEN43SB0602	PEN43SB0701
PEN43SB0702	PEN43SB0801	PEN43SB0802
PEN43SB0901	PEN43SB0902	PEN43SB1001
PEN43SB1002	PEN43SB2001	PEN43SB2002
PEN43SB2101	PEN43SB2102	PEN43SB2201
PEN43SB2202	PEN43SB2301	PEN43SB2501
PEN43SB2501D	PEN43SB2502	

Overview

The sample set for CTO 355, NAS Pensacola, SDG 3551, consists of nineteen (20) soil environmental samples. One (1) field duplicate pair (PEN43SB2501 / PEN43SB2501D) is included within this SDG.

All samples were analyzed for arsenic, barium, copper, lead and vanadium. The samples were collected by TetraTech NUS on March 3 and 4, 2005 and analyzed by Katahdin Analytical Services under Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. Metals analyses were conducted using SW-846 method 6010B.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verification Results
• Laboratory Blank Analyses
* • ICP Interference Check Sample Results
• Matrix Spike/Matrix Spike Duplicate Results
* • Laboratory Control Sample Results
* • ICP Serial Dilution Results
• Field Duplicate Results
* • Sample Quantitation
* • Detection Limits

* - All quality control criteria were met for this parameter.

Laboratory Blank Analyses

The following contaminant was detected in the laboratory method/preparation blanks at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
Barium[1]	2.09 µg/L	1.045 mg/kg

[1] Maximum concentration present in a laboratory preparation blank.

An action level of 5X the maximum concentration has been used to evaluate the sample data for blank contamination. Sample aliquot, percent solids and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive result, less than the action level, reported for barium in sample PEN43SB2002 was qualified "U" as a result of laboratory blank contamination.

Matrix Spike/Matrix Spike Duplicate Results

The matrix spike (MS) and matrix spike duplicate (MSD) percent recoveries for barium were > 125% quality control limit. The positive results reported for barium were qualified as estimated, "J".

Field Duplicate Results

Field Duplicate imprecision (RPD > 50%) was noted arsenic, barium and copper. Positive and nondetected results reported for these analytes were qualified as estimated, "J", and "UJ", respectively.

Notes

Sample PEN43SB2501 was diluted 5X for arsenic, copper, lead and vanadium. Sample PEN43SB2501D was diluted 5X for copper and lead.

The Contract Required Detection Limit (CRDL) percent recoveries for lead on 3/18/05 at 16:36 and 21:05, 3/23/05 at 12:54 and 3/24/05 at 00:11 were > 120% quality control limit. No validation action was taken based on the CRDL percent recoveries.

The Practical Quantitation Limit (PQL) percent recoveries for lead on 3/18/05 and barium on 3/10/05 were < 80% quality control limit. No validation action was taken based on the PQL percent recoveries.

The MS and MSD percent recoveries for copper and lead were outside the 75-125% quality control limits. No validation action was necessary because the concentrations of copper and lead in the un-spiked sample were greater than four times the concentrations of these analytes in the spiking solution.

Executive Summary

Laboratory Performance: Barium was present in the laboratory method blanks.

Other Factors Affecting Data Quality: Barium was qualified due to MS noncompliance. Field duplicate imprecision was noted for arsenic, barium and copper.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", July 2002 and the NFESC document entitled "Navy IRCDQM" (September 1999).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Tetra Tech NUS
Erin M. Faust
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB0601	nsample	PEN43SB0602	nsample	PEN43SB0701
samp_date	3/3/2005	samp_date	3/3/2005	samp_date	3/3/2005
lab_id	WV0922-001	lab_id	WV0922-002	lab_id	WV0922-003
qc_type	NM	qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG	units	MG/KG
Pct_Solids	92.0	Pct_Solids	93.8	Pct_Solids	93.1
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	2.6		J	G
BARIUM	188		J	DG
COPPER	529		J	G
LEAD	519			
VANADIUM	18.5			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.35	I	J	G
BARIUM	17.4		J	DG
COPPER	3.2		J	G
LEAD	6.7			
VANADIUM	2.5			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.36	I	J	G
BARIUM	2.1		J	DG
COPPER	1.5	I	J	G
LEAD	1.8			
VANADIUM	2.3			

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB0702	nsample	PEN43SB0801	nsample	PEN43SB0802
samp_date	3/3/2005	samp_date	3/3/2005	samp_date	3/3/2005
lab_id	WV0922-004	lab_id	WV0922-005	lab_id	WV0922-006
qc_type	NM	qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG	units	MG/KG
Pct_Solids	94.8	Pct_Solids	94.6	Pct_Solids	94.6
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.17	U	UJ	G
BARIUM	1.9		J	DG
COPPER	1.1	I	J	G
LEAD	1.0			
VANADIUM	1.7			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	1.8		J	G
BARIUM	138		J	DG
COPPER	300		J	G
LEAD	427			
VANADIUM	6.5			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.29	I	J	G
BARIUM	15.7		J	DG
COPPER	74.7		J	G
LEAD	20.9			
VANADIUM	2.9			

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB0901
samp_date	3/3/2005
lab_id	WV0922-007
qc_type	NM
units	MG/KG
Pct_Solids	93.4
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	1.3		J	G
BARIUM	13.6		J	DG
COPPER	26.6		J	G
LEAD	109			
VANADIUM	2.3			

nsample	PEN43SB0902
samp_date	3/3/2005
lab_id	WV0922-008
qc_type	NM
units	MG/KG
Pct_Solids	95.3
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.29	I	J	G
BARIUM	1.4		J	DG
COPPER	0.70	I	J	G
LEAD	0.90			
VANADIUM	2.1			

nsample	PEN43SB1001
samp_date	3/3/2005
lab_id	WV0922-009
qc_type	NM
units	MG/KG
Pct_Solids	94.7
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.31	I	J	G
BARIUM	1.4		J	DG
COPPER	0.70	I	J	G
LEAD	1.3			
VANADIUM	2.2			

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB1002	nsample	PEN43SB2001	nsample	PEN43SB2002
samp_date	3/3/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0922-010	lab_id	WV0951-004	lab_id	WV0951-005
qc_type	NM	qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG	units	MG/KG
Pct_Solids	94.8	Pct_Solids	94.6	Pct_Solids	95.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.20	U	UJ	G
BARIUM	2.2		J	DG
COPPER	0.86	I	J	G
LEAD	0.82			
VANADIUM	2.2			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.27	U	UJ	G
BARIUM	2.4		J	DG
COPPER	1.0	I	J	G
LEAD	1.8			
VANADIUM	2.9			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.24	U	UJ	G
BARIUM	0.32	I	U	A
COPPER	0.22	U	UJ	G
LEAD	0.24	I		
VANADIUM	0.44	U	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB2101
samp_date	3/4/2005
lab_id	WV0951-006
qc_type	NM
units	MG/KG
Pct_Solids	93.5
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.27	U	UJ	G
BARIUM	1.8		J	DG
COPPER	0.84	I	J	G
LEAD	0.96			
VANADIUM	2.8			

nsample	PEN43SB2102
samp_date	3/4/2005
lab_id	WV0951-007
qc_type	NM
units	MG/KG
Pct_Solids	93.9
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.24	U	UJ	G
BARIUM	0.92		J	DG
COPPER	0.45	I	J	G
LEAD	0.71			
VANADIUM	1.4	I		

nsample	PEN43SB2201
samp_date	3/4/2005
lab_id	WV0951-008
qc_type	NM
units	MG/KG
Pct_Solids	94.5
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.34	I	J	G
BARIUM	2.0		J	DG
COPPER	0.60	I	J	G
LEAD	1.0			
VANADIUM	2.7			

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB2202
samp_date	3/4/2005
lab_id	WV0951-009
qc_type	NM
units	MG/KG
Pct_Solids	94.1
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.23	U	UJ	G
BARIUM	1.5		J	DG
COPPER	0.73	I	J	G
LEAD	0.62			
VANADIUM	1.5	I		

nsample	PEN43SB2301
samp_date	3/4/2005
lab_id	WV0951-010
qc_type	NM
units	MG/KG
Pct_Solids	92.8
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.21	U	UJ	G
BARIUM	4.0		J	DG
COPPER	1.7	I	J	G
LEAD	2.1			
VANADIUM	1.8	I		

nsample	PEN43SB2501
samp_date	3/4/2005
lab_id	WV0951-001
qc_type	NM
units	MG/KG
Pct_Solids	90.3
DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	14.6		J	G
BARIUM	884		J	DG
COPPER	448		J	G
LEAD	1340			
VANADIUM	13.6			

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: M

nsample	PEN43SB2501D	nsample	PEN43SB2502
samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0951-002	lab_id	WV0951-003
qc_type	NM	qc_type	NM
units	MG/KG	units	MG/KG
Pct_Solids	89.5	Pct_Solids	95.4
DUP_OF:	PEN43SB2501	DUP_OF:	

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	5.3		J	G
BARIUM	270		J	DG
COPPER	930		J	G
LEAD	1390			
VANADIUM	11.2			

Parameter	Result	Lab Qual	Val Qual	Qual Code
ARSENIC	0.25	U	UJ	G
BARIUM	10.8		J	DG
COPPER	8.2		J	G
LEAD	1.1			
VANADIUM	2.4			

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB0601

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 92.0 **Lab Sample ID:** WV0922-001

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	2.6			P	1	0.74	0.26
7440-39-3	BARIUM, TOTAL	188			P	1	0.46	0.05
7440-50-8	COPPER, TOTAL	529			P	1	2.3	0.23
7439-92-1	LEAD, TOTAL	519			P	1	0.46	0.19
7440-62-2	VANADIUM, TOTAL	18.5			P	1	2.3	0.47

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB0602

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 93.8 **Lab Sample ID:** WV0922-002

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.35	I		P	1	0.52	0.18
7440-39-3	BARIUM, TOTAL	17.4			P	1	0.33	0.03
7440-50-8	COPPER, TOTAL	3.2			P	1	1.6	0.16
7439-92-1	LEAD, TOTAL	6.7			P	1	0.33	0.14
7440-62-2	VANADIUM, TOTAL	2.5			P	1	1.6	0.33

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB0701

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 93.1 **Lab Sample ID:** WV0922-003

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.36	I		P	1	0.55	0.19
7440-39-3	BARIUM, TOTAL	2.1			P	1	0.35	0.03
7440-50-8	COPPER, TOTAL	1.5	I		P	1	1.7	0.17
7439-92-1	LEAD, TOTAL	1.8			P	1	0.35	0.14
7440-62-2	VANADIUM, TOTAL	2.3			P	1	1.7	0.35

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB0702

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 94.8 **Lab Sample ID:** WV0922-004

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.17	U		P	1	0.48	0.17
7440-39-3	BARIUM, TOTAL	1.9			P	1	0.30	0.03
7440-50-8	COPPER, TOTAL	1.1	I		P	1	1.5	0.15
7439-92-1	LEAD, TOTAL	1.0			P	1	0.30	0.12
7440-62-2	VANADIUM, TOTAL	1.7			P	1	1.5	0.30

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB0801

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 94.6 **Lab Sample ID:** WV0922-005

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	1.8			P	1	0.62	0.22
7440-39-3	BARIUM, TOTAL	138			P	1	0.39	0.04
7440-50-8	COPPER, TOTAL	300			P	1	1.9	0.20
7439-92-1	LEAD, TOTAL	427			P	1	0.39	0.16
7440-62-2	VANADIUM, TOTAL	6.5			P	1	1.9	0.39

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB0802

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 94.6 **Lab Sample ID:** WV0922-006

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.29	I		P	1	0.73	0.26
7440-39-3	BARIUM, TOTAL	15.7			P	1	0.46	0.05
7440-50-8	COPPER, TOTAL	74.7			P	1	2.3	0.23
7439-92-1	LEAD, TOTAL	20.9			P	1	0.46	0.19
7440-62-2	VANADIUM, TOTAL	2.9			P	1	2.3	0.46

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB0901

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 93.4 **Lab Sample ID:** WV0922-007

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	1.3			P	1	0.65	0.23
7440-39-3	BARIUM, TOTAL	13.6			P	1	0.41	0.04
7440-50-8	COPPER, TOTAL	26.6			P	1	2.0	0.21
7439-92-1	LEAD, TOTAL	109			P	1	0.41	0.17
7440-62-2	VANADIUM, TOTAL	2.3			P	1	2.0	0.41

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB0902

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 95.3 **Lab Sample ID:** WV0922-008

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.29	I		P	1	0.53	0.19
7440-39-3	BARIUM, TOTAL	1.4			P	1	0.33	0.03
7440-50-8	COPPER, TOTAL	0.70	I		P	1	1.6	0.17
7439-92-1	LEAD, TOTAL	0.90			P	1	0.33	0.14
7440-62-2	VANADIUM, TOTAL	2.1			P	1	1.6	0.33

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1001

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 94.7 **Lab Sample ID:** WV0922-009

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.31	I		P	1	0.63	0.22
7440-39-3	BARIUM, TOTAL	1.4			P	1	0.39	0.04
7440-50-8	COPPER, TOTAL	0.70	I		P	1	2.0	0.20
7439-92-1	LEAD, TOTAL	1.3			P	1	0.39	0.16
7440-62-2	VANADIUM, TOTAL	2.2			P	1	2.0	0.40

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB1002

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 94.8 **Lab Sample ID:** WV0922-010

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.20	U		P	1	0.58	0.20
7440-39-3	BARIUM, TOTAL	2.2			P	1	0.36	0.04
7440-50-8	COPPER, TOTAL	0.86	I		P	1	1.8	0.18
7439-92-1	LEAD, TOTAL	0.82			P	1	0.36	0.15
7440-62-2	VANADIUM, TOTAL	2.2			P	1	1.8	0.37

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2001

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 94.6 **Lab Sample ID:** WV0951-004

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.27	U		P	1	0.75	0.27
7440-39-3	BARIUM, TOTAL	2.4			P	1	0.47	0.05
7440-50-8	COPPER, TOTAL	1.0	I		P	1	2.4	0.24
7439-92-1	LEAD, TOTAL	1.8			P	1	0.47	0.20
7440-62-2	VANADIUM, TOTAL	2.9			P	1	2.4	0.48

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2002

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 95.0 **Lab Sample ID:** WV0951-005

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.24	U		P	1	0.69	0.24
7440-39-3	BARIUM, TOTAL	0.32	I		P	1	0.43	0.04
7440-50-8	COPPER, TOTAL	0.22	U		P	1	2.2	0.22
7439-92-1	LEAD, TOTAL	0.24	I		P	1	0.43	0.18
7440-62-2	VANADIUM, TOTAL	0.44	U		P	1	2.2	0.44

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2101

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 93.5 **Lab Sample ID:** WV0951-006

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.27	U		P	1	0.76	0.27
7440-39-3	BARIUM, TOTAL	1.8			P	1	0.48	0.05
7440-50-8	COPPER, TOTAL	0.84	I		P	1	2.4	0.24
7439-92-1	LEAD, TOTAL	0.96			P	1	0.48	0.20
7440-62-2	VANADIUM, TOTAL	2.8			P	1	2.4	0.48

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2102

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 93.9 **Lab Sample ID:** WV0951-007

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.24	U		P	1	0.68	0.24
7440-39-3	BARIUM, TOTAL	0.92			P	1	0.43	0.04
7440-50-8	COPPER, TOTAL	0.45	I		P	1	2.1	0.21
7439-92-1	LEAD, TOTAL	0.71			P	1	0.43	0.18
7440-62-2	VANADIUM, TOTAL	1.4	I		P	1	2.1	0.43

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2201

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 94.5 **Lab Sample ID:** WV0951-008

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.34	I		P	1	0.71	0.25
7440-39-3	BARIUM, TOTAL	2.0			P	1	0.44	0.04
7440-50-8	COPPER, TOTAL	0.60	I		P	1	2.2	0.22
7439-92-1	LEAD, TOTAL	1.0			P	1	0.44	0.18
7440-62-2	VANADIUM, TOTAL	2.7			P	1	2.2	0.45

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2202

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 94.1 **Lab Sample ID:** WV0951-009

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.23	U		P	1	0.65	0.23
7440-39-3	BARIUM, TOTAL	1.5			P	1	0.41	0.04
7440-50-8	COPPER, TOTAL	0.73	I		P	1	2.0	0.21
7439-92-1	LEAD, TOTAL	0.62			P	1	0.41	0.17
7440-62-2	VANADIUM, TOTAL	1.5	I		P	1	2.0	0.41

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2301

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 92.8 **Lab Sample ID:** WV0951-010

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.21	U		P	1	0.61	0.21
7440-39-3	BARIUM, TOTAL	4.0			P	1	0.38	0.04
7440-50-8	COPPER, TOTAL	1.7	I		P	1	1.9	0.19
7439-92-1	LEAD, TOTAL	2.1			P	1	0.38	0.16
7440-62-2	VANADIUM, TOTAL	1.8	I		P	1	1.9	0.39

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2501

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 90.3 **Lab Sample ID:** WV0951-001

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	14.6			P	5	3.4	1.21
7440-39-3	BARIUM, TOTAL	884			P	1	0.43	0.04
7440-50-8	COPPER, TOTAL	448			P	5	11	1.08
7439-92-1	LEAD, TOTAL	1340			P	5	2.1	0.89
7440-62-2	VANADIUM, TOTAL	13.6			P	5	11	2.18

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2501D

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 89.5 **Lab Sample ID:** WV0951-002

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	5.3			P	1	0.78	0.28
7440-39-3	BARIUM, TOTAL	270			P	1	0.49	0.05
7440-50-8	COPPER, TOTAL	930			P	5	12	1.23
7439-92-1	LEAD, TOTAL	1390			P	5	2.4	1.01
7440-62-2	VANADIUM, TOTAL	11.2			P	1	2.4	0.50

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB2502

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 95.4 **Lab Sample ID:** WV0951-003

Concentration Units : mg/Kg

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7440-38-2	ARSENIC, TOTAL	0.25	U		P	1	0.70	0.25
7440-39-3	BARIUM, TOTAL	10.8			P	1	0.44	0.04
7440-50-8	COPPER, TOTAL	8.2			P	1	2.2	0.22
7439-92-1	LEAD, TOTAL	1.1			P	1	0.44	0.18
7440-62-2	VANADIUM, TOTAL	2.4			P	1	2.2	0.44

Color Before: N/A Texture: N/A

Color After: N/A Clarity After: N/A

Comments:

APPENDIX C
SUPPORT DOCUMENTATION

TETRA TECH NUS, INC.

CHAIN OF CUSTODY

WV092

NUMBER 4393

PAGE 1 OF 1

PROJECT NO: N4821	FACILITY: PEN	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX 8428 7247 7067		CITY, STATE Westbrook Me 04092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G

PRESERVATIVE USED: 4° 4°

TYPE OF ANALYSIS

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	8270/8270 SIM TCL SVOC/PAHS	6010B As/Ba/Cu/Pb/Na	COMMENTS
3/3	1055	PEN43SB0601	SB06	3	4	SO	G	2	1	1	
3/3	1100	PEN43SB0602	SB06	7	9	SO	G	2	1	1	
3/3	1115	PEN43SB0701	SB07	3	5	SO	G	2	1	1	
3/3	1120	PEN43SB0702	SB07	7	9	SO	G	2	1	1	
3/3	1400	PEN43SB0801	SB08	2	3	SO	G	2	1	1	
3/3	1405	PEN43SB0802	SB08	6	8	SO	G	2	1	1	
3/3	1420	PEN43SB0901	SB09	2	4	SO	G	2	1	1	
3/3	1425	PEN43SB0902	SB09	6	8	SO	G	2	1	1	
3/3	1555	PEN43SB1001	SB10	2	4	SO	G	2	1	1	
3/3	1600	PEN43SB1002	SB10	6	8	SO	G	2	1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	3/3/05	1730	1. RECEIVED BY	3/4/05	0910
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

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WV0951, WV0952

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2610 | PAGE 3 OF 3

PROJECT NO: 4821	FACILITY: PEN 43	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Bill Okow	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX 8428 7247 7090		CITY, STATE Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 6010B Pb/Ba/Cu/Pb/Na	8270 Tcl SVOC PAHs								COMMENTS
3/4	1230	PEN 43 SB2502		4	5	SO	G	2	1	1								
3/4	1240	PEN 43 SB2001		2	3	SO	G	2	1	1								
3/4	1245	PEN 43 SB2002		5	7	SO	G	2	1	1								
3/4	1305	PEN 43 SB 2101		2	3	SO	G	2	1	1								
3/4	1310	PEN43SB2102		5	7	SO	G	2	1	1								
3/4	1320	PEN 43SB2201		2	3	SO	G	2	1	1								
3/4	1325	PEN 43 SB2202		7	8	SO	G	2	1	1								
3/4	1335	PEN 43 SB 2301		2	3	SO	G	2	1	1								
3/4	1340	PEN43 SB2302		6 WW 3/4/05	~~7~~ 7	SO	G	2	1	1								
3/4		PEN43SB 2401		~~6~~	~~7~~	SO	G	2	1	1								
3/4		PEN 43 SB 2402				SO	G	2	1	1								

3/11/05

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
	3/4/05	1630		3/5/05	1235
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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WW0943, WW0951

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 2601 PAGE 2 OF 3

PROJECT NO: 4821	FACILITY: PEW 43	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX 8428 7247 7090		CITY, STATE Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, WIPE, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 6010B As/Ba/Cu/Pb/Va	8270/SIM TCL SVOC/PAHs							COMMENTS
3/4	0945	PEW43SB1402		4	6	SO	G	2	1	1							
3/4	1010	PEW43SB1601		2	3	SO	G	2	1	1							
3/4	1015	PEW43SB1602		7	8	SO	G	2	1	1							
3/4	1025	PEW43SB1701		2	3	SO	G	2	1	1							
3/4	1025	PEW43SB1701MS		2	3	SO	G	2	1	1							
3/4	1025	PEW43SB1701MSD		2	3	SO	G	2	1	1							
3/4	1030	PEW43SB1702		5	7	SO	G	2	1	1							
3/4	1050	PEW43SB1801		2	3	SO	G	2	1	1							
3/4	1055	PEW43SB1802		7	9	SO	G	2	1	1							
3/4	1120	PEW43SB1901		2	3	SO	G	2	1	1							
3/4	1125	PEW43SB1902		6	8	SO	G	2	1	1							
3/4	1225	PEW43SB2501		2	3	SO	G	2	1	1							
3/4	1225	PEW43SB2501D		2	3	SO	G	2	1	1							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	3/4/05	1630	1. RECEIVED BY	3/5/05	1235
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R

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HOLDTIME

SDG 3551

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB0802	WV0922-006	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB0601	WV0922-001	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB2001	WV0951-004	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB1002	WV0922-010	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB1002	WV0922-010	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB1001	WV0922-009	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB1001	WV0922-009	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB0902	WV0922-008	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB2002	WV0951-005	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB0901	WV0922-007	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB2002	WV0951-005	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB0801	WV0922-005	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB0801	WV0922-005	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB0702	WV0922-004	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB0702	WV0922-004	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB0701	WV0922-003	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB0701	WV0922-003	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB0602	WV0922-002	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB0602	WV0922-002	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB0902	WV0922-008	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB2301	WV0951-010	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB0601	WV0922-001	NM	3/3/2005	3/9/2005	3/10/2005	6	1	7
M	MG/KG	PEN43SB2502	WV0951-003	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2502	WV0951-003	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB2501D	WV0951-002	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
M	MG/KG	PEN43SB2501D	WV0951-002	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2501D	WV0951-002	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB2501	WV0951-001	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
M	MG/KG	PEN43SB2001	WV0951-004	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2301	WV0951-010	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB0802	WV0922-006	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
M	MG/KG	PEN43SB2202	WV0951-009	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2202	WV0951-009	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB2201	WV0951-008	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2201	WV0951-008	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB2102	WV0951-007	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2102	WV0951-007	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB2101	WV0951-006	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
M	MG/KG	PEN43SB2101	WV0951-006	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB2501	WV0951-001	NM	3/4/2005	3/9/2005	3/10/2005	5	1	6
M	MG/KG	PEN43SB0901	WV0922-007	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
TS	%	PEN43SB2001	WV0951-4	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2002	WV0951-15	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2002	WV0951-5	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2101	WV0951-16	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2101	WV0951-6	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2102	WV0951-17	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2102	WV0951-7	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB0601	WV0922-1	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB2001	WV0951-14	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2202	WV0951-9	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SB2201	WV0951-18	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2301	WV0951-10	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2301	WV0951-20	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2501	WV0951-1	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2501	WV0951-11	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2501D	WV0951-12	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2501D	WV0951-2	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2502	WV0951-3	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2502	WV0951-13	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB2201	WV0951-8	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB0602	WV0922-12	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB2202	WV0951-19	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB0601	WV0922-11	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB1002	WV0922-20	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0602	WV0922-2	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0701	WV0922-13	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0701	WV0922-3	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0702	WV0922-14	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SB0702	WV0922-4	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0801	WV0922-15	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0801	WV0922-5	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB1001	WV0922-19	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB1001	WV0922-9	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0902	WV0922-8	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0902	WV0922-18	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0901	WV0922-7	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0901	WV0922-17	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0802	WV0922-6	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB0802	WV0922-16	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
TS	%	PEN43SB1002	WV0922-10	NM	3/3/2005	3/7/2005	3/8/2005	4	1	5
OS	%	PEN43SB1002	WV0922-20	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
OS	%	PEN43SB1001RA	WV0922-9RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20
OS	%	PEN43SB0701	WV0922-13	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	%	PEN43SB0802	WV0922-16	NM	3/3/2005	3/9/2005	3/17/2005	6	8	14
OS	%	PEN43SB1001	WV0922-19	NM	3/3/2005	3/9/2005	3/18/2005	6	9	15
OS	%	PEN43SB0902RA	WV0922-8RA	NM	3/3/2005	3/9/2005	3/23/2005	6	14	20

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CTO 355 NAS PENSACOLA
SDG: CTO355-1

Sample Receipt

The following samples were received on March 4 and March 5, 2005 and were logged in under Katahdin Analytical Services work order numbers WV0922 and WV0951 for a hardcopy due date of March 31, 2005.

KATAHDIN Sample No.	TTNUS Sample Identification
WV0922-1	PEN43SB0601
WV0922-2	PEN43SB0602
WV0922-3	PEN43SB0701
WV0922-4	PEN43SB0702
WV0922-5	PEN43SB0801
WV0922-6	PEN43SB0802
WV0922-7	PEN43SB0901
WV0922-8	PEN43SB0902
WV0922-9	PEN43SB1001
WV0922-10	PEN43SB1002
WV0922-11	PEN43SB0601
WV0922-12	PEN43SB0602
WV0922-13	PEN43SB0701
WV0922-14	PEN43SB0702
WV0922-15	PEN43SB0801
WV0922-16	PEN43SB0802
WV0922-17	PEN43SB0901
WV0922-18	PEN43SB0902
WV0922-19	PEN43SB1001
WV0922-20	PEN43SB1002
WV0951-1	PEN43SB2501
WV0951-2	PEN43SB2501D
WV0951-3	PEN43SB2502
WV0951-4	PEN43SB2001
WV0951-5	PEN43SB2002
WV0951-6	PEN43SB2101
WV0951-7	PEN43SB2102
WV0951-8	PEN43SB2201
WV0951-9	PEN43SB2202
WV0951-10	PEN43SB2301
WV0951-11	PEN43SB2501
WV0951-12	PEN43SB2501D
WV0951-13	PEN43SB2502
WV0951-14	PEN43SB2001

WV0951-15	PEN43SB2002
WV0951-16	PEN43SB2101
WV0951-17	PEN43SB2102
WV0951-18	PEN43SB2201
WV0951-19	PEN43SB2202
WV0951-20	PEN43SB2301

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Andrea J. Colby**. This narrative is an integral part of the Report of Analysis.

Organics Laboratory

The samples of SDG CTO355-1 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, and III 1996, Office of Solid Waste and Emergency Response, U.S. EPA, for the specific methods listed below or on the Report of Analysis. Some manual integrations may have been performed due to split peaks and/or corrected baselines. All have been flagged with a "M" (software-generated) on the pertinent quantitation reports.

8270C SIM Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

The initial calibration analyzed on the K instrument on 03/17/05 had %RSD values for three analytes that exceeded the method acceptance limit of 15%. For two analytes, a linear model was used for quantitation instead of an average response factor. The target analyte 1-methylnaphthalene failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. This compound was calibrated using the average model.

The initial calibration standards (files U0471 and U0473) had responses for the internal standards chrysene-d12 and/or perylene-d12, which were all low and outside the method acceptance limits of -50% to +100% of the responses of the mid-level calibration standard from the initial calibration performed on 03/21/05.

The calibration verification standard (CV) (file X7512) had a low response for the (CCC) calibration check compound pentachlorophenol, which resulted in a %D that was outside the method acceptance limit of 20%D.

The calibration verification standard (CV) (file X7572) had a low response for the (CCC) calibration check compound di-n-octylphthalate, which resulted in a %D that was outside the method acceptance limit of 20%D.

Samples WV0922-11, 15, 17 and 19 and WV0951-19RE had high recoveries for one surrogate, which were outside the method established limits. Since a high recovery would indicate a high bias and no target analytes were detected above the PQL, the samples were not reanalyzed.

Samples WV0922-16 and WV0951-19RA had low recoveries for one or more surrogates, which were outside the method established limits. These samples were reextracted five and fourteen days, respectively, out of hold time and analyzed. Results for both analyses are reported.

The laboratory method blanks WG14977-1 and WG15035-1RA had high recoveries for one surrogate, which were outside the laboratory established acceptance limits. Since a high recovery would indicate a high bias and there were no target analytes detected above the PQL, the samples were not reanalyzed.

The laboratory control samples (LCSs) WG14977-2 and WG15659-2 and the laboratory control sample duplicate (LCSD) WG15362-3 had high recoveries for one or more surrogates, which were outside the laboratory established acceptance limits. Since the recoveries of the spiked analytes were acceptable, the LCS/LCSD were not reanalyzed.

The laboratory control sample (LCS) WG15039-2 had a low recovery for one surrogate, which was outside the laboratory established acceptance limits. Since the recoveries of the spiked analytes were acceptable, the LCS was not reanalyzed.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of Katahdin SDG CTO355-1 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Waste", SW-846, November 1986, Third Edition.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample Nos. WV0922-(1-10 and WV0951-(1-10) were digested for ICP analysis on 03/09-05 (QC Batch VC09ICS0) in accordance with USEPA Method 3050B. Katahdin Sample No. WV0922-1 was prepared with duplicate matrix-spiked aliquots.

ICP analyses of SDG CTO355-1 sample digestates were performed using a Thermo Jarrell Ash (TJA) Trace ICP spectrometer and a TJA ICAP 61E ICP spectrometer. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following comments or exceptions:

Some of the results for run QC samples (ICV, ICB, CCV, CCB, ICSA, and ICSAB) included in the accompanying data package may have exceeded acceptance limits for some elements. Please note that all client samples and batch QC samples associated with out-of-control results for run QC samples were subsequently reanalyzed for the analytes in question.

Matrix QC Summary

The matrix-spike recoveries for barium for Katahdin Sample No. WV0922-1 are outside the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added). Recoveries for all other elements are acceptable.

The matrix spike duplicate analysis of Katahdin Sample No. WV0922-1 is within the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for all analytes.

The serial dilution analysis of Katahdin Sample No. WV0922-1 is within the laboratory's ICP serial dilution acceptance limit (<10% difference between the original sample result and the result for a 5-fold dilution of the sample, if the result for the dilution is at least ten times the instrument detection limit) for all analytes.

Wet Chemistry Analysis

The samples of SDG CTO355-1 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total solids were performed according to "U.S. EPA Contract Laboratory Program Statement of Work for Inorganic Analysis", SOW 7/88.

All analyses were performed within analytical hold time. All quality control criteria were met.

No deviations were noted by the Wet Chemistry group.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
040705

Leslie Dimond
Quality Assurance Officer

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: CTO355-1 **SOW No.** SW846

Client Field ID	Lab Sample ID
PEN43SB0601	WV0922-001
PEN43SB0601	WV0922-001P
PEN43SB0601	WV0922-001S
PEN43SB0602	WV0922-002
PEN43SB0701	WV0922-003
PEN43SB0702	WV0922-004
PEN43SB0801	WV0922-005
PEN43SB0802	WV0922-006
PEN43SB0901	WV0922-007
PEN43SB0902	WV0922-008
PEN43SB1001	WV0922-009
PEN43SB1002	WV0922-010
PEN43SB2001	WV0951-004
PEN43SB2002	WV0951-005
PEN43SB2101	WV0951-006
PEN43SB2102	WV0951-007
PEN43SB2201	WV0951-008
PEN43SB2202	WV0951-009
PEN43SB2301	WV0951-010
PEN43SB2501	WV0951-001
PEN43SB2501D	WV0951-002
PEN43SB2502	WV0951-003

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Edward A. Morgan Name: Edward A. Morgan

Date: March 31, 2005 Title: Senior Chemist

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICV

File: AVC18A Mar 18, 2005 13:28

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	18400.94	92.0
ARSENIC	600.0	583.90	97.3
CALCIUM	20000.0	19872.38	99.4
IRON	20000.0	19843.25	99.2
LEAD	550.0	523.17	95.1
MAGNESIUM	20000.0	20136.71	100.7

SAMPLE: CCV

File: AVC18A Mar 18, 2005 14:14

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47658.68	95.3
ARSENIC	1000.0	987.87	98.8
CALCIUM	50000.0	49778.39	99.6
IRON	20000.0	19857.36	99.3
LEAD	1000.0	974.63	97.5
MAGNESIUM	50000.0	48998.27	98.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: AVC18A Mar 18, 2005 15:44

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	44324.87	88.6
ARSENIC	1000.0	960.64	96.1
CALCIUM	50000.0	47570.52	95.1
IRON	20000.0	18995.84	95.0
LEAD	1000.0	944.76	94.5
MAGNESIUM	50000.0	46945.67	93.9

SAMPLE: CCV

File: AVC18A Mar 18, 2005 16:58

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	44817.11	89.6 OK
ARSENIC	1000.0	1002.28	100.2
CALCIUM	50000.0	49091.62	98.2
IRON	20000.0	19657.55	98.3
LEAD	1000.0	989.32	98.9
MAGNESIUM	50000.0	48116.04	96.2

OK-no reported results for Al bracketed by this CCV.
EMF 4/22/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: AVC18A Mar 18, 2005 18:34

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45907.68	91.8
ARSENIC	1000.0	1058.34	105.8
CALCIUM	50000.0	51005.47	102.0
IRON	20000.0	20423.57	102.1
LEAD	1000.0	1031.95	103.2
MAGNESIUM	50000.0	49537.38	99.1

SAMPLE: CCV

File: AVC18A Mar 18, 2005 20:00

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	44221.13	88.4 *
ARSENIC	1000.0	1100.34	110.0
CALCIUM	50000.0	51273.28	102.5
IRON	20000.0	20703.43	103.5
LEAD	1000.0	1081.88	108.2
MAGNESIUM	50000.0	49782.16	99.6

ok-no reported results for Al bracketed by this CCV. EMF 4/22/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: AVC18A Mar 18, 2005 21:27

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	38726.59	77.5 *
ARSENIC	1000.0	1008.99	100.9
CALCIUM	50000.0	46040.01	92.1
IRON	20000.0	18714.19	93.6
LEAD	1000.0	980.03	98.0
MAGNESIUM	50000.0	44577.82	89.2 *

SAMPLE: CCV

File: AVC18A Mar 18, 2005 22:53

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	38895.90	77.8 *
ARSENIC	1000.0	1042.77	104.3
CALCIUM	50000.0	46669.06	93.3
IRON	20000.0	19072.73	95.4
LEAD	1000.0	998.38	99.8
MAGNESIUM	50000.0	45086.76	90.2

ok no reported results for Al+Mg bracketed by these CCVs. EMF 4/22/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: AVC18A Mar 18, 2005 23:58

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	39354.82	78.7 *
ARSENIC	1000.0	1067.46	106.7
CALCIUM	50000.0	47417.20	94.8
IRON	20000.0	19432.34	97.2
LEAD	1000.0	1021.78	102.2
MAGNESIUM	50000.0	45784.86	91.6

ok - no reported results for Al bracketed by this CCV. EMF 4/22/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICV

File: AVC23A Mar 23, 2005 12:21

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	18579.45	92.9
ARSENIC	600.0	596.45	99.4
CALCIUM	20000.0	20216.25	101.1
IRON	20000.0	20090.14	100.5
LEAD	550.0	549.91	100.0
MAGNESIUM	20000.0	21083.27	105.4

SAMPLE: CCV

File: AVC23A Mar 23, 2005 13:15

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47548.52	95.1
ARSENIC	1000.0	998.31	99.8
CALCIUM	50000.0	50384.43	100.8
IRON	20000.0	19977.73	99.9
LEAD	1000.0	1005.63	100.6
MAGNESIUM	50000.0	51008.49	102.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: AVC23A Mar 23, 2005 14:42

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46479.26	93.0
ARSENIC	1000.0	998.72	99.9
CALCIUM	50000.0	50007.59	100.0
IRON	20000.0	19848.70	99.2
LEAD	1000.0	1001.64	100.2
MAGNESIUM	50000.0	50566.37	101.1

SAMPLE: CCV

File: AVC23A Mar 23, 2005 16:08

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45517.50	91.0
ARSENIC	1000.0	1032.66	103.3
CALCIUM	50000.0	51001.72	102.0
IRON	20000.0	20117.46	100.6
LEAD	1000.0	1060.41	106.0
MAGNESIUM	50000.0	52362.04	104.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: AVC23A Mar 23, 2005 17:20

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45634.80	91.3
ARSENIC	1000.0	1048.77	104.9
CALCIUM	50000.0	51465.09	102.9
IRON	20000.0	20349.72	101.7
LEAD	1000.0	1079.72	108.0
MAGNESIUM	50000.0	52591.78	105.2

SAMPLE: CCV

File: AVC23A Mar 23, 2005 18:46

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	38858.07	77.7 •
ARSENIC	1000.0	928.90	92.9
CALCIUM	50000.0	44774.99	89.5 OK
IRON	20000.0	17719.92	88.6 •
LEAD	1000.0	951.47	95.1
MAGNESIUM	50000.0	45980.54	92.0

OK- no reported results for Al or Fe bracketed by two CCV.
EWF 4/22/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: AVC23A Mar 23, 2005 20:13

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	42839.85	85.7 *
ARSENIC	1000.0	1004.76	100.5
CALCIUM	50000.0	49045.65	98.1
IRON	20000.0	19486.01	97.4
LEAD	1000.0	1030.42	103.0
MAGNESIUM	50000.0	50410.62	100.8

SAMPLE: CCV

File: AVC23A Mar 23, 2005 21:39

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	43777.77	87.6 *
ARSENIC	1000.0	1044.31	104.4
CALCIUM	50000.0	50340.29	100.7
IRON	20000.0	20039.70	100.2
LEAD	1000.0	1058.95	105.9
MAGNESIUM	50000.0	51718.72	103.4

Ok no reported results for Al bracketed by these CCVs.
EWF 4/22/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: AVC23A Mar 23, 2005 23:06

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	40074.96	80.1 *
ARSENIC	1000.0	969.29	96.9
CALCIUM	50000.0	46541.53	93.1
IRON	20000.0	18495.70	92.5
LEAD	1000.0	988.78	98.9
MAGNESIUM	50000.0	48109.81	96.2

SAMPLE: CCV

File: AVC23A Mar 24, 2005 0:32

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	40785.11	81.6 *
ARSENIC	1000.0	954.56	95.5
CALCIUM	50000.0	46665.95	93.3
IRON	20000.0	18513.15	92.6
LEAD	1000.0	978.75	97.9
MAGNESIUM	50000.0	47938.17	95.9

OK - See pg. 4000034.
EJF 4/22/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: AVC23A Mar 24, 2005 1:59

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45015.97	90.0
ARSENIC	1000.0	1035.91	103.6
CALCIUM	50000.0	50812.08	101.6
IRON	20000.0	20177.64	100.9
LEAD	1000.0	1064.59	106.5
MAGNESIUM	50000.0	52243.04	104.5

SAMPLE: CCV

File: AVC23A Mar 24, 2005 3:26

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	43683.26	87.4 *
ARSENIC	1000.0	1015.76	101.6
CALCIUM	50000.0	49735.06	99.5
IRON	20000.0	19795.93	99.0
LEAD	1000.0	1043.43	104.3
MAGNESIUM	50000.0	51169.48	102.3

OK - See pg. 4000034.
2uF 4/22/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: AVC23A Mar 24, 2005 4:52

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	43044.17	86.1
ARSENIC	1000.0	998.78	99.9
CALCIUM	50000.0	48882.48	97.8
IRON	20000.0	19475.37	97.4
LEAD	1000.0	1024.11	102.4
MAGNESIUM	50000.0	50360.68	100.7

OK - See pg. 4000034.
EUF 4/22/05

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICV

File: BVC10A Mar 10, 2005 13:03

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19442.19	97.2
BARIUM	500.0	510.22	102.0
CALCIUM	20000.0	19833.77	99.2
COPPER	500.0	478.42	95.7
IRON	20000.0	20290.01	101.5
MAGNESIUM	20000.0	19468.96	97.3
VANADIUM	500.0	518.73	103.7

SAMPLE: CCV

File: BVC10A Mar 10, 2005 13:38

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49371.59	98.7
BARIUM	1000.0	1010.00	101.0
CALCIUM	50000.0	50335.94	100.7
COPPER	1000.0	1004.20	100.4
IRON	20000.0	20343.80	101.7
MAGNESIUM	50000.0	49427.22	98.9
VANADIUM	1000.0	1016.62	101.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: BVC10A Mar 10, 2005 14:29

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49593.22	99.2
BARIUM	1000.0	1013.08	101.3
CALCIUM	50000.0	51237.80	102.5
COPPER	1000.0	1009.86	101.0
IRON	20000.0	20635.25	103.2
MAGNESIUM	50000.0	49832.68	99.7
VANADIUM	1000.0	1027.47	102.7

SAMPLE: CCV

File: BVC10A Mar 10, 2005 15:50

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50020.22	100.0
BARIUM	1000.0	1023.44	102.3
CALCIUM	50000.0	52398.47	104.8
COPPER	1000.0	1012.20	101.2
IRON	20000.0	20963.85	104.8
MAGNESIUM	50000.0	50510.81	101.0
VANADIUM	1000.0	1042.33	104.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: BVC10A Mar 10, 2005 16:57

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50157.89	100.3
BARIUM	1000.0	1027.21	102.7
CALCIUM	50000.0	52998.13	106.0
COPPER	1000.0	1011.20	101.1
IRON	20000.0	21087.43	105.4
MAGNESIUM	50000.0	50780.99	101.6
VANADIUM	1000.0	1050.16	105.0

SAMPLE: CCV

File: BVC10A Mar 10, 2005 18:06

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50029.13	100.1
BARIUM	1000.0	1026.13	102.6
CALCIUM	50000.0	53604.01	107.2
COPPER	1000.0	1013.09	101.3
IRON	20000.0	21205.86	106.0
MAGNESIUM	50000.0	50997.48	102.0
VANADIUM	1000.0	1048.49	104.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: BVC10A Mar 10, 2005 19:14

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50180.74	100.4
BARIUM	1000.0	1027.75	102.8
CALCIUM	50000.0	53518.66	107.0
COPPER	1000.0	1016.70	101.7
IRON	20000.0	21056.04	105.3
MAGNESIUM	50000.0	51106.04	102.2
VANADIUM	1000.0	1049.84	105.0

SAMPLE: CCV

File: BVC10A Mar 10, 2005 20:05

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50469.90	100.9
BARIUM	1000.0	1030.49	103.0
CALCIUM	50000.0	53713.82	107.4
COPPER	1000.0	1020.85	102.1
IRON	20000.0	21152.67	105.8
MAGNESIUM	50000.0	51381.72	102.8
VANADIUM	1000.0	1054.10	105.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICV

File: BVC24A Mar 24, 2005 11:23

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19527.40	97.6
CALCIUM	20000.0	19302.86	96.5
COPPER	500.0	473.05	94.6
IRON	20000.0	20084.65	100.4
MAGNESIUM	20000.0	19357.23	96.8
VANADIUM	500.0	502.89	100.6

SAMPLE: CCV

File: BVC24A Mar 24, 2005 12:00

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49764.51	99.5
CALCIUM	50000.0	47288.54	94.6
COPPER	1000.0	993.66	99.4
IRON	20000.0	19650.74	98.3
MAGNESIUM	50000.0	49198.63	98.4
VANADIUM	1000.0	979.09	97.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: BVC24A Mar 24, 2005 13:13

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47950.74	95.9
CALCIUM	50000.0	47902.16	95.8
COPPER	1000.0	941.07	94.1
IRON	20000.0	19291.10	96.5
MAGNESIUM	50000.0	48013.95	96.0
VANADIUM	1000.0	961.71	96.2

SAMPLE: CCV

File: BVC24A Mar 24, 2005 14:20

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47028.46	94.1
CALCIUM	50000.0	48332.74	96.7
COPPER	1000.0	925.26	92.5
IRON	20000.0	19370.22	96.9
MAGNESIUM	50000.0	47345.37	94.7
VANADIUM	1000.0	959.45	95.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCV

File: BVC24A Mar 24, 2005 15:24

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46953.49	93.9
CALCIUM	50000.0	47948.66	95.9
COPPER	1000.0	926.01	92.6
IRON	20000.0	19350.94	96.8
MAGNESIUM	50000.0	47096.03	94.2
VANADIUM	1000.0	956.86	95.7

SAMPLE: CCV

File: BVC24A Mar 24, 2005 16:32

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	45601.80	91.2
CALCIUM	50000.0	47744.03	95.5
COPPER	1000.0	895.52	89.6 OK
IRON	20000.0	18948.06	94.7
MAGNESIUM	50000.0	46175.70	92.4
VANADIUM	1000.0	940.86	94.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CRI

File: AVC18A Mar 18, 2005 13:50

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	17.04	85.2
LEAD	6.0	5.36	89.3

SAMPLE: CRI

File: AVC18A Mar 18, 2005 16:36

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	19.59	98.0
LEAD	6.0	7.63	127.2

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CRI

File: AVC18A Mar 18, 2005 21:05

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	22.28	111.4
LEAD	6.0	7.41	123.5

SAMPLE: CRI

File: AVC18A Mar 18, 2005 23:36

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	19.07	95.3
LEAD	6.0	5.75	95.8

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CRI

File: AVC23A Mar 23, 2005 12:54

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	19.21	96.0
LEAD	6.0	7.61	126.8

SAMPLE: CRI

File: AVC23A Mar 23, 2005 19:51

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	19.73	98.7
LEAD	6.0	6.93	115.5

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CRI

File: AVC23A Mar 24, 2005 00:11

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	20.14	100.7
LEAD	6.0	7.35	122.5

SAMPLE: CRI

File: AVC23A Mar 24, 2005 04:31

Analyte	TRUE	FOUND	% R
ARSENIC	20.0	23.82	119.1
LEAD	6.0	5.89	98.2

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CRI

File: BVC10A Mar 10, 2005 13:20

Analyte	TRUE	FOUND	% R
COPPER	50.0	48.26	96.5
VANADIUM	100.0	105.45	105.5

SAMPLE: CRI

File: BVC10A Mar 10, 2005 14:09

Analyte	TRUE	FOUND	% R
COPPER	50.0	50.16	100.3
VANADIUM	100.0	108.13	108.1

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CRI

File: BVC10A Mar 10, 2005 17:48

Analyte	TRUE	FOUND	% R
COPPER	50.0	49.20	98.4
VANADIUM	100.0	111.65	111.7

SAMPLE: CRI

File: BVC10A Mar 10, 2005 19:48

Analyte	TRUE	FOUND	% R
COPPER	50.0	49.48	99.0
VANADIUM	100.0	113.09	113.1

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CRI

File: BVC24A Mar 24, 2005 11:43

Analyte	TRUE	FOUND	% R
COPPER	50.0	48.16	96.3
VANADIUM	100.0	104.04	104.0

SAMPLE: CRI

File: BVC24A Mar 24, 2005 16:15

Analyte	TRUE	FOUND	% R
COPPER	50.0	44.13	88.3
VANADIUM	100.0	102.66	102.7

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

SAMPLE: PQL

File: AVC18A Mar 18, 2005 13:42 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	279.59	93.2
ARSENIC	8.0	9.29	116.1
CALCIUM	50.0	56.18	112.4
IRON	100.0	103.16	103.2
LEAD	5.0	3.42	68.4
MAGNESIUM	50.0	75.84	151.7 •

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

SAMPLE: PQL

File: AVC23A Mar 23, 2005 12:47 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	232.54	77.5
ARSENIC	8.0	6.85	85.6
CALCIUM	50.0	47.01	94.0
IRON	100.0	107.61	107.6
LEAD	5.0	5.37	107.4
MAGNESIUM	50.0	59.01	118.0

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

SAMPLE: PQL

File: BVC10A Mar 10, 2005 13:14 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	298.94	99.6
BARIUM	5.0	3.51	70.2
CALCIUM	50.0	47.10	94.2
COPPER	25.0	24.52	98.1
IRON	100.0	105.63	105.6
MAGNESIUM	50.0	42.66	85.3
VANADIUM	25.0	24.44	97.8

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

SAMPLE: PQL

File: BVC24A Mar 24, 2005 11:35 Concentration Units: ug/L

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	279.82	93.3
CALCIUM	50.0	51.06	102.1
COPPER	25.0	25.62	102.5
IRON	100.0	119.90	119.9
MAGNESIUM	50.0	60.53	121.1
VANADIUM	25.0	26.89	107.6

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICB

File: AVC18A Mar 18, 2005 13:35

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	-3.04	I
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC18A Mar 18, 2005 14:21

Analyte	Result	C
ALUMINUM	35.32	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC18A Mar 18, 2005 15:52

Analyte	Result	C
ALUMINUM	42.80	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCB

File: AVC18A Mar 18, 2005 17:05

Analyte	Result	C
ALUMINUM	85.05	I
ARSENIC	2.81	U
CALCIUM	-7.93	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC18A Mar 18, 2005 18:41

Analyte	Result	C
ALUMINUM	162.76	I
ARSENIC	2.81	U
CALCIUM	-12.50	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC18A Mar 18, 2005 20:07

Analyte	Result	C
ALUMINUM	133.37	I
ARSENIC	2.81	U
CALCIUM	-19.09	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCB

File: AVC18A Mar 18, 2005 21:34

Analyte	Result	C
ALUMINUM	145.79	I
ARSENIC	2.81	U
CALCIUM	-19.64	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC18A Mar 18, 2005 23:00

Analyte	Result	C
ALUMINUM	145.30	I
ARSENIC	2.81	U
CALCIUM	-21.50	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC18A Mar 19, 2005 0:05

Analyte	Result	C
ALUMINUM	202.56	I
ARSENIC	2.81	U
CALCIUM	-23.30	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICB

File: AVC23A Mar 23, 2005 12:38

Analyte	Result	C
ALUMINUM	-29.34	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	-22.98	I
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC23A Mar 23, 2005 13:23

Analyte	Result	C
ALUMINUM	69.87	I
ARSENIC	2.81	U
CALCIUM	7.24	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC23A Mar 23, 2005 14:49

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	-8.26	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCB

File: AVC23A Mar 23, 2005 16:15

Analyte	Result	C
ALUMINUM	-21.14	I
ARSENIC	2.81	U
CALCIUM	-13.80	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC23A Mar 23, 2005 17:27

Analyte	Result	C
ALUMINUM	-18.97	I
ARSENIC	2.81	U
CALCIUM	-13.84	I
IRON	35.58	I
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC23A Mar 23, 2005 18:54

Analyte	Result	C
ALUMINUM	-58.52	I
ARSENIC	2.81	U
CALCIUM	-16.20	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCB

File: AVC23A Mar 23, 2005 20:20

Analyte	Result	C
ALUMINUM	-55.38	I
ARSENIC	2.81	U
CALCIUM	-13.29	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	13.95	I

SAMPLE: CCB

File: AVC23A Mar 23, 2005 21:47

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	-17.71	I
IRON	29.33	I
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC23A Mar 23, 2005 23:13

Analyte	Result	C
ALUMINUM	24.49	I
ARSENIC	2.81	U
CALCIUM	-17.60	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCB

File: AVC23A Mar 24, 2005 0:40

Analyte	Result	C
ALUMINUM	14.60	U
ARSENIC	2.81	U
CALCIUM	-12.92	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.19	I

SAMPLE: CCB

File: AVC23A Mar 24, 2005 2:06

Analyte	Result	C
ALUMINUM	-32.66	I
ARSENIC	2.81	U
CALCIUM	-14.96	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVC23A Mar 24, 2005 3:33

Analyte	Result	C
ALUMINUM	-51.66	I
ARSENIC	2.81	U
CALCIUM	-15.89	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCB

File: AVC23A Mar 24, 2005 5:00

Analyte	Result	C
ALUMINUM	-41.92	I
ARSENIC	2.81	U
CALCIUM	-12.42	I
IRON	-111.50	
LEAD	2.07	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICB

File: BVC10A Mar 10, 2005 13:09

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC10A Mar 10, 2005 13:44

Analyte	Result	C
ALUMINUM	28.56	I
BARIUM	0.50	U
CALCIUM	25.75	I
COPPER	2.52	U
IRON	8.11	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC10A Mar 10, 2005 14:34

Analyte	Result	C
ALUMINUM	39.31	I
BARIUM	0.50	U
CALCIUM	24.86	I
COPPER	2.52	U
IRON	10.90	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCB

File: BVC10A Mar 10, 2005 15:55

Analyte	Result	C
ALUMINUM	44.59	I
BARIUM	0.50	U
CALCIUM	40.31	I
COPPER	2.52	U
IRON	14.34	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC10A Mar 10, 2005 17:03

Analyte	Result	C
ALUMINUM	37.45	I
BARIUM	0.52	I
CALCIUM	33.15	I
COPPER	2.52	U
IRON	16.53	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC10A Mar 10, 2005 18:12

Analyte	Result	C
ALUMINUM	52.39	I
BARIUM	0.50	U
CALCIUM	18.06	I
COPPER	2.52	U
IRON	9.43	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCB

File: BVC10A Mar 10, 2005 19:20

Analyte	Result	C
ALUMINUM	44.90	I
BARIUM	0.50	U
CALCIUM	38.30	I
COPPER	2.52	U
IRON	14.58	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC10A Mar 10, 2005 20:10

Analyte	Result	C
ALUMINUM	82.83	I
BARIUM	0.65	I
CALCIUM	70.67	
COPPER	2.52	U
IRON	31.61	I
MAGNESIUM	56.81	
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICB

File: BVC24A Mar 24, 2005 11:29

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 12:05

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	22.13	I
COPPER	2.52	U
IRON	9.75	I
MAGNESIUM	38.35	I
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 13:18

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	20.36	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: CCB

File: BVC24A Mar 24, 2005 14:26

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	18.34	I
COPPER	2.52	U
IRON	9.52	I
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 15:30

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	15.90	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
VANADIUM	5.07	U

SAMPLE: CCB

File: BVC24A Mar 24, 2005 16:37

Analyte	Result	C
ALUMINUM	20.50	U
CALCIUM	61.57	
COPPER	2.52	U
IRON	18.56	I
MAGNESIUM	63.07	
VANADIUM	5.07	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSVC09ICS0

Matrix: SOIL **SDG Name:** CTO355-1

QC Batch ID: VC09ICS0

Concentration Units : mg/Kg

Analyte	RESULT	C
ARSENIC	0.280	U
BARIUM	0.090	I
COPPER	0.250	U
LEAD	0.210	U
VANADIUM	0.510	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC18A Mar 18, 2005 16:44

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	482595	96.5
ARSENIC	0	-2	
CALCIUM	500000	528479	105.7
IRON	200000	201043	100.5
LEAD	0	2	
MAGNESIUM	500000	476582	95.3

SAMPLE: ICSAB

File: AVC18A Mar 18, 2005 16:51

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	487610	97.5
ARSENIC	100	102	102.0
CALCIUM	500000	534926	107.0
IRON	200000	203240	101.6
LEAD	50	48	96.0
MAGNESIUM	500000	481076	96.2

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC18A Mar 18, 2005 21:12

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	412927	82.6
ARSENIC	0	-4	
CALCIUM	500000	496640	99.3
IRON	200000	193469	96.7
LEAD	0	-1	
MAGNESIUM	500000	445746	89.1

SAMPLE: ICSAB

File: AVC18A Mar 18, 2005 21:19

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	426413	85.3
ARSENIC	100	105	105.0
CALCIUM	500000	509986	102.0
IRON	200000	198851	99.4
LEAD	50	47	94.0
MAGNESIUM	500000	456131	91.2

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC18A Mar 18, 2005 23:44

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	401799	80.4
ARSENIC	0	-2	
CALCIUM	500000	493247	98.6
IRON	200000	194433	97.2
LEAD	0	-4	
MAGNESIUM	500000	444487	88.9

SAMPLE: ICSAB

File: AVC18A Mar 18, 2005 23:51

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	411836	82.4
ARSENIC	100	106	106.0
CALCIUM	500000	502189	100.4
IRON	200000	198155	99.1
LEAD	50	50	100.0
MAGNESIUM	500000	451511	90.3

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC23A Mar 24, 2005 00:18

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	431705	86.3
ARSENIC	0	1	
CALCIUM	500000	506021	101.2
IRON	200000	190257	95.1
LEAD	0	3	
MAGNESIUM	500000	474937	95.0

SAMPLE: ICSAB

File: AVC23A Mar 24, 2005 00:25

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	463054	92.6
ARSENIC	100	105	105.0
CALCIUM	500000	541831	108.4
IRON	200000	203623	101.8
LEAD	50	55	110.0
MAGNESIUM	500000	505562	101.1

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICSA

File: AVC23A Mar 24, 2005 04:38

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	437302	87.5
ARSENIC	0	1	
CALCIUM	500000	509774	102.0
IRON	200000	191833	95.9
LEAD	0	7	
MAGNESIUM	500000	479808	96.0

SAMPLE: ICSAB

File: AVC23A Mar 24, 2005 04:45

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	428464	85.7
ARSENIC	100	101	101.0
CALCIUM	500000	496961	99.4
IRON	200000	187285	93.6
LEAD	50	49	98.0
MAGNESIUM	500000	467416	93.5

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC10A Mar 10, 2005 14:15

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	520401	104.1
BARIUM	0	1	
CALCIUM	500000	513635	102.7
COPPER	0	0	
IRON	200000	197191	98.6
MAGNESIUM	500000	532995	106.6
VANADIUM	0	-2	

SAMPLE: ICSAB

File: BVC10A Mar 10, 2005 14:23

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	516426	103.3
BARIUM	500	507	101.4
CALCIUM	500000	510865	102.2
COPPER	500	493	98.6
IRON	200000	195804	97.9
MAGNESIUM	500000	528868	105.8
VANADIUM	500	501	100.2

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC10A Mar 10, 2005 17:55

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	522368	104.5
BARIUM	0	2	
CALCIUM	500000	535608	107.1
COPPER	0	1	
IRON	200000	201777	100.9
MAGNESIUM	500000	541899	108.4
VANADIUM	0	-2	

SAMPLE: ICSAB

File: BVC10A Mar 10, 2005 18:01

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	517054	103.4
BARIUM	500	510	102.0
CALCIUM	500000	529787	106.0
COPPER	500	491	98.2
IRON	200000	199401	99.7
MAGNESIUM	500000	536446	107.3
VANADIUM	500	507	101.4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC10A Mar 10, 2005 19:53

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	526443	105.3
BARIUM	0	0	
CALCIUM	500000	536945	107.4
COPPER	0	0	
IRON	200000	201564	100.8
MAGNESIUM	500000	546431	109.3
VANADIUM	0	1	

SAMPLE: ICSAB

File: BVC10A Mar 10, 2005 19:59

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	521323	104.3
BARIUM	500	513	102.6
CALCIUM	500000	532148	106.4
COPPER	500	496	99.2
IRON	200000	199820	99.9
MAGNESIUM	500000	541201	108.2
VANADIUM	500	513	102.6

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC24A Mar 24, 2005 11:48

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	539347	107.9
CALCIUM	500000	492089	98.4
COPPER	0	-2	
IRON	200000	193143	96.6
MAGNESIUM	500000	537234	107.4
VANADIUM	0	-3	

SAMPLE: ICSAB

File: BVC24A Mar 24, 2005 11:54

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	536052	107.2
CALCIUM	500000	488238	97.6
COPPER	500	507	101.4
IRON	200000	191799	95.9
MAGNESIUM	500000	533514	106.7
VANADIUM	500	494	98.8

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Concentration Units: ug/L

SAMPLE: ICSA

File: BVC24A Mar 24, 2005 16:21

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	487671	97.5
CALCIUM	500000	489104	97.8
COPPER	0	-3	
IRON	200000	183386	91.7
MAGNESIUM	500000	500263	100.1
VANADIUM	0	-5	

SAMPLE: ICSAB

File: BVC24A Mar 24, 2005 16:26

Analyte	TRUE	FOUND	% R
ALUMINUM	500000	488343	97.7
CALCIUM	500000	493036	98.6
COPPER	500	450	90.0
IRON	200000	184495	92.2
MAGNESIUM	500000	501765	100.4
VANADIUM	500	472	94.4

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SB0601S

Matrix: SOIL | **SDG Name:** CTO355-1

Percent Solids: 92.0 | **Lab Sample ID:** WV0922-001P

Concentration Units : mg/Kg

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	57.3656		2.5564		46.45	118.0		75	125	P
BARIUM, TOTAL	526.2481		187.7787		185.78	182.2	J	75	125	P
COPPER, TOTAL	458.8585		528.8008		23.22	-301.2	OK	75	125	P
LEAD, TOTAL	700.9820		519.0202		46.45	391.7	OK	75	125	P
VANADIUM, TOTAL	72.1995		18.5190		46.45	115.6		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SB0601S

Matrix: SOIL | **SDG Name:** CTO355-1

Percent Solids: 92.0 | **Lab Sample ID:** WV0922-001S

Concentration Units : mg/Kg

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ARSENIC, TOTAL	54.5593		2.5564		46.45	112.0		75	125	P
BARIUM, TOTAL	445.4217		187.7787		185.78	138.7	J	75	125	P
COPPER, TOTAL	409.4826		528.8008		23.22	-513.9	ok	75	125	P
LEAD, TOTAL	750.1860		519.0202		46.45	497.7	ok	75	125	P
VANADIUM, TOTAL	64.3947		18.5190		46.45	98.8		75	125	P

Comments:

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43SB0601

Matrix: SOIL **SDG Name:** CTO355-1

Percent Solids: 92.0 **Lab Sample ID:** WV0922-001

Concentration Units : mg/Kg

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ARSENIC, TOTAL		54.5593		57.3656		5.0		P
BARIUM, TOTAL		445.4217		526.2481		16.6		P
COPPER, TOTAL		409.4826		458.8585		11.4		P
LEAD, TOTAL		750.1860		700.9820		6.8		P
VANADIUM, TOTAL		64.3947		72.1995		11.4		P

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOVC09ICS0

Matrix: SOIL **SDG Name:** CTO355-1

QC Batch ID: VC09ICS0

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ARSENIC	500.0	506.80	101.4	80	120
BARIUM	2000.0	2095.08	104.8	80	120
COPPER	250.0	248.06	99.2	80	120
LEAD	500.0	495.31	99.1	80	120
VANADIUM	500.0	545.03	109.0	80	120

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43SB0601L

Matrix: SOIL | **SDG Name:** CTO355-1

Lab Sample ID: WV0922-001L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
ARSENIC, TOTAL	27.52		28.63	I	4.0		P
BARIUM, TOTAL	2021.47		2053.90		1.6		P
COPPER, TOTAL	5692.63		5729.10		0.6		P
LEAD, TOTAL	5587.34		5754.77		3.0		P
VANADIUM, TOTAL	199.36		195.84		1.8		P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** A

Instrument Name: TJA TRACE ICP **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ARSENIC	8.0	2.81	P
LEAD	5.0	2.07	P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** B

Instrument Name: TJA 61 ICP **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
BARIUM	5.0	0.50	P
COPPER	25	2.52	P
VANADIUM	25	5.07	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** VC09ICS0

Matrix: SOIL **SDG Name:** CTO355-1

Method: P **Prep Date:** 03/09/2005

Client ID	Lab Sample ID	Initial (g)	Final (L)
LCSOVC09ICS0	LCSOVC09ICS0	1	0.1
PBSVC09ICS0	PBSVC09ICS0	1	0.1
PEN43SB0601	WV0922-001	1.17	0.1
PEN43SB0601P	WV0922-001P	1.17	0.1
PEN43SB0601S	WV0922-001S	1.17	0.1
PEN43SB0602	WV0922-002	1.63	0.1
PEN43SB0701	WV0922-003	1.55	0.1
PEN43SB0702	WV0922-004	1.76	0.1
PEN43SB0801	WV0922-005	1.36	0.1
PEN43SB0802	WV0922-006	1.16	0.1
PEN43SB0901	WV0922-007	1.31	0.1
PEN43SB0902	WV0922-008	1.59	0.1
PEN43SB1001	WV0922-009	1.34	0.1
PEN43SB1002	WV0922-010	1.46	0.1
PEN43SB2501	WV0951-001	1.29	0.1
PEN43SB2501D	WV0951-002	1.14	0.1
PEN43SB2502	WV0951-003	1.2	0.1
PEN43SB2001	WV0951-004	1.12	0.1
PEN43SB2002	WV0951-005	1.22	0.1
PEN43SB2101	WV0951-006	1.12	0.1
PEN43SB2102	WV0951-007	1.25	0.1
PEN43SB2201	WV0951-008	1.19	0.1
PEN43SB2202	WV0951-009	1.3	0.1
PEN43SB2301	WV0951-010	1.41	0.1

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Instrument ID: TJA TRACE ICP **File Name:** AVC18A

Date: 3/18/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	11:24	Al	As	Ca	Fe Pb Mg
S1		1	11:31	Al	As	Ca	Fe Pb Mg
AL IEC		1	11:42	Al	As	Ca	Fe Pb Mg
FE IEC		1	11:49	Al	As	Ca	Fe Pb Mg
MN IEC		1	11:57	Al	As	Ca	Fe Pb Mg
IEC		1	12:05	Al	As	Ca	Fe Pb Mg
ICV		1	13:28	Al	As	Ca	Fe Pb Mg
ICB		1	13:35	Al	As	Ca	Fe Pb Mg
PQL		1	13:42	Al	As	Ca	Fe Pb Mg
CRI		1	13:50	Al	As	Ca	Fe Pb Mg
ICSA		1	13:59	Al	As	Ca	Fe Pb Mg
ICSAB		1	14:07	Al	As	Ca	Fe Pb Mg
CCV		1	14:14	Al	As	Ca	Fe Pb Mg
CCB		1	14:21	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	14:28				
ZZZZZZ		1	14:35				
ZZZZZZ		1	14:43				
ZZZZZZ		1	14:50				
ZZZZZZ		1	14:57				
ZZZZZZ		5	15:04				
ZZZZZZ		1	15:11				
ZZZZZZ		1	15:19				
ZZZZZZ		1	15:30				
ZZZZZZ		1	15:37				
CCV		1	15:44	Al	As	Ca	Fe Pb Mg
CCB		1	15:52	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	15:59				
ZZZZZZ		1	16:06				
ZZZZZZ		1	16:13				
ZZZZZZ		1	16:22				
ZZZZZZ		1	16:29				
CRI		1	16:36	Al	As	Ca	Fe Pb Mg
ICSA		1	16:44	Al	As	Ca	Fe Pb Mg
ICSAB		1	16:51	Al	As	Ca	Fe Pb Mg
CCV		1	16:58	Al	As	Ca	Fe Pb Mg
CCB		1	17:05	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	17:22				
ZZZZZZ		1	17:29				
ZZZZZZ		1	17:36				
ZZZZZZ		1	17:43				
ZZZZZZ		5	17:50				
ZZZZZZ		1	17:58				
ZZZZZZ		1	18:05				
WV0922-003	PEN43SB0701	1	18:12		As		Pb
ZZZZZZ		1	18:19				
ZZZZZZ		1	18:26				
CCV		1	18:34	Al	As	Ca	Fe Pb Mg
CCB		1	18:41	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	18:48				
ZZZZZZ		1	18:55				

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Instrument ID: TJA TRACE ICP **File Name:** AVC18A

Date: 3/18/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements						
ZZZZZZ		1	19:02							
ZZZZZZ		1	19:10							
ZZZZZZ		1	19:17							
ZZZZZZ		1	19:24							
LCSOVC09ICS0		1	19:31		As				Pb	
PBSVC09ICS0		1	19:38		As				Pb	
WV0922-001	PEN43SB0601	1	19:46		As				Pb	
WV0922-001L	PEN43SB0601L	5	19:53		As				Pb	
CCV		1	20:00	Al	As		Ca	Fe	Pb	Mg
CCB		1	20:07	Al	As		Ca	Fe	Pb	Mg
ZZZZZZ		1	20:15							
ZZZZZZ		1	20:22							
WV0922-002	PEN43SB0602	1	20:29		As				Pb	
ZZZZZZ		1	20:36							
WV0922-004	PEN43SB0702	1	20:43		As				Pb	
WV0922-005	PEN43SB0801	1	20:51		As				Pb	
WV0922-006	PEN43SB0802	1	20:58		As				Pb	
CRI		1	21:05	Al	As		Ca	Fe	Pb	Mg
ICSA		1	21:12	Al	As		Ca	Fe	Pb	Mg
ICSAB		1	21:19	Al	As		Ca	Fe	Pb	Mg
CCV		1	21:27	Al	As		Ca	Fe	Pb	Mg
CCB		1	21:34	Al	As		Ca	Fe	Pb	Mg
WV0922-007	PEN43SB0901	1	21:41		As				Pb	
WV0922-008	PEN43SB0902	1	21:48		As				Pb	
WV0922-009	PEN43SB1001	1	21:55		As				Pb	
WV0922-010	PEN43SB1002	1	22:03		As				Pb	
ZZZZZZ		1	22:10							
WV0951-002	PEN43SB2501D	1	22:17		As					
WV0951-003	PEN43SB2502	1	22:24		As				Pb	
WV0951-004	PEN43SB2001	1	22:31		As				Pb	
WV0951-005	PEN43SB2002	1	22:39		As				Pb	
WV0951-006	PEN43SB2101	1	22:46		As				Pb	
CCV		1	22:53	Al	As		Ca	Fe	Pb	Mg
CCB		1	23:00	Al	As		Ca	Fe	Pb	Mg
WV0951-007	PEN43SB2102	1	23:08		As				Pb	
WV0951-008	PEN43SB2201	1	23:15		As				Pb	
WV0951-009	PEN43SB2202	1	23:22		As				Pb	
WV0951-010	PEN43SB2301	1	23:29		As				Pb	
CRI		1	23:36	Al	As		Ca	Fe	Pb	Mg
ICSA		1	23:44	Al	As		Ca	Fe	Pb	Mg
ICSAB		1	23:51	Al	As		Ca	Fe	Pb	Mg
CCV		1	23:58	Al	As		Ca	Fe	Pb	Mg
CCB		1	0:05	Al	As		Ca	Fe	Pb	Mg

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Instrument ID: TJA TRACE ICP **File Name:** AVC23A

Date: 3/23/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	11:21	Al	As	Ca	Fe Pb Mg
S1		1	11:29	Al	As	Ca	Fe Pb Mg
AL IEC		1	11:39	Al	As	Ca	Fe Pb Mg
FE IEC		1	11:46	Al	As	Ca	Fe Pb Mg
MN IEC		1	11:54	Al	As	Ca	Fe Pb Mg
IEC		1	12:02	Al	As	Ca	Fe Pb Mg
ICV		1	12:21	Al	As	Ca	Fe Pb Mg
ICB		1	12:38	Al	As	Ca	Fe Pb Mg
PQL		1	12:47	Al	As	Ca	Fe Pb Mg
CRI		1	12:54	Al	As	Ca	Fe Pb Mg
ICSA		1	13:01	Al	As	Ca	Fe Pb Mg
ICSAB		1	13:08	Al	As	Ca	Fe Pb Mg
CCV		1	13:15	Al	As	Ca	Fe Pb Mg
CCB		1	13:23	Al	As	Ca	Fe Pb Mg
ZZZZZZ		5	13:30				
ZZZZZZ		1	13:37				
ZZZZZZ		1	13:44				
ZZZZZZ		1	13:51				
ZZZZZZ		1	13:59				
ZZZZZZ		1	14:06				
ZZZZZZ		1	14:13				
ZZZZZZ		1	14:20				
ZZZZZZ		1	14:27				
ZZZZZZ		1	14:35				
CCV		1	14:42	Al	As	Ca	Fe Pb Mg
CCB		1	14:49	Al	As	Ca	Fe Pb Mg
ZZZZZZ		5	14:56				
ZZZZZZ		1	15:03				
ZZZZZZ		1	15:11				
ZZZZZZ		1	15:18				
ZZZZZZ		1	15:25				
ZZZZZZ		1	15:32				
ZZZZZZ		1	15:39				
ZZZZZZ		1	15:47				
ZZZZZZ		1	15:54				
ZZZZZZ		1	16:01				
CCV		1	16:08	Al	As	Ca	Fe Pb Mg
CCB		1	16:15	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	16:37				
ZZZZZZ		1	16:44				
ZZZZZZ		1	16:51				
ZZZZZZ		1	16:58				
ZZZZZZ		1	17:06				
ZZZZZZ		1	17:13				
CCV		1	17:20	Al	As	Ca	Fe Pb Mg
CCB		1	17:27	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	17:34				
ZZZZZZ		1	17:42				
ZZZZZZ		1	17:49				
ZZZZZZ		1	17:56				

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Instrument ID: TJA TRACE ICP **File Name:** AVC23A

Date: 3/23/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ZZZZZZ		1	18:03				
ZZZZZZ		1	18:10				
ZZZZZZ		1	18:18				
ZZZZZZ		1	18:25				
ZZZZZZ		1	18:32				
ZZZZZZ		1	18:39				
CCV		1	18:46	Al	As	Ca	Fe Pb Mg
CCB		1	18:54	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	19:01				
ZZZZZZ		1	19:08				
ZZZZZZ		1	19:15				
ZZZZZZ		1	19:22				
ZZZZZZ		1	19:30				
ZZZZZZ		1	19:37				
ZZZZZZ		1	19:44				
CRI		1	19:51	Al	As	Ca	Fe Pb Mg
ICSA		1	19:58	Al	As	Ca	Fe Pb Mg
ICSAB		1	20:06	Al	As	Ca	Fe Pb Mg
CCV		1	20:13	Al	As	Ca	Fe Pb Mg
CCB		1	20:20	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	20:27				
ZZZZZZ		1	20:34				
ZZZZZZ		1	20:42				
ZZZZZZ		1	20:49				
ZZZZZZ		1	20:56				
ZZZZZZ		1	21:03				
ZZZZZZ		1	21:11				
ZZZZZZ		1	21:18				
ZZZZZZ		1	21:25				
ZZZZZZ		1	21:32				
CCV		1	21:39	Al	As	Ca	Fe Pb Mg
CCB		1	21:47	Al	As	Ca	Fe Pb Mg
ZZZZZZ		1	21:54				
ZZZZZZ		1	22:01				
ZZZZZZ		1	22:08				
ZZZZZZ		1	22:15				
ZZZZZZ		1	22:23				
ZZZZZZ		1	22:30				
ZZZZZZ		1	22:37				
ZZZZZZ		1	22:44				
ZZZZZZ		1	22:51				
ZZZZZZ		1	22:59				
CCV		1	23:06	Al	As	Ca	Fe Pb Mg
CCB		1	23:13	Al	As	Ca	Fe Pb Mg
ZZZZZZ		5	23:20				
ZZZZZZ		1	23:28				
ZZZZZZ		1	23:35				
ZZZZZZ		2	23:42				
ZZZZZZ		1	23:49				
ZZZZZZ		1	23:56				
ZZZZZZ		5	0:04				

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Instrument ID: TJA TRACE ICP **File Name:** AVC23A

Date: 3/24/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
CRI		1	0:11	Al	As	Ca	Fe	Pb	Mg
ICSA		1	0:18	Al	As	Ca	Fe	Pb	Mg
ICSAB		1	0:25	Al	As	Ca	Fe	Pb	Mg
CCV		1	0:32	Al	As	Ca	Fe	Pb	Mg
CCB		1	0:40	Al	As	Ca	Fe	Pb	Mg
ZZZZZZ		1	0:47						
ZZZZZZ		1	0:54						
ZZZZZZ		1	1:01						
ZZZZZZ		1	1:08						
ZZZZZZ		5	1:16						
ZZZZZZ		1	1:23						
ZZZZZZ		1	1:30						
ZZZZZZ		2	1:37						
ZZZZZZ		1	1:45						
ZZZZZZ		5	1:52						
CCV		1	1:59	Al	As	Ca	Fe	Pb	Mg
CCB		1	2:06	Al	As	Ca	Fe	Pb	Mg
ZZZZZZ		1	2:13						
ZZZZZZ		1	2:21						
WV0922-001P	PEN43SB0601P	5	2:28		As			Pb	
ZZZZZZ		1	2:35						
ZZZZZZ		1	2:42						
ZZZZZZ		1	2:49						
ZZZZZZ		1	2:57						
ZZZZZZ		1	3:04						
ZZZZZZ		1	3:11						
ZZZZZZ		1	3:18						
CCV		1	3:26	Al	As	Ca	Fe	Pb	Mg
CCB		1	3:33	Al	As	Ca	Fe	Pb	Mg
ZZZZZZ		1	3:40						
WV0951-001	PEN43SB2501	5	3:47		As			Pb	
WV0951-002	PEN43SB2501D	5	3:54					Pb	
ZZZZZZ		1	4:02						
ZZZZZZ		1	4:09						
ZZZZZZ		1	4:16						
ZZZZZZ		1	4:23						
CRI		1	4:31	Al	As	Ca	Fe	Pb	Mg
ICSA		1	4:38	Al	As	Ca	Fe	Pb	Mg
ICSAB		1	4:45	Al	As	Ca	Fe	Pb	Mg
CCV		1	4:52	Al	As	Ca	Fe	Pb	Mg
CCB		1	5:00	Al	As	Ca	Fe	Pb	Mg

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Instrument ID: TJA 61 ICP **File Name:** BVC10A

Date: 3/10/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
S0		1	12:35	Al	Ba	Ca	Cu Fe	Mg	V
S1		1	12:41	Al	Ba	Ca	Cu Fe	Mg	V
AL_IEC		1	12:47	Al	Ba	Ca	Cu Fe	Mg	V
FE_IEC		1	12:55	Al	Ba	Ca	Cu Fe	Mg	V
ICV		1	13:03	Al	Ba	Ca	Cu Fe	Mg	V
ICB		1	13:09	Al	Ba	Ca	Cu Fe	Mg	V
PQL		1	13:14	Al	Ba	Ca	Cu Fe	Mg	V
CRI		1	13:20	Al	Ba	Ca	Cu Fe	Mg	V
ICSA		1	13:26	Al	Ba	Ca	Cu Fe	Mg	V
ICSAB		1	13:31	Al	Ba	Ca	Cu Fe	Mg	V
CCV		1	13:38	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	13:44	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	13:50						
ZZZZZZ		1	13:56						
ZZZZZZ		1	14:02						
CRI		1	14:09	Al	Ba	Ca	Cu Fe	Mg	V
ICSA		1	14:15	Al	Ba	Ca	Cu Fe	Mg	V
ICSAB		1	14:23	Al	Ba	Ca	Cu Fe	Mg	V
CCV		1	14:29	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	14:34	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	14:43						
ZZZZZZ		1	14:49						
ZZZZZZ		1	14:55						
ZZZZZZ		1	15:00						
ZZZZZZ		1	15:06						
ZZZZZZ		5	15:12						
ZZZZZZ		1	15:27						
ZZZZZZ		1	15:33						
ZZZZZZ		1	15:39						
ZZZZZZ		1	15:44						
CCV		1	15:50	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	15:55	Al	Ba	Ca	Cu Fe	Mg	V
ZZZZZZ		1	16:01						
ZZZZZZ		1	16:07						
LCSOVC09ICS0		1	16:12		Ba		Cu		V
PBSVC09ICS0		1	16:18		Ba		Cu		V
WV0922-001	PEN43SB0601	1	16:24		Ba		Cu		V
WV0922-001L	PEN43SB0601L	5	16:29		Ba		Cu		V
WV0922-001P	PEN43SB0601P	1	16:35		Ba				
WV0922-001S	PEN43SB0601S	1	16:41		Ba				
WV0922-002	PEN43SB0602	1	16:46		Ba		Cu		V
WV0922-003	PEN43SB0701	1	16:52		Ba		Cu		V
CCV		1	16:57	Al	Ba	Ca	Cu Fe	Mg	V
CCB		1	17:03	Al	Ba	Ca	Cu Fe	Mg	V
WV0922-004	PEN43SB0702	1	17:09		Ba		Cu		V
WV0922-005	PEN43SB0801	1	17:14		Ba		Cu		V
WV0922-006	PEN43SB0802	1	17:20		Ba		Cu		V
WV0922-007	PEN43SB0901	1	17:26		Ba		Cu		V
WV0922-008	PEN43SB0902	1	17:31		Ba		Cu		V
WV0922-009	PEN43SB1001	1	17:37		Ba		Cu		V

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Instrument ID: TJA 61 ICP **File Name:** BVC10A

Date: 3/10/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements						
WV0922-010	PEN43SB1002	1	17:42		Ba		Cu			V
CRI		1	17:48	Al	Ba	Ca	Cu Fe	Mg		V
ICSA		1	17:55	Al	Ba	Ca	Cu Fe	Mg		V
ICSAB		1	18:01	Al	Ba	Ca	Cu Fe	Mg		V
CCV		1	18:06	Al	Ba	Ca	Cu Fe	Mg		V
CCB		1	18:12	Al	Ba	Ca	Cu Fe	Mg		V
WV0951-001	PEN43SB2501	1	18:18		Ba					
WV0951-002	PEN43SB2501D	1	18:23		Ba					V
WV0951-003	PEN43SB2502	1	18:29		Ba		Cu			V
WV0951-004	PEN43SB2001	1	18:35		Ba		Cu			V
WV0951-005	PEN43SB2002	1	18:40		Ba		Cu			V
WV0951-006	PEN43SB2101	1	18:46		Ba		Cu			V
WV0951-007	PEN43SB2102	1	18:51		Ba		Cu			V
WV0951-008	PEN43SB2201	1	18:57		Ba		Cu			V
WV0951-009	PEN43SB2202	1	19:03		Ba		Cu			V
WV0951-010	PEN43SB2301	1	19:08		Ba		Cu			V
CCV		1	19:14	Al	Ba	Ca	Cu Fe	Mg		V
CCB		1	19:20	Al	Ba	Ca	Cu Fe	Mg		V
ZZZZZZ		1	19:25							
ZZZZZZ		1	19:31							
ZZZZZZ		1	19:37							
ZZZZZZ		1	19:42							
CRI		1	19:48	Al	Ba	Ca	Cu Fe	Mg		V
ICSA		1	19:53	Al	Ba	Ca	Cu Fe	Mg		V
ICSAB		1	19:59	Al	Ba	Ca	Cu Fe	Mg		V
CCV		1	20:05	Al	Ba	Ca	Cu Fe	Mg		V
CCB		1	20:10	Al	Ba	Ca	Cu Fe	Mg		V

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Instrument ID: TJA 61 ICP **File Name:** BVC24A

Date: 3/24/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
S0		1	10:54	Al	Ca	Cu Fe	Mg		V
S1		1	11:00	Al	Ca	Cu Fe	Mg		V
AL IEC		1	11:05	Al	Ca	Cu Fe	Mg		V
FE IEC		1	11:14	Al	Ca	Cu Fe	Mg		V
ICV		1	11:23	Al	Ca	Cu Fe	Mg		V
ICB		1	11:29	Al	Ca	Cu Fe	Mg		V
PQL		1	11:35	Al	Ca	Cu Fe	Mg		V
CRI		1	11:43	Al	Ca	Cu Fe	Mg		V
ICSA		1	11:48	Al	Ca	Cu Fe	Mg		V
ICSAB		1	11:54	Al	Ca	Cu Fe	Mg		V
CCV		1	12:00	Al	Ca	Cu Fe	Mg		V
CCB		1	12:05	Al	Ca	Cu Fe	Mg		V
ZZZZZZ		1000	12:11						
ZZZZZZ		1	12:17						
ZZZZZZ		5	12:28						
ZZZZZZ		1	12:33						
ZZZZZZ		1	12:39						
ZZZZZZ		1	12:45						
ZZZZZZ		1	12:50						
ZZZZZZ		1	12:56						
ZZZZZZ		1	13:02						
ZZZZZZ		1	13:07						
CCV		1	13:13	Al	Ca	Cu Fe	Mg		V
CCB		1	13:18	Al	Ca	Cu Fe	Mg		V
ZZZZZZ		1	13:24						
ZZZZZZ		1	13:30						
ZZZZZZ		1	13:35						
ZZZZZZ		1	13:41						
ZZZZZZ		1	13:47						
ZZZZZZ		1	13:52						
ZZZZZZ		1	13:58						
WV0951-001	PEN43SB2501	5	14:04			Cu			V
WV0951-002	PEN43SB2501D	5	14:09			Cu			
ZZZZZZ		1	14:15						
CCV		1	14:20	Al	Ca	Cu Fe	Mg		V
CCB		1	14:26	Al	Ca	Cu Fe	Mg		V
ZZZZZZ		1	14:32						
ZZZZZZ		1	14:38						
ZZZZZZ		1	14:43						
ZZZZZZ		1	14:49						
ZZZZZZ		1	14:54						
ZZZZZZ		1	15:00						
ZZZZZZ		1	15:06						
ZZZZZZ		1	15:17						
CCV		1	15:24	Al	Ca	Cu Fe	Mg		V
CCB		1	15:30	Al	Ca	Cu Fe	Mg		V
ZZZZZZ		1	15:35						
ZZZZZZ		1	15:41						
ZZZZZZ		1	15:47						
ZZZZZZ		1	15:52						

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-1

Instrument ID: TJA 61 ICP **File Name:** BVC24A

Date: 3/24/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
ZZZZZZ		1	15:58						
ZZZZZZ		1	16:04						
ZZZZZZ		1	16:09						
CRI		1	16:15	Al	Ca	Cu Fe	Mg		V
ICSA		1	16:21	Al	Ca	Cu Fe	Mg		V
ICSAB		1	16:26	Al	Ca	Cu Fe	Mg		V
CCV		1	16:32	Al	Ca	Cu Fe	Mg		V
CCB		1	16:37	Al	Ca	Cu Fe	Mg		V

NAS PENSACOLA
SOIL DATA
3551

FRACTION	CHEMICAL	PEN43SB2501	UNITS	PEN43SB2501D	RPD	D
MISC	TOTAL SOLIDS	90	%	90	0.00	0.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

NAS PENSACOLA
SOIL DATA
3551

FRACTION	CHEMICAL	PEN43SB2501	UNITS	PEN43SB2501D	RPD	D
M	ARSENIC	14.6	MG/KG	5.3	93.47	9.30
M	BARIUM	884 J	MG/KG	270 J	106.41	614.00
M	COPPER	448	MG/KG	930	69.96	482.00
M	LEAD	1340	MG/KG	1390	3.66	50.00
M	VANADIUM	13.6	MG/KG	11.2	19.35	2.40

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.

#2	15.629	.00911	-.02799

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	360.063	--	--	--	--	--	--
Avge	46407	--	--	--	--	--	--
SDev	53.74012	--	--	--	--	--	--
%RSD	.1158017	--	--	--	--	--	--
#1	46369	--	--	--	--	--	--
#2	46445	--	--	--	--	--	--

Method: NONAK Sample Name: WV0951-002 Operator:
Run Time: 03/24/05 03:54:59 PEN4358250D EuF 4/22/05
Comment:
Mode: CONC Corr. Factor: 5

Elem	Al	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	40.896	.04593	2.2761	.01338	.01729	.02050	10.802
SDev	.232	.00112	.0092	.00005	.00368	.00166	.035
%RSD	.56806	2.4415	.40585	.40420	21.308	8.1053	.31969
#1	40.731	.04513	2.2696	.01335	.01468	.01932	10.777
#2	41.060	.04672	2.2827	.01342	.01989	.02167	10.826

Elem	Cr	Co	Cu	Fe	Mg	Mn	Mo
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.08843	.01335	8.4614	185.69	2.4967	3.2985	-.00149
SDev	.00473	.00368	.0388	.69	.0163	.0150	.00012
%RSD	5.3522	27.578	.45840	.37335	.65483	.45459	7.7974
#1	.08508	.01596	8.4339	185.20	2.5083	3.2879	-.00157
#2	.09178	.01075	8.4888	186.18	2.4852	3.3091	-.00140

Elem	Ni	Ag	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.26942	.03667	.09513	.00119	1.1710	.41510	.08895
SDev	.00111	.00033	.00022	.01481	.0043	.00101	.00293
%RSD	.41303	.91077	.23676	1239.0	.36980	.24438	3.2885
#1	.26863	.03691	.09497	.01166	1.1679	.41438	.08688
#2	.27021	.03643	.09529	-.00927	1.1740	.41582	.09102

Elem	Zn	Pb	Se	Sb	2068/1	2068/2	2203/1
Units	mg/L	mg/L	mg/L	mg/L			
Avge	16.601	14.213	.00998	.08010	.06408	.08810	14.240
SDev	.074	.049	.00195	.00269	.01910	.01357	.043
%RSD	.44812	.34817	19.502	3.3609	29.810	15.406	.30202
#1	16.548	14.178	.00860	.07820	.07759	.07850	14.210
#2	16.654	14.248	.01136	.08200	.05057	.09770	14.271

Elem	2203/2	1960/1	1960/2
Units			
Avge	14.200	.04412	-.00706

Pb = 14.213 mg/L × 1L/1000 mL × 100 mL/1.14 g × 1000 g/1 kg × 1/0.895 = 1393 mg/kg.

SDev	.053	.02374	.01477
%RSD	.37128	53.801	209.13
#1	14.162	.06090	-.01751
#2	14.237	.02733	.00338

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	360.063	--	--	--	--	--	--
Avge	49812	--	--	--	--	--	--
SDev	37.47666	--	--	--	--	--	--
%RSD	.0752354	--	--	--	--	--	--
#1	49839	--	--	--	--	--	--
#2	49786	--	--	--	--	--	--

Method: NONAK Sample Name: WV0951-003 Operator:
Run Time: 03/24/05 04:02:12
Comment:
Mode: CONC Corr. Factor: 1

Elem	Al	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	19.930	.00405	.14095	.00074	.01308	-.00030	2.2345
SDev	.024	.00288	.00017	.00002	.00103	.00008	.0023
%RSD	.11869	71.081	.12327	3.2823	7.9133	27.678	.10145
#1	19.914	.00201	.14083	.00076	.01235	-.00036	2.2329
#2	19.947	.00608	.14108	.00073	.01382	-.00024	2.2361

Elem	Cr	Co	Cu	Fe	Mg	Mn	Mo
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.02072	.00126	.10194	16.943	1.2382	.08379	.00045
SDev	.00153	.00040	.00120	.039	.0135	.00015	.00320
%RSD	7.3893	32.064	1.1813	.22996	1.0891	.18272	706.35
#1	.01964	.00098	.10109	16.916	1.2287	.08368	.00271
#2	.02181	.00155	.10279	16.971	1.2478	.08389	-.00181

Elem	Ni	Ag	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.01239	.00113	.01354	.00153	.02827	.34260	.02977
SDev	.00075	.00029	.00005	.00138	.00125	.00011	.00175
%RSD	6.0513	25.813	.36048	90.065	4.4183	.03323	5.8873
#1	.01292	.00093	.01350	.00056	.02739	.34268	.03101
#2	.01186	.00134	.01357	.00251	.02915	.34252	.02854

Elem	Zn	Pb	Se	Sb	2068/1	2068/2	2203/1
Units	mg/L	mg/L	mg/L	mg/L			
Avge	.04079	.01799	-.00134	.00557	.00342	.00664	.01959
SDev	.00021	.00226	.00146	.00256	.00634	.00701	.00242
%RSD	.51951	12.561	109.54	46.020	185.39	105.55	12.340
#1	.04094	.01959	-.00237	.00376	.00791	.00168	.01788
#2	.04064	.01639	-.00030	.00738	-.00106	.01160	.02130

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**G. WALKER**	**DATE:**	**MAY 27, 2005**
FROM:	**BERNARD F SPADA III**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- SVOC/PAH**
CTO 355, NAS PENSACOLA
SDG 3551

SAMPLES: 20/Soil

PEN43SB0601	PEN43SB0602	PEN43SB0701
PEN43SB0702	PEN43SB0801	PEN43SB0802
PEN43SB0901	PEN43SB0902	PEN43SB1001
PEN43SB1002	PEN43SB2001	PEN43SB2002
PEN43SB2101	PEN43SB2102	PEN43SB2201
PEN43SB2202	PEN43SB2301	PEN43SB2501
PEN43SB2501D	PEN43SB2502	

OVERVIEW

The sample set for CTO 355, NAS Pensacola, SDG 3551 consists of nineteen (19) environmental soil samples and one (1) field duplicate. All samples were analyzed for semivolatile organic compounds (SVOC) and polynuclear aromatic hydrocarbons (PAH). The field duplicate included in this SDG is PEN43SB2501 and PEN43SB2501D.

The samples were collected by Tetra Tech NUS on March 3 and 4, 2005 and analyzed by Katahdin Analytical Services. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8270C and 8270SIM analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- Data completeness
- * Holding times
- * GC/MS Tuning
- Initial and continuing calibration
- Blank results
- Surrogate spike recoveries
- Internal standard recoveries
- Blank Spike/Blank Spike Duplicate Results
- Matrix Spike/Matrix Spike Duplicate Results
- * Compound Quantitation
- * Compound Identification
- * Tentatively Identified Compounds
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are included in Appendix B.

Semivolatile

The validator noted that the SVOC CCAL performed on March 30 at 11:34 contained in this SDG had a different RRF and a %D value for 4-nitrophenol than the same CCAL provided in SDG 3554. The validator requested the laboratory to determine which was correct and re-submit. The laboratory determined that the CCAL in this SDG was correct and re-submitted a new CCAL Form VII for SDG 3554. No action was taken on this basis. This item was noted as a completeness issue.

The validator noted that the initial submittal of the continuing calibration (CCAL) performed on March 24, 2005 included information for benzaldehyde that was inconsistent with the initial calibration on March 15. According to the laboratory, the aforementioned CCAL had a retention time shift for benzaldehyde. The CCAL summary form (Form VII) was regenerated and re-submitted.

The initial calibration performed on February 23, 2005 on the GCMS-X instrument exceeded the 30% RSD quality control criterion for benzaldehyde, hexachlorocyclopentadiene, and atrazine. No action was taken for benzaldehyde on this basis because all associated results were rejected for RRF non-compliance. Non-detected results for hexachlorocyclopentadiene and atrazine were qualified as estimated (UJ) in samples PEN43SB0601, PEN43SB0602, PEN43SB0701, PEN43SB0702, PEN43SB0801, PEN43SB0802, PEN43SB0901, and PEN43SB0902.

The continuing calibration performed on March 10 at 12:58 on the GCMS-X instrument was below the 0.05 RRF quality control criterion for benzaldehyde. No action was taken on this basis because only QC samples were associated with this calibration.

The continuing calibration performed on March 10 at 12:58 on the GCMS-X instrument exceeded the 25% difference quality control criterion for benzaldehyde, hexachlorocyclopentadiene, 4-nitroaniline, and di-n-octylphthalate. No action was taken on this basis because only QC samples were associated with this calibration.

The continuing calibration performed on March 17 at 09:51 on the GCMS-X instrument was below the 0.05 RRF quality control criterion for benzaldehyde. The non-detected result for benzaldehyde was rejected (UR) in samples PEN43SB0601, PEN43SB0602, PEN43SB0701, PEN43SB0702, PEN43SB0801, PEN43SB0802, PEN43SB0901, and PEN43SB0902.

The continuing calibration performed on March 17 at 09:51 on the GCMS-X instrument exceeded the 25% difference quality control criterion for benzaldehyde, hexachlorocyclopentadiene, atrazine, and 4,6-dinitro-2-methylphenol. No action was taken for benzaldehyde on this basis because all associated results were rejected for RRF non-compliance. Non-detected results for hexachlorocyclopentadiene, atrazine, and 4,6-dinitro-2-methylphenol were qualified as estimated (UJ) in samples PEN43SB0601, PEN43SB0602, PEN43SB0701, PEN43SB0702, PEN43SB0801, PEN43SB0802, PEN43SB0901, and PEN43SB0902.

The initial calibration performed on March 15, 2005 on the GCMS-X instrument was below the 0.05 RRF quality control criterion for benzaldehyde. Non-detected results for benzaldehyde were rejected (UR) in samples PEN43SB1001, PEN43SB1002, PEN43SB2001, PEN43SB2002, PEN43SB2101, PEN43SB2102, PEN43SB2201, PEN43SB2301, PEN43SB2501, PEN43SB2501D, and PEN43SB2502.

The initial calibration performed on March 15, 2005 on the GCMS-X instrument exceeded the 30% RSD quality control criterion for benzaldehyde. No action was taken on this basis because all associated results for benzaldehyde were rejected for RRF non-compliance.

The continuing calibration performed on March 18 at 10:02 on the GCMS-X instrument exceeded the 25% difference quality control criterion for benzaldehyde and 2,4-dinitrophenol. No action was taken for benzaldehyde on this basis because all associated results were rejected for RRF non-compliance. Non-detected results for 2,4-dinitrophenol were qualified as estimated (UJ) in samples PEN43SB1001 and PEN43SB1002.

The continuing calibration performed on March 24 at 12:21 on the GCMS-X instrument exceeded the 25% difference quality control criterion for benzaldehyde and bis(2-chloroethyl)ether. No action was taken for benzaldehyde on this basis because all associated samples were rejected for RRF non-compliance. Non-detected results for bis(2-chloroethyl)ether were qualified as estimated in samples PEN43SB2001, PEN43SB2002, PEN43SB2101, PEN43SB2102, PEN43SB2201, PEN43SB2501, PEN43SB2501D, and PEN43SB2502.

The initial calibration performed on March 28, 2005 on the GCMS-X instrument exceeded the 30% RSD quality control criterion for benzaldehyde and 2,4-dinitrophenol. The non-detected results for benzaldehyde and 2,4-dinitrophenol were qualified as estimated (UJ) in sample PEN43SB2301. The non-detected result for benzaldehyde was qualified as estimated in sample PEN43SB2202. No action was taken for 2,4-dinitrophenol in sample PEN43SB2202 on this basis because the result was rejected for RRF non-compliance.

The continuing calibration performed on March 30 at 11:34 on the GCMS-X instrument was below the 0.05 RRF quality control criterion for caprolactam and 2,4-dinitrophenol. Non-detected results for the aforementioned compounds were rejected (UR) in sample PEN43SB2202.

The continuing calibration performed on March 30 at 11:34 on the GCMS-X instrument exceeded the 25% difference quality control criterion for benzaldehyde, hexachlorocyclopentadiene, and 2,4-dinitrophenol. No action was taken for 2,4-dinitrophenol on this basis because the associated result was rejected for RRF non-compliance. The non-detected results for benzaldehyde and hexachlorocyclopentadiene were qualified as estimated (UJ) in sample PEN43SB2202.

The initial calibration performed on April 5, 2005 on the GCMS-U was below the 0.05 RRF quality control criterion for benzaldehyde. No action was taken on this basis because no environmental samples used for validation were associated with this calibration.

The initial calibration performed on April 5, 2005 on the GCMS-U instrument exceeded the 30% relative standard deviation (RSD) quality control criterion for benzaldehyde, 4-chlorophenylphenyl ether, 4,6-dinitro-2-methylphenol, and N-nitrosodiphenylamine. No action was taken on this basis because no environmental samples used for validation were associated with this calibration.

The following compound was detected in a soil method blank:

Compound	Maximum Concentration	Blank Action Level
Bis(2-ethylhexyl)phthalate	160 µg/kg	1600 µg/kg

Sample aliquot, percent solids, and dilution factors were taken into consideration when applying the blank action levels. Non-detected results for bis(2-ethylhexyl)phthalate below the action level were qualified as non-detected (U).

The surrogates 2,4,6-tribromophenol and terphenyl-d14 exceeded the percent recovery quality control criterion in the LCS (WG15659-LCS). No action was taken on this basis because only one surrogate was non-compliant in each fraction.

The surrogate 2-fluorobiphenyl exceeded the percent recovery quality control criterion in the re-extracted sample PEN43SB2202. No action was taken on this basis because the initial analysis was used for validation.

The surrogate terphenyl-d14 exceeded the percent recovery quality control criterion in samples PEN43SB0601, PEN43SB0801, PEN43SB0901, PEN43SB1001, the method blanks WG14977-blank and WG15035-blank, and the blank spike WG14977-LCS. No action was taken on this basis because only one surrogate was non-compliant.

The surrogate 2,4,6-tribromophenol exceeded the percent recovery quality control criterion in the blank spike WG15362-LCSD. No action was taken on this basis because only one surrogate was non-compliant.

The surrogate terphenyl-d14 was below the percent recovery quality control criterion in the initial analysis of sample PEN43SB2202 and the blank spike WG15039-LCS. No action was taken on this basis because only one surrogate was non-compliant. According to the laboratory narrative, sample PEN43SB2202 was re-extracted 14 days outside holding time and re-analyzed. The initial analysis was used for validation.

The surrogates nitrobenzene-d5 and terphenyl-d14 were below the percent recovery quality control criterion in sample PEN43SB0802. The sample was re-extracted five days outside of holding time and re-analyzed with compliant results. The initial analysis was used for validation. Positive and non-detected results were qualified as estimated (J and UJ) in the base/neutral fraction of sample PEN43SB0802. No action was taken for benzaldehyde on this basis because it was rejected for RRF non-compliance.

The percent recovery of 2,4-dimethylphenol and di-n-octylphthalate exceeded the quality control criterion in the blank spike WG14977-LCS. No action was taken on this basis because all results for the aforementioned compounds were non-detected.

The percent recovery of N-nitrosodiphenylamine was below the quality control criterion in the LCS (WG14977-LCS). Non-detected results for N-nitrosodiphenylamine were qualified as estimated (UJ) in all samples.

The percent recovery of N-nitrosodiphenylamine was below the quality control criterion in the LCS (WG15035-LCS). Non-detected results for N-nitrosodiphenylamine were qualified as estimated (UJ) in all samples.

The percent recoveries of 4-chloroaniline, 3-nitroaniline, and N-nitrosodiphenylamine were below the quality control criterion in the LCS (WG15039-LCS). No action was taken for 2,4-dinitrophenol in sample PEN43SB2202 on this basis because the result was rejected for RRF non-compliance. Non-detected results for the remaining aforementioned compounds were qualified as estimated (UJ) in all samples.

The percent recovery of 2,4-dinitrophenol was below the quality control criterion in the LCS (WG15659-LCS). No action was taken on this basis because the LCS was associated with the re-extraction of sample PEN43SB2202 which was not used for validation.

The percent recoveries of 3-nitroaniline and N-nitrosodiphenylamine were below the quality control criterion in the LCS/LCSD (WG15362-LCS/LCSD). No action was taken on this basis because the LCS was associated with the re-extraction of sample PEN43SB0802 which was not used for validation.

An MS/MSD was not performed with this SDG. No action was taken on this basis because an LCS/LCSD was performed.

PAH

The continuing calibration performed on March 23 at 08:09 on the GCMS-U instrument exceeded the 25% difference quality control criterion for benzo(a)anthracene. Positive and non-detected results for benzo(a)anthracene were qualified as estimated (J and UJ) in samples PEN43SB2001, PEN43SB2201, PEN43SB2501, PEN43SB2502, and PEN43SB2501D.

The continuing calibration performed on March 18 at 09:25 on the GCMS-K instrument exceeded the 25% difference quality control criterion for benzo(b)fluoranthene. Positive and non-detected results for benzo(b)fluoranthene were qualified as estimated (J and UJ) in samples PEN43SB0601 and PEN43SB0701.

The continuing calibration performed on March 22 at 11:03 on the GCMS-K instrument exceeded the 25% difference quality control criterion for pyrene, benzo(k)fluoranthene, and dibenzo(a,h)anthracene. No action was taken on this basis because only QC samples were associated with this calibration.

The continuing calibration performed on March 23 at 11:13 on the GCMS-K instrument exceeded the 25% difference quality control criterion for pyrene and benzo(g,h,i)perylene. Positive and non-detected results for pyrene and benzo(g,h,i)perylene were qualified as estimated (J and UJ) in samples PEN43SB0602, PEN43SB0702, PEN43SB0801, PEN43SB0802, PEN43SB0901, PEN43SB0902, PEN43SB1001, and PEN43SB1002.

The continuing calibration performed on March 28 at 10:36 on the GCMS-K instrument exceeded the 25% difference quality control criterion for acenaphthylene, indeno(1,2,3-cd)pyrene, 2-methylnaphthalene, dibenzo(a,h)anthracene, 1-methylnaphthalene, and benzo(g,h,i)perylene. Non-detected results for the aforementioned compounds were qualified as estimated (UJ) in samples PEN43SB2202 and PEN43SB2301.

The percent recoveries of benzo(a)anthracene and benzo(b)fluoranthene exceeded the quality control criterion in the LCS (WG15034-LCS). No action was taken on this basis because the other two LCS samples were compliant.

An MS/MSD was not performed with this SDG. No action was taken on this basis.

Several samples were reported as re-analyzed (-RA) in the EDD and on the Form Vs, however, the laboratory did not provide the initial analyses or any explanation why the samples were re-analyzed. No action was taken on this basis. This item is noted as a completeness issue.

The results for acenaphthene, benzo(b)fluoranthene, and benzo(k)fluoranthene exceeded the 50% relative percent difference (RPD) quality control criterion in the field duplicate pair PEN43SB2501 and PEN43SB2501D. No action was taken for acenaphthene on this basis because the difference between results were <2X the reporting limit. The results for benzo(b)fluoranthene and benzo(k)fluoranthene were qualified as estimated (J) in samples PEN43SB2501 and PEN43SB2501D.

Positive results below the reporting limit were qualified as estimated (J) due to uncertainty near the detection limit.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Qualifications were made based on calibration non-compliances, surrogate recovery non-compliances, and LCS recovery non-compliances.

Other Factors Affecting Data Quality: Qualifications were made based on field duplicate imprecision.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the NFESC guidelines. The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC guidelines and the Quality Assurance Project Plan (QAPP)."

Tetra Tech NUS
Bernard F. Spada III
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB0601	nsample	PEN43SB0601	nsample	PEN43SB0602
samp_date	3/3/2005	samp_date	3/3/2005	samp_date	3/3/2005
lab_id	WV0922-11	lab_id	WV0922-11	lab_id	WV0922-12
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	92.0	Pct_Solids	92.0	Pct_Solids	93.8
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	130	UJ	E
2,4-DINITROPHENOL	67	U	
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	84	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	98	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	82	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	78	U	
4,6-DINITRO-2-METHYLPHENOL	220	UJ	C
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	58	U	
4-CHLOROPHENYL PHENYL ETHER	55	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	93	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	61	U	
ATRAZINE	180	UJ	C
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	57	U	
BIS(2-CHLOROETHYL)ETHER	36	U	
BIS(2-ETHYLHEXYL)PHTHALATE	81	U	
BUTYL BENZYL PHTHALATE	74	U	
CAPROLACTAM	180	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	65	U	
DIBENZOFURAN	67	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	68	U	
DI-N-BUTYL PHTHALATE	92	U	
DI-N-OCTYL PHTHALATE	80	UJ	E
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	82	UJ	C
HEXACHLOROETHANE	66	U	
ISOPHORONE	56	U	
NITROBENZENE	81	U	
N-NITROSO-DI-N-PROPYLAMINE	61	U	
N-NITROSODIPHENYLAMINE	78	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	99	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	UJ	E
2,4-DINITROPHENOL	66	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	96	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	U	
4,6-DINITRO-2-METHYLPHENOL	220	UJ	C
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	U	
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	180	UJ	C
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	180	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB0602	nsample	PEN43SB0701	nsample	PEN43SB0701
samp_date	3/3/2005	samp_date	3/3/2005	samp_date	3/3/2005
lab_id	WV0922-12	lab_id	WV0922-13	lab_id	WV0922-13
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.8	Pct_Solids	93.1	Pct_Solids	93.1
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	90	U	
DI-N-OCTYL PHTHALATE	78	UJ	E
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	80	UJ	C
HEXACHLOROETHANE	65	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	130	UJ	E
2,4-DINITROPHENOL	66	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	97	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	77	U	
4,6-DINITRO-2-METHYLPHENOL	220	UJ	C
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	U	
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	60	U	
ATRAZINE	180	UJ	C
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	80	U	
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	67	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	91	U	
DI-N-OCTYL PHTHALATE	79	UJ	E
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	80	UJ	C
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB0702	nsample	PEN43SB0702	nsample	PEN43SB0801
samp_date	3/3/2005	samp_date	3/3/2005	samp_date	3/3/2005
lab_id	WV0922-14	lab_id	WV0922-14	lab_id	WV0922-15
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	94.8	Pct_Solids	94.8	Pct_Solids	94.6
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	UJ	E
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	UJ	C
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	UJ	C
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	UJ	E
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	UJ	E
HEXACHLOROCYCLOPENTADIENE	79	UJ	C
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	UJ	E
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	UJ	C
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	170	UJ	C
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB0801
samp_date	3/3/2005
lab_id	WV0922-15
qc_type	NM
units	UG/KG
Pct_Solids	94.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	UJ	E
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	UJ	C
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

nsample	PEN43SB0802
samp_date	3/3/2005
lab_id	WV0922-16
qc_type	NM
units	UG/KG
Pct_Solids	94.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	UJ	R
2,2'-OXYBIS(1-CHLOROPROPANE)	32	UJ	R
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	UJ	E
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	UJ	R
2,6-DINITROTOLUENE	82	UJ	R
2-CHLORONAPHTHALENE	51	UJ	R
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	UJ	R
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	UJ	R
3-NITROANILINE	75	UJ	R
4,6-DINITRO-2-METHYLPHENOL	220	UJ	C
4-BROMOPHENYL PHENYL ETHER	59	UJ	R
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	UJ	R
4-CHLOROPHENYL PHENYL ETHER	53	UJ	R
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	UJ	R
4-NITROPHENOL	160	U	
ACETOPHENONE	60	UJ	R
ATRAZINE	170	UJ	CR
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	UJ	R
BIS(2-CHLOROETHYL)ETHER	35	UJ	R
BIS(2-ETHYLHEXYL)PHTHALATE	78	UJ	R
BUTYL BENZYL PHTHALATE	72	UJ	R
CAPROLACTAM	170	UJ	R

nsample	PEN43SB0802
samp_date	3/3/2005
lab_id	WV0922-16
qc_type	NM
units	UG/KG
Pct_Solids	94.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	UJ	R
DIBENZOFURAN	66	UJ	R
DIETHYL PHTHALATE	110	UJ	R
DIMETHYL PHTHALATE	66	UJ	R
DI-N-BUTYL PHTHALATE	650	J	R
DI-N-OCTYL PHTHALATE	78	UJ	ER
HEXACHLOROBENZENE	250	UJ	R
HEXACHLOROBUTADIENE	46	UJ	R
HEXACHLOROCYCLOPENTADIENE	79	UJ	R
HEXACHLOROETHANE	64	UJ	R
ISOPHORONE	55	UJ	R
NITROBENZENE	78	UJ	R
N-NITROSO-DI-N-PROPYLAMINE	60	UJ	R
N-NITROSODIPHENYLAMINE	76	UJ	ER
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB0901	nsample	PEN43SB0901	nsample	PEN43SB0902
samp_date	3/3/2005	samp_date	3/3/2005	samp_date	3/3/2005
lab_id	WV0922-17	lab_id	WV0922-17	lab_id	WV0922-18
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.4	Pct_Solids	93.4	Pct_Solids	95.3
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	UJ	E
2,4-DINITROPHENOL	66	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	96	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	U	
4,6-DINITRO-2-METHYLPHENOL	220	UJ	C
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	U	
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	180	UJ	C
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	110	U	A
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	1200		
DI-N-OCTYL PHTHALATE	79	UJ	E
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	80	UJ	C
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	UJ	E
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	81	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	94	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	UJ	C
4-BROMOPHENYL PHENYL ETHER	58	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	90	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	UJ	C
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	71	U	
CAPROLACTAM	170	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB0902
samp_date	3/3/2005
lab_id	WV0922-18
qc_type	NM
units	UG/KG
Pct_Solids	95.3
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	65	U	
DI-N-BUTYL PHTHALATE	88	U	
DI-N-OCTYL PHTHALATE	77	UJ	E
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	UJ	C
HEXACHLOROETHANE	64	U	
ISOPHORONE	54	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

nsample	PEN43SB1001
samp_date	3/3/2005
lab_id	WV0922-19
qc_type	NM
units	UG/KG
Pct_Solids	94.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	UJ	E
2,4-DINITROPHENOL	65	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	81	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	58	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	90	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

nsample	PEN43SB1001
samp_date	3/3/2005
lab_id	WV0922-19
qc_type	NM
units	UG/KG
Pct_Solids	94.7
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	UJ	E
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB1002	nsample	PEN43SB1002	nsample	PEN43SB2001
samp_date	3/3/2005	samp_date	3/3/2005	samp_date	3/4/2005
lab_id	WV0922-20	lab_id	WV0922-20	lab_id	WV0951-14
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	94.8	Pct_Solids	94.8	Pct_Solids	94.6
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	UJ	E
2,4-DINITROPHENOL	65	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	81	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	58	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	90	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	77	UJ	E
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB2001
samp_date	3/4/2005
lab_id	WV0951-14
qc_type	NM
units	UG/KG
Pct_Solids	94.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

nsample	PEN43SB2002
samp_date	3/4/2005
lab_id	WV0951-15
qc_type	NM
units	UG/KG
Pct_Solids	95.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	81	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	90	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

nsample	PEN43SB2002
samp_date	3/4/2005
lab_id	WV0951-15
qc_type	NM
units	UG/KG
Pct_Solids	95.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB2101
samp_date	3/4/2005
lab_id	WV0951-16
qc_type	NM
units	UG/KG
Pct_Solids	93.5
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	66	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	96	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	U	
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	U	

nsample	PEN43SB2101
samp_date	3/4/2005
lab_id	WV0951-16
qc_type	NM
units	UG/KG
Pct_Solids	93.5
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	90	U	
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	80	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

nsample	PEN43SB2102
samp_date	3/4/2005
lab_id	WV0951-17
qc_type	NM
units	UG/KG
Pct_Solids	93.9
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	66	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	96	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	U	
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	92	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	180	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB2102	nsample	PEN43SB2201	nsample	PEN43SB2201
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0951-17	lab_id	WV0951-18	lab_id	WV0951-18
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.9	Pct_Solids	94.5	Pct_Solids	94.5
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	90	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	80	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	77	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	95	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	35	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	170	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	89	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB2202RA	nsample	PEN43SB2202RA	nsample	PEN43SB2301
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0951-19RA	lab_id	WV0951-19RA	lab_id	WV0951-20
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	94.1	Pct_Solids	94.1	Pct_Solids	92.8
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	66	UR	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	82	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	96	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	80	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	76	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	59	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	57	UJ	E
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	91	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	60	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	35	U	
BIS(2-ETHYLHEXYL)PHTHALATE	79	U	
BUTYL BENZYL PHTHALATE	72	U	
CAPROLACTAM	180	UR	C

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	64	U	
DIBENZOFURAN	66	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	66	U	
DI-N-BUTYL PHTHALATE	90	U	
DI-N-OCTYL PHTHALATE	78	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	80	UJ	C
HEXACHLOROETHANE	64	U	
ISOPHORONE	55	U	
NITROBENZENE	79	U	
N-NITROSO-DI-N-PROPYLAMINE	60	U	
N-NITROSODIPHENYLAMINE	76	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	97	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	33	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	66	UJ	C
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	83	U	
2-CHLORONAPHTHALENE	52	U	
2-CHLOROPHENOL	97	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	81	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	77	UJ	E
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	60	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	57	UJ	E
4-CHLOROPHENYL PHENYL ETHER	54	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	93	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	61	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UJ	C
BIS(2-CHLOROETHOXY)METHANE	56	U	
BIS(2-CHLOROETHYL)ETHER	36	U	
BIS(2-ETHYLHEXYL)PHTHALATE	80	U	
BUTYL BENZYL PHTHALATE	73	U	
CAPROLACTAM	180	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB2301
samp_date	3/4/2005
lab_id	WV0951-20
qc_type	NM
units	UG/KG
Pct_Solids	92.8
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	65	U	
DIBENZOFURAN	67	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	67	U	
DI-N-BUTYL PHTHALATE	91	U	
DI-N-OCTYL PHTHALATE	79	U	
HEXACHLOROBENZENE	250	U	
HEXACHLOROBUTADIENE	47	U	
HEXACHLOROCYCLOPENTADIENE	81	U	
HEXACHLOROETHANE	65	U	
ISOPHORONE	56	U	
NITROBENZENE	80	U	
N-NITROSO-DI-N-PROPYLAMINE	61	U	
N-NITROSODIPHENYLAMINE	78	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	98	U	

nsample	PEN43SB2501
samp_date	3/4/2005
lab_id	WV0951-11
qc_type	NM
units	UG/KG
Pct_Solids	90.3
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	34	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	150	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	68	U	
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	86	U	
2-CHLORONAPHTHALENE	54	U	
2-CHLOROPHENOL	100	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	83	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	150	U	
3-NITROANILINE	79	U	
4,6-DINITRO-2-METHYLPHENOL	230	U	
4-BROMOPHENYL PHENYL ETHER	62	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	59	U	
4-CHLOROPHENYL PHENYL ETHER	56	U	
4-METHYLPHENOL	170	U	
4-NITROANILINE	95	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	62	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	58	U	
BIS(2-CHLOROETHYL)ETHER	36	UJ	C
BIS(2-ETHYLHEXYL)PHTHALATE	82	U	
BUTYL BENZYL PHTHALATE	75	U	
CAPROLACTAM	180	U	

nsample	PEN43SB2501
samp_date	3/4/2005
lab_id	WV0951-11
qc_type	NM
units	UG/KG
Pct_Solids	90.3
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	66	U	
DIBENZOFURAN	69	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	69	U	
DI-N-BUTYL PHTHALATE	93	U	
DI-N-OCTYL PHTHALATE	82	U	
HEXACHLOROBENZENE	260	U	
HEXACHLOROBUTADIENE	48	U	
HEXACHLOROCYCLOPENTADIENE	83	U	
HEXACHLOROETHANE	67	U	
ISOPHORONE	58	U	
NITROBENZENE	82	U	
N-NITROSO-DI-N-PROPYLAMINE	62	U	
N-NITROSODIPHENYLAMINE	80	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	100	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB2501D	nsample	PEN43SB2501D	nsample	PEN43SB2502
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0951-12	lab_id	WV0951-12	lab_id	WV0951-13
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	89.5	Pct_Solids	89.5	Pct_Solids	95.4
DUP_OF:	PEN43SB2501	DUP_OF:	PEN43SB2501	DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	180	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	34	U	
2,4,5-TRICHLOROPHENOL	200	U	
2,4,6-TRICHLOROPHENOL	130	U	
2,4-DICHLOROPHENOL	150	U	
2,4-DIMETHYLPHENOL	130	U	
2,4-DINITROPHENOL	69	U	
2,4-DINITROTOLUENE	110	U	
2,6-DINITROTOLUENE	86	U	
2-CHLORONAPHTHALENE	54	U	
2-CHLOROPHENOL	100	U	
2-METHYLPHENOL	150	U	
2-NITROANILINE	84	U	
2-NITROPHENOL	120	U	
3,3'-DICHLOROBENZIDINE	150	U	
3-NITROANILINE	80	U	
4,6-DINITRO-2-METHYLPHENOL	230	U	
4-BROMOPHENYL PHENYL ETHER	62	U	
4-CHLORO-3-METHYLPHENOL	130	U	
4-CHLOROANILINE	60	U	
4-CHLOROPHENYL PHENYL ETHER	56	U	
4-METHYLPHENOL	170	U	
4-NITROANILINE	96	U	
4-NITROPHENOL	170	U	
ACETOPHENONE	63	U	
ATRAZINE	180	U	
BENZALDEHYDE	180	UR	C
BIS(2-CHLOROETHOXY)METHANE	58	U	
BIS(2-CHLOROETHYL)ETHER	37	U	
BIS(2-ETHYLHEXYL)PHTHALATE	83	U	
BUTYL BENZYL PHTHALATE	76	U	
CAPROLACTAM	180	U	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	67	U	
DIBENZOFURAN	69	U	
DIETHYL PHTHALATE	120	U	
DIMETHYL PHTHALATE	70	U	
DI-N-BUTYL PHTHALATE	94	U	
DI-N-OCTYL PHTHALATE	82	U	
HEXACHLOROBENZENE	260	U	
HEXACHLOROBUTADIENE	49	U	
HEXACHLOROCYCLOPENTADIENE	84	U	
HEXACHLOROETHANE	68	U	
ISOPHORONE	58	U	
NITROBENZENE	83	U	
N-NITROSO-DI-N-PROPYLAMINE	63	U	
N-NITROSODIPHENYLAMINE	80	UJ	E
PENTACHLOROPHENOL	160	U	
PHENOL	100	U	

Parameter	Result	Val Qual	Qual Code
1,1-BIPHENYL	170	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	32	U	
2,4,5-TRICHLOROPHENOL	190	U	
2,4,6-TRICHLOROPHENOL	120	U	
2,4-DICHLOROPHENOL	140	U	
2,4-DIMETHYLPHENOL	120	U	
2,4-DINITROPHENOL	65	U	
2,4-DINITROTOLUENE	100	U	
2,6-DINITROTOLUENE	81	U	
2-CHLORONAPHTHALENE	51	U	
2-CHLOROPHENOL	94	U	
2-METHYLPHENOL	140	U	
2-NITROANILINE	79	U	
2-NITROPHENOL	110	U	
3,3'-DICHLOROBENZIDINE	140	U	
3-NITROANILINE	75	U	
4,6-DINITRO-2-METHYLPHENOL	220	U	
4-BROMOPHENYL PHENYL ETHER	58	U	
4-CHLORO-3-METHYLPHENOL	120	U	
4-CHLOROANILINE	56	U	
4-CHLOROPHENYL PHENYL ETHER	53	U	
4-METHYLPHENOL	160	U	
4-NITROANILINE	90	U	
4-NITROPHENOL	160	U	
ACETOPHENONE	59	U	
ATRAZINE	170	U	
BENZALDEHYDE	170	UR	C
BIS(2-CHLOROETHOXY)METHANE	55	U	
BIS(2-CHLOROETHYL)ETHER	34	U	
BIS(2-ETHYLHEXYL)PHTHALATE	78	U	
BUTYL BENZYL PHTHALATE	71	U	
CAPROLACTAM	170	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: OS

nsample	PEN43SB2502
samp_date	3/4/2005
lab_id	WV0951-13
qc_type	NM
units	UG/KG
Pct_Solids	95.4
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
CARBAZOLE	63	U	
DIBENZOFURAN	65	U	
DIETHYL PHTHALATE	110	U	
DIMETHYL PHTHALATE	65	U	
DI-N-BUTYL PHTHALATE	88	U	
DI-N-OCTYL PHTHALATE	77	U	
HEXACHLOROBENZENE	240	U	
HEXACHLOROBUTADIENE	46	U	
HEXACHLOROCYCLOPENTADIENE	79	U	
HEXACHLOROETHANE	64	U	
ISOPHORONE	54	U	
NITROBENZENE	78	U	
N-NITROSO-DI-N-PROPYLAMINE	59	U	
N-NITROSODIPHENYLAMINE	75	UJ	E
PENTACHLOROPHENOL	150	U	
PHENOL	96	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB0601
samp_date	3/3/2005
lab_id	WV0922-1
qc_type	NM
units	UG/KG
Pct_Solids	92.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	U	
2-METHYLNAPHTHALENE	1	J	P
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	8	J	P
BENZO(A)ANTHRACENE	56		
BENZO(A)PYRENE	47		
BENZO(B)FLUORANTHENE	57	J	C
BENZO(G,H,I)PERYLENE	40		
BENZO(K)FLUORANTHENE	24		
CHRYSENE	50		
DIBENZO(A,H)ANTHRACENE	15	J	P
FLUORANTHENE	86		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	30		
NAPHTHALENE	2	J	P
PHENANTHRENE	38		
PYRENE	74		

nsample	PEN43SB0602RA
samp_date	3/3/2005
lab_id	WV0922-2RA
qc_type	NM
units	UG/KG
Pct_Solids	93.8
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

nsample	PEN43SB0701
samp_date	3/3/2005
lab_id	WV0922-3
qc_type	NM
units	UG/KG
Pct_Solids	93.1
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	UJ	C
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	1	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB0702RA
samp_date	3/3/2005
lab_id	WV0922-4RA
qc_type	NM
units	UG/KG
Pct_Solids	94.8
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

nsample	PEN43SB0801RA
samp_date	3/3/2005
lab_id	WV0922-5RA
qc_type	NM
units	UG/KG
Pct_Solids	94.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	1	J	P
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	2	J	P
ANTHRACENE	2	J	P
BENZO(A)ANTHRACENE	24		
BENZO(A)PYRENE	19	J	P
BENZO(B)FLUORANTHENE	42		
BENZO(G,H,I)PERYLENE	7	J	CP
BENZO(K)FLUORANTHENE	13	J	P
CHRYSENE	16	J	P
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	30		
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	8	J	P
NAPHTHALENE	1	J	P
PHENANTHRENE	12	J	P
PYRENE	20	J	CP

nsample	PEN43SB0802RA
samp_date	3/3/2005
lab_id	WV0922-6RA
qc_type	NM
units	UG/KG
Pct_Solids	94.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	7	J	P
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	7	J	P
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	J	P
CHRYSENE	2	J	P
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	4	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	3	J	P
PYRENE	3	J	CP

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB0901RA	nsample	PEN43SB0902RA	nsample	PEN43SB1001RA
samp_date	3/3/2005	samp_date	3/3/2005	samp_date	3/3/2005
lab_id	WV0922-7RA	lab_id	WV0922-8RA	lab_id	WV0922-9RA
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.4	Pct_Solids	95.3	Pct_Solids	94.7
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	U	
2-METHYLNAPHTHALENE	2	J	P
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	10	J	P
BENZO(A)PYRENE	4	J	P
BENZO(B)FLUORANTHENE	13	J	P
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	3	J	P
CHRYSENE	4	J	P
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	8	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	1	J	P
PHENANTHRENE	4	J	P
PYRENE	5	J	CP

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	2	J	P
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB1002RA	nsample	PEN43SB2001	nsample	PEN43SB2002
samp_date	3/3/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0922-10RA	lab_id	WV0951-4	lab_id	WV0951-5
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	94.8	Pct_Solids	94.6	Pct_Solids	95.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	UJ	C

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	2	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	10	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB2101	nsample	PEN43SB2102	nsample	PEN43SB2201
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0951-6	lab_id	WV0951-7	lab_id	WV0951-8
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.5	Pct_Solids	93.9	Pct_Solids	94.5
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	1	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	U	
2-METHYLNAPHTHALENE	5	I	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	2	U	
2-METHYLNAPHTHALENE	0.6	U	
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	UJ	C
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB2202	nsample	PEN43SB2301	nsample	PEN43SB2501
samp_date	3/4/2005	samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0951-9	lab_id	WV0951-10	lab_id	WV0951-1
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	94.1	Pct_Solids	92.8	Pct_Solids	90.3
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	UJ	C
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	UJ	C
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	1	U	
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	UJ	C
NAPHTHALENE	1	J	P
PHENANTHRENE	2	U	
PYRENE	2	U	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	11	UJ	C
2-METHYLNAPHTHALENE	0.6	UJ	C
ACENAPHTHENE	0.8	U	
ACENAPHTHYLENE	0.6	UJ	C
ANTHRACENE	0.9	U	
BENZO(A)ANTHRACENE	6	J	P
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	UJ	C
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	UJ	C
FLUORANTHENE	2	J	P
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	UJ	C
NAPHTHALENE	1	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	2	U	
2-METHYLNAPHTHALENE	8	J	P
ACENAPHTHENE	1	J	P
ACENAPHTHYLENE	2	J	P
ANTHRACENE	7	J	P
BENZO(A)ANTHRACENE	89	J	C
BENZO(A)PYRENE	52		
BENZO(B)FLUORANTHENE	100	J	G
BENZO(G,H,I)PERYLENE	30		
BENZO(K)FLUORANTHENE	32	J	G
CHRYSENE	47		
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	100		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	38		
NAPHTHALENE	1	U	
PHENANTHRENE	34		
PYRENE	61		

PROJ_NO: 4821

SDG: 3551 MEDIA: SOIL DATA FRACTION: PAH

nsample	PEN43SB2501D	nsample	PEN43SB2502
samp_date	3/4/2005	samp_date	3/4/2005
lab_id	WV0951-2	lab_id	WV0951-3
qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG
Pct_Solids	89.5	Pct_Solids	95.4
DUP_OF:	PEN43SB2501	DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	2	U	
2-METHYLNAPHTHALENE	10	J	P
ACENAPHTHENE	2	J	P
ACENAPHTHYLENE	3	J	P
ANTHRACENE	8	J	P
BENZO(A)ANTHRACENE	100	J	C
BENZO(A)PYRENE	60		
BENZO(B)FLUORANTHENE	180	J	G
BENZO(G,H,I)PERYLENE	30		
BENZO(K)FLUORANTHENE	9	J	GP
CHRYSENE	54		
DIBENZO(A,H)ANTHRACENE	22		
FLUORANTHENE	110		
FLUORENE	0.7	U	
INDENO(1,2,3-CD)PYRENE	40		
NAPHTHALENE	1	U	
PHENANTHRENE	36		
PYRENE	74		

Parameter	Result	Val Qual	Qual Code
1-METHYLNAPHTHALENE	2	U	
2-METHYLNAPHTHALENE	5	J	P
ACENAPHTHENE	0.7	U	
ACENAPHTHYLENE	0.6	U	
ANTHRACENE	0.8	U	
BENZO(A)ANTHRACENE	1	UJ	C
BENZO(A)PYRENE	0.8	U	
BENZO(B)FLUORANTHENE	2	U	
BENZO(G,H,I)PERYLENE	2	U	
BENZO(K)FLUORANTHENE	1	U	
CHRYSENE	1	U	
DIBENZO(A,H)ANTHRACENE	2	U	
FLUORANTHENE	2	U	
FLUORENE	0.6	U	
INDENO(1,2,3-CD)PYRENE	2	U	
NAPHTHALENE	0.9	U	
PHENANTHRENE	2	U	
PYRENE	2	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 14:14
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.0

Lab ID: WV0922-11
Client ID: PEN43SB0601
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	99	1.0	330	360	99
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	98	1.0	330	360	98
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	360	33
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	66	1.0	330	360	66
621-64-7	N-Nitroso-di-n-propylamine	U	61	1.0	330	360	61
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	81	1.0	330	360	81
78-59-1	Isophorone	U	56	1.0	330	360	56
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	57	1.0	330	360	57
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	360	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	58	1.0	330	360	58
87-68-3	Hexachlorobutadiene	U	47	1.0	330	360	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	82	1.0	330	360	82
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	360	200
91-58-7	2-Chloronaphthalene	U	52	1.0	330	360	52
105-67-9	2,4-Dimethylphenol	U	130	1.0	9	10	130
88-74-4	2-Nitroaniline	U	82	1.0	330	360	82
131-11-3	Dimethyl Phthalate	U	68	1.0	330	360	68
606-20-2	2,6-Dinitrotoluene	U	84	1.0	330	360	84
99-09-2	3-Nitroaniline	U	78	1.0	330	360	78
51-28-5	2,4-Dinitrophenol	U	67	1.0	330	360	67
132-64-9	Dibenzofuran	U	67	1.0	330	360	67
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	360	110
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	55	1.0	330	360	55
100-01-6	4-Nitroaniline	U	93	1.0	330	360	93
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	360	220
86-30-6	N-Nitrosodiphenylamine	U	78	1.0	330	360	78
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	360	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	360	250
87-86-5	Pentachlorophenol	U	150	1.0	330	360	150
86-74-8	Carbazole	U	65	1.0	330	360	65
84-74-2	Di-n-butylphthalate	U	92	1.0	330	360	92

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 14:14
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.0

Lab ID: WV0922-11
Client ID: PEN43SB0601
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	74	1.0	330	360	74
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	360	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	81	1.0	330	360	81
117-84-0	Di-n-octylphthalate	U	80	1.0	330	360	80
98-86-2	Acetophenone	U	61	1.0	330	360	61
367-12-4	2-Fluorophenol		91%				
13127-88-3	Phenol-D6		94%				
4165-60-0	Nitrobenzene-D5		83%				
321-60-8	2-Fluorobiphenyl		87%				
118-79-6	2,4,6-Tribromophenol		88%				
1718-51-0	Terphenyl-D14		J113%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 14:57
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.8

Lab ID: WV0922-12
Client ID: PEN43SB0602
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
105-67-9	2,4-Dimethylphenol	U	120	1.0	9	10	120
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 14:57
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.8

Lab ID: WV0922-12
Client ID: PEN43SB0602
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-86-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		82%				
13127-88-3	Phenol-D6		86%				
4165-60-0	Nitrobenzene-D5		74%				
321-60-8	2-Fluorobiphenyl		80%				
118-79-6	2,4,6-Tribromophenol		79%				
1718-51-0	Terphenyl-D14		107%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 15:40
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.1

Lab ID: WV0922-13
Client ID: PEN43SB0701
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	98	1.0	330	350	98
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	97	1.0	330	350	97
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	150	1.0	330	350	150
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	80	1.0	330	350	80
78-59-1	Isophorone	U	56	1.0	330	350	56
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	350	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
105-67-9	2,4-Dimethylphenol	U	130	1.0	9	10	130
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	67	1.0	330	350	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	350	83
99-09-2	3-Nitroaniline	U	77	1.0	330	350	77
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	67	1.0	330	350	67
100-02-7	4-Nitrophenol	U	170	1.0	330	350	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	350	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	91	1.0	330	350	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 15:40
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.1

Lab ID: WV0922-13
Client ID: PEN43SB0701
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	350	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	80	1.0	330	350	80
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-86-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		82%				
13127-88-3	Phenol-D6		84%				
4165-60-0	Nitrobenzene-D5		74%				
321-60-8	2-Fluorobiphenyl		78%				
118-79-6	2,4,6-Tribromophenol		74%				
1718-51-0	Terphenyl-D14		104%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 16:22
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.8

Lab ID: WV0922-14
Client ID: PEN43SB0702
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
105-67-9	2,4-Dimethylphenol	U	120	1.0	9	10	120
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 16:22
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.8

Lab ID: WV0922-14
Client ID: PEN43SB0702
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-86-2	Acetophenone	U	59	1.0	330	350	59
367-12-4	2-Fluorophenol		75%				
13127-88-3	Phenol-D6		78%				
4165-60-0	Nitrobenzene-D5		69%				
321-60-8	2-Fluorobiphenyl		73%				
118-79-6	2,4,6-Tribromophenol		72%				
1718-51-0	Terphenyl-D14		106%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 17:05
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0922-15
Client ID: PEN43SB0801
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
105-67-9	2,4-Dimethylphenol	U	120	1.0	9	10	120
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 17:05
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0922-15
Client ID: PEN43SB0801
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-86-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		81%				
13127-88-3	Phenol-D6		89%				
4165-60-0	Nitrobenzene-D5		72%				
321-60-8	2-Fluorobiphenyl		82%				
118-79-6	2,4,6-Tribromophenol		86%				
1718-51-0	Terphenyl-D14		J121%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 17:48
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0922-16
Client ID: PEN43SB0802
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
105-67-9	2,4-Dimethylphenol	U	120	1.0	9	10	120
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate		650	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 17:48
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0922-16
Client ID: PEN43SB0802
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-86-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		44%				
13127-88-3	Phenol-D6		46%				
4165-60-0	Nitrobenzene-D5		J 34%				
321-60-8	2-Fluorobiphenyl		42%				
118-79-6	2,4,6-Tribromophenol		40%				
1718-51-0	Terphenyl-D14		J 53%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/22/05
Analysis Date: 24-MAR-2005 15:12
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0922-16RE
Client ID: PEN43SB0802
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15362
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/22/05
Analysis Date: 24-MAR-2005 15:12
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0922-16RE
Client ID: PEN43SB0802
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15362
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		88%				
13127-88-3	Phenol-D6		94%				
4165-60-0	Nitrobenzene-D5		69%				
321-60-8	2-Fluorobiphenyl		83%				
118-79-6	2,4,6-Tribromophenol		83%				
1718-51-0	Terphenyl-D14		96%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 18:31
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.4

Lab ID: WV0922-17
Client ID: PEN43SB0901
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	98	1.0	330	350	98
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	80	1.0	330	350	80
78-59-1	Isophorone	U	56	1.0	330	350	56
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
105-67-9	2,4-Dimethylphenol	U	120	1.0	9	10	120
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	67	1.0	330	350	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	350	83
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	350	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate		1200	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 18:31
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.4

Lab ID: WV0922-17
Client ID: PEN43SB0901
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	350	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	I	110	1.0	330	350	80
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-86-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		84%				
13127-88-3	Phenol-D6		82%				
4165-60-0	Nitrobenzene-D5		72%				
321-60-8	2-Fluorobiphenyl		86%				
118-79-6	2,4,6-Tribromophenol		97%				
1718-51-0	Terphenyl-D14		J132%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 19:14
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 95.3

Lab ID: WV0922-18
Client ID: PEN43SB0902
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	94	1.0	330	350	94
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	54	1.0	330	350	54
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
105-67-9	2,4-Dimethylphenol	U	120	1.0	10	10	120
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	65	1.0	330	350	65
606-20-2	2,6-Dinitrotoluene	U	81	1.0	330	350	81
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	90	1.0	330	350	90
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	58	1.0	330	350	58
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	88	1.0	330	350	88

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 19:14
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 95.3

Lab ID: WV0922-18
Client ID: PEN43SB0902
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	71	1.0	330	350	71
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	77	1.0	330	350	77
98-86-2	Acetophenone	U	59	1.0	330	350	59
367-12-4	2-Fluorophenol		79%				
13127-88-3	Phenol-D6		78%				
4165-60-0	Nitrobenzene-D5		78%				
321-60-8	2-Fluorobiphenyl		82%				
118-79-6	2,4,6-Tribromophenol		68%				
1718-51-0	Terphenyl-D14		98%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 10:48
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 95.0

Lab ID: WV0922-19
Client ID: PEN43SB1001
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	81	1.0	330	350	81
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	90	1.0	330	350	90
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	58	1.0	330	350	58
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 10:48
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 95.0

Lab ID: WV0922-19
Client ID: PEN43SB1001
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	59	1.0	330	350	59
367-12-4	2-Fluorophenol		94%				
13127-88-3	Phenol-D6		98%				
4165-60-0	Nitrobenzene-D5		87%				
321-60-8	2-Fluorobiphenyl		93%				
118-79-6	2,4,6-Tribromophenol		82%				
1718-51-0	Terphenyl-D14		J120%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 11:31
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 95.1

Lab ID: WV0922-20
Client ID: PEN43SB1002
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	81	1.0	330	350	81
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	90	1.0	330	350	90
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	58	1.0	330	350	58
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 11:31
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 95.1

Lab ID: WV0922-20
Client ID: PEN43SB1002
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	77	1.0	330	350	77
98-96-2	Acetophenone	U	59	1.0	330	350	59
367-12-4	2-Fluorophenol		79%				
13127-88-3	Phenol-D6		84%				
4165-60-0	Nitrobenzene-D5		68%				
321-60-8	2-Fluorobiphenyl		70%				
118-79-6	2,4,6-Tribromophenol		62%				
1718-51-0	Terphenyl-D14		94%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 20:54
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0951-14
Client ID: PEN43SB2001
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 20:54
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0951-14
Client ID: PEN43SB2001
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		84%				
13127-88-3	Phenol-D6		91%				
4165-60-0	Nitrobenzene-D5		64%				
321-60-8	2-Fluorobiphenyl		76%				
118-79-6	2,4,6-Tribromophenol		94%				
1718-51-0	Terphenyl-D14		91%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 21:36
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 95.0

Lab ID: WV0951-15
Client ID: PEN43SB2002
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	96	1.0	330	350	96
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	350	59
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	78	1.0	330	350	78
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	81	1.0	330	350	81
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	65	1.0	330	350	65
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	90	1.0	330	350	90
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	240	1.0	330	350	240
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 21:36
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 95.0

Lab ID: WV0951-15
Client ID: PEN43SB2002
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	350	78
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	59	1.0	330	350	59
367-12-4	2-Fluorophenol		72%				
13127-88-3	Phenol-D6		78%				
4165-60-0	Nitrobenzene-D5		59%				
321-60-8	2-Fluorobiphenyl		66%				
118-79-6	2,4,6-Tribromophenol		81%				
1718-51-0	Terphenyl-D14		95%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 22:18
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.5

Lab ID: WV0951-16
Client ID: PEN43SB2101
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	98	1.0	330	350	98
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	56	1.0	330	350	56
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	67	1.0	330	350	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	350	83
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	350	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 22:18
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.5

Lab ID: WV0951-16
Client ID: PEN43SB2101
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	350	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	79	1.0	330	350	79
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		80%				
13127-88-3	Phenol-D6		87%				
4165-60-0	Nitrobenzene-D5		66%				
321-60-8	2-Fluorobiphenyl		76%				
118-79-6	2,4,6-Tribromophenol		92%				
1718-51-0	Terphenyl-D14		97%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 23:01
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.9

Lab ID: WV0951-17
Client ID: PEN43SB2102
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 23:01
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.9

Lab ID: WV0951-17
Client ID: PEN43SB2102
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		73%				
13127-88-3	Phenol-D6		81%				
4165-60-0	Nitrobenzene-D5		58%				
321-60-8	2-Fluorobiphenyl		70%				
118-79-6	2,4,6-Tribromophenol		84%				
1718-51-0	Terphenyl-D14		96%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 23:44
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.5

Lab ID: WV0951-18
Client ID: PEN43SB2201
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	350	170
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	95	1.0	330	350	95
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	350	32
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	170	1.0	330	350	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	350	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	350	170
106-47-8	4-Chloroaniline	U	56	1.0	330	350	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	350	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	79	1.0	330	350	79
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	75	1.0	330	350	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	350	65
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	170	1.0	330	350	170
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	350	53
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	63	1.0	330	350	63
84-74-2	Di-n-butylphthalate	U	89	1.0	330	350	89

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 23:44
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.5

Lab ID: WV0951-18
Client ID: PEN43SB2201
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		69%				
13127-88-3	Phenol-D6		73%				
4165-60-0	Nitrobenzene-D5		55%				
321-60-8	2-Fluorobiphenyl		68%				
118-79-6	2,4,6-Tribromophenol		76%				
1718-51-0	Terphenyl-D14		88%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 13:03
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.1

Lab ID: WV0951-19RA
Client ID: PEN43SB2202
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/11/05
Analysis Date: 30-MAR-2005 13:03
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.1

Lab ID: WV0951-19RA
Client ID: PEN43SB2202
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		80%				
13127-88-3	Phenol-D6		74%				
4165-60-0	Nitrobenzene-D5		62%				
321-60-8	2-Fluorobiphenyl		68%				
118-79-6	2,4,6-Tribromophenol		46%				
1718-51-0	Terphenyl-D14		J 74%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 16:30
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.1

Lab ID: WV0951-19RE
Client ID: PEN43SB2202
SDG: CTO355-1
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	97	1.0	330	350	97
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	64	1.0	330	350	64
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	79	1.0	330	350	79
78-59-1	Isophorone	U	55	1.0	330	350	55
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	350	120
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	46	1.0	330	350	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	350	120
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	350	51
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	66	1.0	330	350	66
606-20-2	2,6-Dinitrotoluene	U	82	1.0	330	350	82
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	91	1.0	330	350	91
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	76	1.0	330	350	76
101-55-3	4-Bromophenyl-phenylether	U	59	1.0	330	350	59
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate	U	90	1.0	330	350	90

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 16:30
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 94.1

Lab ID: WV0951-19RE
Client ID: PEN43SB2202
SDG: CTO355-1
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	72	1.0	330	350	72
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	350	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	79	1.0	330	350	79
117-84-0	Di-n-octylphthalate	U	78	1.0	330	350	78
98-96-2	Acetophenone	U	60	1.0	330	350	60
367-12-4	2-Fluorophenol		79%				
13127-88-3	Phenol-D6		93%				
4165-60-0	Nitrobenzene-D5		92%				
321-60-8	2-Fluorobiphenyl		J109%				
118-79-6	2,4,6-Tribromophenol		96%				
1718-51-0	Terphenyl-D14		107%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 21:30
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.8

Lab ID: WV0951-20
Client ID: PEN43SB2301
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	98	1.0	330	360	98
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	97	1.0	330	360	97
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	360	33
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	65	1.0	330	360	65
621-64-7	N-Nitroso-di-n-propylamine	U	61	1.0	330	360	61
106-44-5	4-Methylphenol	U	160	1.0	330	360	160
98-95-3	Nitrobenzene	U	80	1.0	330	360	80
78-59-1	Isophorone	U	56	1.0	330	360	56
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	360	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	360	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	57	1.0	330	360	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	360	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	81	1.0	330	360	81
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	360	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	360	52
88-74-4	2-Nitroaniline	U	81	1.0	330	360	81
131-11-3	Dimethyl Phthalate	U	67	1.0	330	360	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	360	83
99-09-2	3-Nitroaniline	U	77	1.0	330	360	77
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	360	66
132-64-9	Dibenzofuran	U	67	1.0	330	360	67
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	360	100
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	360	54
100-01-6	4-Nitroaniline	U	93	1.0	330	360	93
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	360	220
86-30-6	N-Nitrosodiphenylamine	U	78	1.0	330	360	78
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	360	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	360	250
87-86-5	Pentachlorophenol	U	150	1.0	330	360	150
86-74-8	Carbazole	U	65	1.0	330	360	65
84-74-2	Di-n-butylphthalate	U	91	1.0	330	360	91

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 21:30
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 92.8

Lab ID: WV0951-20
Client ID: PEN43SB2301
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	73	1.0	330	360	73
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	360	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	80	1.0	330	360	80
117-84-0	Di-n-octylphthalate	U	79	1.0	330	360	79
98-96-2	Acetophenone	U	61	1.0	330	360	61
367-12-4	2-Fluorophenol		94%				
13127-88-3	Phenol-D6		87%				
4165-60-0	Nitrobenzene-D5		70%				
321-60-8	2-Fluorobiphenyl		75%				
118-79-6	2,4,6-Tribromophenol		88%				
1718-51-0	Terphenyl-D14		75%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 18:45
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 90.3

Lab ID: WV0951-11
Client ID: PEN43SB2501
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	360	180
108-95-2	Phenol	U	100	1.0	330	360	100
111-44-4	Bis(2-Chloroethyl)ether	U	36	1.0	330	360	36
95-57-8	2-Chlorophenol	U	100	1.0	330	360	100
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	34	1.0	330	360	34
95-48-7	2-Methylphenol	U	150	1.0	330	360	150
67-72-1	Hexachloroethane	U	67	1.0	330	360	67
621-64-7	N-Nitroso-di-n-propylamine	U	62	1.0	330	360	62
106-44-5	4-Methylphenol	U	170	1.0	330	360	170
98-95-3	Nitrobenzene	U	82	1.0	330	360	82
78-59-1	Isophorone	U	58	1.0	330	360	58
88-75-5	2-Nitrophenol	U	120	1.0	330	360	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	360	130
105-60-2	Caprolactam	U	180	1.0	330	360	180
111-91-1	Bis(2-Chloroethoxy)methane	U	58	1.0	330	360	58
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	360	150
92-52-4	1,1'-Biphenyl	U	180	1.0	330	360	180
106-47-8	4-Chloroaniline	U	59	1.0	330	360	59
87-68-3	Hexachlorobutadiene	U	48	1.0	330	360	48
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	360	130
77-47-4	Hexachlorocyclopentadiene	U	83	1.0	330	360	83
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	360	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	360	200
91-58-7	2-Chloronaphthalene	U	54	1.0	330	360	54
88-74-4	2-Nitroaniline	U	83	1.0	330	360	83
131-11-3	Dimethyl Phthalate	U	69	1.0	330	360	69
606-20-2	2,6-Dinitrotoluene	U	86	1.0	330	360	86
99-09-2	3-Nitroaniline	U	79	1.0	330	360	79
51-28-5	2,4-Dinitrophenol	U	68	1.0	330	360	68
132-64-9	Dibenzofuran	U	69	1.0	330	360	69
100-02-7	4-Nitrophenol	U	170	1.0	330	360	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	360	110
1912-24-9	Atrazine	U	180	1.0	330	360	180
84-66-2	Diethylphthalate	U	110	1.0	330	360	110
7005-72-3	4-Chlorophenyl-phenylether	U	56	1.0	330	360	56
100-01-6	4-Nitroaniline	U	95	1.0	330	360	95
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	360	230
86-30-6	N-Nitrosodiphenylamine	U	80	1.0	330	360	80
101-55-3	4-Bromophenyl-phenylether	U	62	1.0	330	360	62
118-74-1	Hexachlorobenzene	U	260	1.0	330	360	260
87-86-5	Pentachlorophenol	U	160	1.0	330	360	160
86-74-8	Carbazole	U	66	1.0	330	360	66
84-74-2	Di-n-butylphthalate	U	93	1.0	330	360	93

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 18:45
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 90.3

Lab ID: WV0951-11
Client ID: PEN43SB2501
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	75	1.0	330	360	75
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	360	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	82	1.0	330	360	82
117-84-0	Di-n-octylphthalate	U	82	1.0	330	360	82
98-96-2	Acetophenone	U	62	1.0	330	360	62
367-12-4	2-Fluorophenol		72%				
13127-88-3	Phenol-D6		80%				
4165-60-0	Nitrobenzene-D5		58%				
321-60-8	2-Fluorobiphenyl		73%				
118-79-6	2,4,6-Tribromophenol		90%				
1718-51-0	Terphenyl-D14		96%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 19:28
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 89.5

Lab ID: WV0951-12
Client ID: PEN43SB2501D
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	370	180
108-95-2	Phenol	U	100	1.0	330	370	100
111-44-4	Bis(2-Chloroethyl)ether	U	37	1.0	330	370	37
95-57-8	2-Chlorophenol	U	100	1.0	330	370	100
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	34	1.0	330	370	34
95-48-7	2-Methylphenol	U	150	1.0	330	370	150
67-72-1	Hexachloroethane	U	68	1.0	330	370	68
621-64-7	N-Nitroso-di-n-propylamine	U	63	1.0	330	370	63
106-44-5	4-Methylphenol	U	170	1.0	330	370	170
98-95-3	Nitrobenzene	U	83	1.0	330	370	83
78-59-1	Isophorone	U	58	1.0	330	370	58
88-75-5	2-Nitrophenol	U	120	1.0	330	370	120
105-67-9	2,4-Dimethylphenol	U	130	1.0	330	370	130
105-60-2	Caprolactam	U	180	1.0	330	370	180
111-91-1	Bis(2-Chloroethoxy)methane	U	58	1.0	330	370	58
120-83-2	2,4-Dichlorophenol	U	150	1.0	330	370	150
92-52-4	1,1'-Biphenyl	U	180	1.0	330	370	180
106-47-8	4-Chloroaniline	U	60	1.0	330	370	60
87-68-3	Hexachlorobutadiene	U	49	1.0	330	370	49
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	370	130
77-47-4	Hexachlorocyclopentadiene	U	84	1.0	330	370	84
88-06-2	2,4,6-Trichlorophenol	U	130	1.0	330	370	130
95-95-4	2,4,5-Trichlorophenol	U	200	1.0	330	370	200
91-58-7	2-Chloronaphthalene	U	54	1.0	330	370	54
88-74-4	2-Nitroaniline	U	84	1.0	330	370	84
131-11-3	Dimethyl Phthalate	U	70	1.0	330	370	70
606-20-2	2,6-Dinitrotoluene	U	86	1.0	330	370	86
99-09-2	3-Nitroaniline	U	80	1.0	330	370	80
51-28-5	2,4-Dinitrophenol	U	69	1.0	330	370	69
132-64-9	Dibenzofuran	U	69	1.0	330	370	69
100-02-7	4-Nitrophenol	U	170	1.0	330	370	170
121-14-2	2,4-Dinitrotoluene	U	110	1.0	330	370	110
1912-24-9	Atrazine	U	180	1.0	330	370	180
84-66-2	Diethylphthalate	U	120	1.0	330	370	120
7005-72-3	4-Chlorophenyl-phenylether	U	56	1.0	330	370	56
100-01-6	4-Nitroaniline	U	96	1.0	330	370	96
534-52-1	4,6-Dinitro-2-Methylphenol	U	230	1.0	330	370	230
86-30-6	N-Nitrosodiphenylamine	U	80	1.0	330	370	80
101-55-3	4-Bromophenyl-phenylether	U	62	1.0	330	370	62
118-74-1	Hexachlorobenzene	U	260	1.0	330	370	260
87-86-5	Pentachlorophenol	U	160	1.0	330	370	160
86-74-8	Carbazole	U	67	1.0	330	370	67
84-74-2	Di-n-butylphthalate	U	94	1.0	330	370	94

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 19:28
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 89.5

Lab ID: WV0951-12
Client ID: PEN43SB2501D
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	76	1.0	330	370	76
91-94-1	3,3'-Dichlorobenzidine	U	150	1.0	330	370	150
117-81-7	bis(2-Ethylhexyl)phthalate	U	83	1.0	330	370	83
117-84-0	Di-n-octylphthalate	U	82	1.0	330	370	82
98-96-2	Acetophenone	U	63	1.0	330	370	63
367-12-4	2-Fluorophenol		81%				
13127-88-3	Phenol-D6		88%				
4165-60-0	Nitrobenzene-D5		65%				
321-60-8	2-Fluorobiphenyl		77%				
118-79-6	2,4,6-Tribromophenol		92%				
1718-51-0	Terphenyl-D14		96%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 20:11
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 95.4

Lab ID: WV0951-13
Client ID: PEN43SB2502
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	170	1.0	330	340	170
108-95-2	Phenol	U	96	1.0	330	340	96
111-44-4	Bis(2-Chloroethyl)ether	U	34	1.0	330	340	34
95-57-8	2-Chlorophenol	U	94	1.0	330	340	94
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	32	1.0	330	340	32
95-48-7	2-Methylphenol	U	140	1.0	330	340	140
67-72-1	Hexachloroethane	U	64	1.0	330	340	64
621-64-7	N-Nitroso-di-n-propylamine	U	59	1.0	330	340	59
106-44-5	4-Methylphenol	U	160	1.0	330	340	160
98-95-3	Nitrobenzene	U	78	1.0	330	340	78
78-59-1	Isophorone	U	54	1.0	330	340	54
88-75-5	2-Nitrophenol	U	110	1.0	330	340	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	340	120
105-60-2	Caprolactam	U	170	1.0	330	340	170
111-91-1	Bis(2-Chloroethoxy)methane	U	55	1.0	330	340	55
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	340	140
92-52-4	1,1'-Biphenyl	U	170	1.0	330	340	170
106-47-8	4-Chloroaniline	U	56	1.0	330	340	56
87-68-3	Hexachlorobutadiene	U	46	1.0	330	340	46
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	340	120
77-47-4	Hexachlorocyclopentadiene	U	79	1.0	330	340	79
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	340	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	340	190
91-58-7	2-Chloronaphthalene	U	51	1.0	330	340	51
88-74-4	2-Nitroaniline	U	79	1.0	330	340	79
131-11-3	Dimethyl Phthalate	U	65	1.0	330	340	65
606-20-2	2,6-Dinitrotoluene	U	81	1.0	330	340	81
99-09-2	3-Nitroaniline	U	75	1.0	330	340	75
51-28-5	2,4-Dinitrophenol	U	65	1.0	330	340	65
132-64-9	Dibenzofuran	U	65	1.0	330	340	65
100-02-7	4-Nitrophenol	U	160	1.0	330	340	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	340	100
1912-24-9	Atrazine	U	170	1.0	330	340	170
84-66-2	Diethylphthalate	U	110	1.0	330	340	110
7005-72-3	4-Chlorophenyl-phenylether	U	53	1.0	330	340	53
100-01-6	4-Nitroaniline	U	90	1.0	330	340	90
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	340	220
86-30-6	N-Nitrosodiphenylamine	U	75	1.0	330	340	75
101-55-3	4-Bromophenyl-phenylether	U	58	1.0	330	340	58
118-74-1	Hexachlorobenzene	U	240	1.0	330	340	240
87-86-5	Pentachlorophenol	U	150	1.0	330	340	150
86-74-8	Carbazole	U	63	1.0	330	340	63
84-74-2	Di-n-butylphthalate	U	88	1.0	330	340	88

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 24-MAR-2005 20:11
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 95.4

Lab ID: WV0951-13
Client ID: PEN43SB2502
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	71	1.0	330	340	71
91-94-1	3,3'-Dichlorobenzidine	U	140	1.0	330	340	140
117-81-7	bis(2-Ethylhexyl)phthalate	U	78	1.0	330	340	78
117-84-0	Di-n-octylphthalate	U	77	1.0	330	340	77
98-96-2	Acetophenone	U	59	1.0	330	340	59
367-12-4	2-Fluorophenol		90%				
13127-88-3	Phenol-D6		100%				
4165-60-0	Nitrobenzene-D5		75%				
321-60-8	2-Fluorobiphenyl		86%				
118-79-6	2,4,6-Tribromophenol		95%				
1718-51-0	Terphenyl-D14		106%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 11:54
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 92.0

Lab ID: WV0922-1
Client ID: PEN43SB0601
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	2	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	I	1	1.0	20	22	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene		38	1.0	20	22	2
120-12-7	Anthracene	I	8	1.0	20	22	0.9
206-44-0	Fluoranthene		86	1.0	20	22	2
129-00-0	Pyrene		74	1.0	20	22	2
56-55-3	Benzo(a)anthracene		56	1.0	20	22	1
218-01-9	Chrysene		50	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene		57	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene		24	1.0	20	22	1
50-32-8	Benzo(a)pyrene		47	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		30	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	I	15	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene		40	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		92%				
81103-79-9	Fluorene-d10		80%				
1718-52-1	Pyrene-d10		90%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 23-MAR-2005 15:20
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 93.8

Lab ID: WV0922-2RA
Client ID: PEN43SB0602
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.9	1.0	20	21	0.9
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		86%				
81103-79-9	Fluorene-d10		69%				
1718-52-1	Pyrene-d10		75%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 13:35
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 93.1

Lab ID: WV0922-3
Client ID: PEN43SB0701
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	21	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	21	0.8
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.9	1.0	20	21	0.9
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		76%				
81103-79-9	Fluorene-d10		69%				
1718-52-1	Pyrene-d10		88%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 23-MAR-2005 16:09
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.8

Lab ID: WV0922-4RA
Client ID: PEN43SB0702
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		81%				
81103-79-9	Fluorene-d10		84%				
1718-52-1	Pyrene-d10		83%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 23-MAR-2005 16:58
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0922-5RA
Client ID: PEN43SB0801
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	1	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	I	1	1.0	20	21	0.6
208-96-8	Acenaphthylene	I	2	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	12	1.0	20	21	2
120-12-7	Anthracene	I	2	1.0	20	21	0.8
206-44-0	Fluoranthene		30	1.0	20	21	2
129-00-0	Pyrene	I	20	1.0	20	21	2
56-55-3	Benzo(a)anthracene		24	1.0	20	21	1
218-01-9	Chrysene	I	16	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene		42	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	I	13	1.0	20	21	1
50-32-8	Benzo(a)pyrene	I	19	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	I	8	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	I	7	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		83%				
81103-79-9	Fluorene-d10		92%				
1718-52-1	Pyrene-d10		89%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 23-MAR-2005 17:48
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0922-6RA
Client ID: PEN43SB0802
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	3	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	I	4	1.0	20	21	2
129-00-0	Pyrene	I	3	1.0	20	21	2
56-55-3	Benzo(a)anthracene	I	7	1.0	20	21	1
218-01-9	Chrysene	I	2	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	I	7	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	I	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		44%				
81103-79-9	Fluorene-d10		50%				
1718-52-1	Pyrene-d10		52%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 23-MAR-2005 18:36
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 93.4

Lab ID: WV0922-7RA
Client ID: PEN43SB0901
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	1	1.0	20	21	1.0
91-57-6	2-Methylnaphthalene	I	2	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	I	4	1.0	20	21	2
120-12-7	Anthracene	U	0.9	1.0	20	21	0.9
206-44-0	Fluoranthene	I	8	1.0	20	21	2
129-00-0	Pyrene	I	5	1.0	20	21	2
56-55-3	Benzo(a)anthracene	I	10	1.0	20	21	1
218-01-9	Chrysene	I	4	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	I	13	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	I	3	1.0	20	21	1
50-32-8	Benzo(a)pyrene	I	4	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		84%				
81103-79-9	Fluorene-d10		92%				
1718-52-1	Pyrene-d10		91%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 23-MAR-2005 19:25
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 95.3

Lab ID: WV0922-8RA
Client ID: PEN43SB0902
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	2	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		98%				
81103-79-9	Fluorene-d10		76%				
1718-52-1	Pyrene-d10		83%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 23-MAR-2005 20:16
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.7

Lab ID: WV0922-9RA
Client ID: PEN43SB1001
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	I	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		108%				
81103-79-9	Fluorene-d10		85%				
1718-52-1	Pyrene-d10		94%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 23-MAR-2005 21:06
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.8

Lab ID: WV0922-10RA
Client ID: PEN43SB1002
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		77%				
81103-79-9	Fluorene-d10		68%				
1718-52-1	Pyrene-d10		71%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 09:35
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.6

Lab ID: WV0951-4
Client ID: PEN43SB2001
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
90-12-0	1-Methylnaphthalene	U	2	1.0	20	21	2
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
7297-45-2	2-Methylnaphthalene-d10		91%				
81103-79-9	Fluorene-d10		93%				
1718-52-1	Pyrene-d10		95%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 19:23
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 95.0

Lab ID: WV0951-5
Client ID: PEN43SB2002
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	21	10
7297-45-2	2-Methylnaphthalene-d10		77%				
81103-79-9	Fluorene-d10		79%				
1718-52-1	Pyrene-d10		91%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 20:07
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 93.5

Lab ID: WV0951-6
Client ID: PEN43SB2101
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	21	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.9	1.0	20	21	0.9
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		86%				
81103-79-9	Fluorene-d10		87%				
1718-52-1	Pyrene-d10		87%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 20:51
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 93.9

Lab ID: WV0951-7
Client ID: PEN43SB2102
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	I	5	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.9	1.0	20	21	0.9
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		78%				
81103-79-9	Fluorene-d10		83%				
1718-52-1	Pyrene-d10		86%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 11:02
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.5

Lab ID: WV0951-8
Client ID: PEN43SB2201
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
90-12-0	1-Methylnaphthalene	U	2	1.0	20	21	2
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
7297-45-2	2-Methylnaphthalene-d10		72%				
81103-79-9	Fluorene-d10		72%				
1718-52-1	Pyrene-d10		87%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 14:46
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 94.1

Lab ID: WV0951-9
Client ID: PEN43SB2202
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	1	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	21	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.9	1.0	20	21	0.9
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	21	11
7297-45-2	2-Methylnaphthalene-d10		93%				
81103-79-9	Fluorene-d10		80%				
1718-52-1	Pyrene-d10		85%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 15:34
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 92.8

Lab ID: WV0951-10
Client ID: PEN43SB2301
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	22	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.6	1.0	20	22	0.6
85-01-8	Phenanthrene	U	2	1.0	20	22	2
120-12-7	Anthracene	U	0.9	1.0	20	22	0.9
206-44-0	Fluoranthene	I	2	1.0	20	22	2
129-00-0	Pyrene	U	2	1.0	20	22	2
56-55-3	Benzo(a)anthracene	I	6	1.0	20	22	1
218-01-9	Chrysene	U	1	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	22	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		82%				
81103-79-9	Fluorene-d10		73%				
1718-52-1	Pyrene-d10		80%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 11:45
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 90.3

Lab ID: WV0951-1
Client ID: PEN43SB2501
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	I	8	1.0	20	22	0.6
90-12-0	1-Methylnaphthalene	U	2	1.0	20	22	2
208-96-8	Acenaphthylene	I	2	1.0	20	22	0.6
83-32-9	Acenaphthene	I	1	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene		34	1.0	20	22	2
120-12-7	Anthracene	I	7	1.0	20	22	0.9
206-44-0	Fluoranthene		100	1.0	20	22	2
129-00-0	Pyrene		61	1.0	20	22	2
56-55-3	Benzo(a)anthracene	J	89	1.0	20	22	1
218-01-9	Chrysene		47	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene	J	100	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene		32	1.0	20	22	1
50-32-8	Benzo(a)pyrene		52	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		38	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene		30	1.0	20	22	2
7297-45-2	2-Methylnaphthalene-d10		80%				
81103-79-9	Fluorene-d10		90%				
1718-52-1	Pyrene-d10		91%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 12:28
Report Date: 03/30/2005
Matrix: SOIL
% Solids: 89.5

Lab ID: WV0951-2
Client ID: PEN43SB2501D
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	1.0	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	I	10	1.0	20	22	0.6
90-12-0	1-Methylnaphthalene	U	2	1.0	20	22	2
208-96-8	Acenaphthylene	I	3	1.0	20	22	0.6
83-32-9	Acenaphthene	I	2	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene		36	1.0	20	22	2
120-12-7	Anthracene	I	8	1.0	20	22	0.9
206-44-0	Fluoranthene		110	1.0	20	22	2
129-00-0	Pyrene		74	1.0	20	22	2
56-55-3	Benzo(a)anthracene	J	100	1.0	20	22	1
218-01-9	Chrysene		54	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene	J	180	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene	I	9	1.0	20	22	2
50-32-8	Benzo(a)pyrene		60	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		40	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene		22	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene		30	1.0	20	22	2
7297-45-2	2-Methylnaphthalene-d10		84%				
81103-79-9	Fluorene-d10		92%				
1718-52-1	Pyrene-d10		101%				

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/04/05
Received Date: 03/05/05
Extraction Date: 03/10/05
Analysis Date: 23-MAR-2005 08:52
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 95.4

Lab ID: WV0951-3
Client ID: PEN43SB2502
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	21	0.9
91-57-6	2-Methylnaphthalene	I	5	1.0	20	21	0.6
90-12-0	1-Methylnaphthalene	U	2	1.0	20	21	2
208-96-8	Acenaphthylene	U	0.6	1.0	20	21	0.6
83-32-9	Acenaphthene	U	0.7	1.0	20	21	0.7
86-73-7	Fluorene	U	0.6	1.0	20	21	0.6
85-01-8	Phenanthrene	U	2	1.0	20	21	2
120-12-7	Anthracene	U	0.8	1.0	20	21	0.8
206-44-0	Fluoranthene	U	2	1.0	20	21	2
129-00-0	Pyrene	U	2	1.0	20	21	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	21	1
218-01-9	Chrysene	U	1	1.0	20	21	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	21	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	21	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	21	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	21	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	21	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	21	2
7297-45-2	2-Methylnaphthalene-d10		102%				
81103-79-9	Fluorene-d10		104%				
1718-52-1	Pyrene-d10		100%				

APPENDIX C

SUPPORT DOCUMENTATION

NAS PENSACOLA
SOIL DATA
3551

FRACTION	CHEMICAL	PEN43SB2501	UNITS	PEN43SB2501D	RPD	D
PAH	2-METHYLNAPHTHALENE	8 J	UG/KG	10 I	22.22	2.00
PAH	ACENAPHTHENE	1 J	UG/KG	2 I	66.67	1.00
PAH	ACENAPHTHYLENE	2 J	UG/KG	3 I	40.00	1.00
PAH	ANTHRACENE	7 J	UG/KG	8 I	13.33	1.00
PAH	BENZO(A)ANTHRACENE	89 C	UG/KG	100 J	11.64	11.00
PAH	BENZO(A)PYRENE	52	UG/KG	60	14.29	8.00
PAH	BENZO(B)FLUORANTHENE	100 C	UG/KG	180 J	57.14	80.00
PAH	BENZO(G,H,I)PERYLENE	30	UG/KG	30	0.00	0.00
PAH	BENZO(K)FLUORANTHENE	32	UG/KG	9 I	112.20	23.00
PAH	CHRYSENE	47	UG/KG	54	13.86	7.00
PAH	DIBENZO(A,H)ANTHRACENE	ND	UG/KG	22	NC	NC
PAH	FLUORANTHENE	100	UG/KG	110	9.52	10.00
PAH	INDENO(1,2,3-CD)PYRENE	38	UG/KG	40	5.13	2.00
PAH	PHENANTHRENE	34	UG/KG	36	5.71	2.00
PAH	PYRENE	61	UG/KG	74	19.26	13.00

Current RPD Quality Control Limit: 50 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.
ND = Compound not detected.
NC = Statistic not calculated

HOLDTIME

SDG 3552

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB1301	WV0943-008	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1501	WV0943-010	NM	3/4/2005	3/17/2005	3/29/2005	13	12	25
M	MG/KG	PEN43SB1501	WV0943-010	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1402	WV0943-013	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1402	WV0943-013	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1401	WV0943-012	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1401	WV0943-012	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24
M	MG/KG	PEN43SB1302	WV0943-009	NM	3/4/2005	3/17/2005	3/29/2005	13	12	25
M	MG/KG	PEN43SB1101D	WV0943-004	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1301	WV0943-008	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1601	WV0943-014	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1202	WV0943-007	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1202	WV0943-007	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1201	WV0943-006	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24
M	MG/KG	PEN43SB1201	WV0943-006	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB1102	WV0943-005	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24
M	MG/KG	PEN43SB1102	WV0943-005	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1101D	WV0943-004	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24
M	MG/KG	PEN43SB1302	WV0943-009	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1702	WV0943-017	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1101	WV0943-003	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1902	WV0943-021	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1902	WV0943-021	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1901	WV0943-020	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1901	WV0943-020	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1802	WV0943-019	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1802	WV0943-019	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1502	WV0943-011	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1801	WV0943-018	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1502	WV0943-011	NM	3/4/2005	3/17/2005	3/29/2005	13	12	25
M	MG/KG	PEN43SB1702	WV0943-017	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1701	WV0943-016	NM	3/4/2005	3/17/2005	3/31/2005	13	14	27
M	MG/KG	PEN43SB1701	WV0943-016	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	PEN43SB1701	WV0943-016	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1602	WV0943-015	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1602	WV0943-015	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1601	WV0943-014	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1401	WV0943-012	NM	3/4/2005	3/17/2005	3/24/2005	13	7	20
M	MG/KG	PEN43SB1801	WV0943-018	NM	3/4/2005	3/17/2005	3/30/2005	13	13	26
M	MG/KG	PEN43SB1101	WV0943-003	NM	3/4/2005	3/17/2005	3/28/2005	13	11	24
M	MG/KG	PEN43SB1401	WV0943-012	NM	3/4/2005	3/17/2005	3/29/2005	13	12	25
M	UG/L	PEN43RB0304	WV0943-001	NM	3/4/2005	3/8/2005	3/24/2005	4	16	20
M	UG/L	PEN43RB0304	WV0943-001	NM	3/4/2005	3/8/2005	3/9/2005	4	1	5
TS	%	PEN43SB1502	WV0943-11	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1502	WV0943-43	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1601	WV0943-14	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1601	WV0943-46	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1602	WV0943-15	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1602	WV0943-47	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1701	WV0943-16	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1701	WV0943-48	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SB1501	WV0943-42	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1801	WV0943-18	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1702	WV0943-49	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1802	WV0943-19	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1802	WV0943-51	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1901	WV0943-20	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1901	WV0943-68	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1902	WV0943-69	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1902	WV0943-21	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1702	WV0943-17	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1201	WV0943-38	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1101	WV0943-3	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1801	WV0943-50	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1501	WV0943-10	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1101D	WV0943-36	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1101D	WV0943-4	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1102	WV0943-5	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1101	WV0943-35	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TS	%	PEN43SB1201	WV0943-6	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1202	WV0943-39	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1202	WV0943-7	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1401	WV0943-44	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1301	WV0943-8	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1302	WV0943-41	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1302	WV0943-9	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1401	WV0943-12	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1301	WV0943-40	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1402	WV0943-45	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1102	WV0943-37	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
TS	%	PEN43SB1402	WV0943-13	NM	3/4/2005	3/7/2005	3/8/2005	3	1	4
OS	%	PEN43SB1201RA	WV0943-6RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	%	PEN43SB1202	WV0943-39	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	%	PEN43SB1202RA	WV0943-7RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	%	PEN43SB1301	WV0943-40	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	%	PEN43SB1301RA	WV0943-8RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	%	PEN43SB1302RA	WV0943-9RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	%	PEN43SB1401	WV0943-44	NM	3/4/2005	3/10/2005	3/25/2005	6	15	21
OS	%	PEN43SB1201	WV0943-38	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	%	PEN43SB1401DL2	WV0943-12DL2	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	%	PEN43SB1401DL	WV0943-12DL	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	%	PEN43SB1302	WV0943-41	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	%	PEN43SB1102RA	WV0943-5RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	%	PEN43SB1102	WV0943-37	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	%	PEN43SB1101RA	WV0943-3RA	NM	3/4/2005	3/9/2005	3/21/2005	5	12	17
OS	%	PEN43SB1101DRA	WV0943-4RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	%	PEN43SB1101DL	WV0943-3DL	NM	3/4/2005	3/9/2005	3/23/2005	5	14	19
OS	%	PEN43SB1101D	WV0943-4	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	%	PEN43SB1101D	WV0943-36	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	%	PEN43SB1101	WV0943-3	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	%	PEN43RB0304	WV0943-2	NM	3/4/2005	3/11/2005	3/16/2005	7	5	12
OS	%	PEN43RB0304	WV0943-1	NM	3/4/2005	3/11/2005	3/17/2005	7	6	13
OS	%	PEN43SB1902	WV0943-21	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1402	WV0943-13	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1101	WV0943-35	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	%	PEN43SB1801	WV0943-18	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1402	WV0943-45	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1901	WV0943-20	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1902	WV0943-69	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1901	WV0943-68	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	%	PEN43SB1802	WV0943-51	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	%	PEN43SB1801	WV0943-50	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	%	PEN43SB1702	WV0943-49	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1702	WV0943-17	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1701DL	WV0943-16DL	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	%	PEN43SB1502	WV0943-11	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1701	WV0943-16	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	%	PEN43SB1602	WV0943-47	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	%	PEN43SB1602	WV0943-15	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1501	WV0943-42	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	%	PEN43SB1601	WV0943-46	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1601	WV0943-14	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	%	PEN43SB1502	WV0943-43	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	%	PEN43SB1701	WV0943-48	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	%	PEN43SB1501RA	WV0943-10RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	%	PEN43SB1802	WV0943-19	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1701	WV0943-16	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB1602	WV0943-47	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB1602	WV0943-15	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1601	WV0943-46	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1601	WV0943-14	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1502	WV0943-11	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1701	WV0943-48	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB1902	WV0943-69	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1502	WV0943-43	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1701DL	WV0943-16DL	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB1702	WV0943-17	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1702	WV0943-49	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1801	WV0943-18	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1801	WV0943-50	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB1802	WV0943-19	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	PEN43SB1802	WV0943-51	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB1901	WV0943-20	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1501RA	WV0943-10RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	UG/KG	PEN43SB1902	WV0943-21	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1202RA	WV0943-7RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	UG/KG	PEN43SB1901	WV0943-68	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB1201	WV0943-38	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	UG/KG	PEN43SB1101	WV0943-3	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	UG/KG	PEN43SB1101	WV0943-35	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	UG/KG	PEN43SB1101D	WV0943-36	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	UG/KG	PEN43SB1101D	WV0943-4	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	UG/KG	PEN43SB1101DL	WV0943-3DL	NM	3/4/2005	3/9/2005	3/23/2005	5	14	19
OS	UG/KG	PEN43SB1101DRA	WV0943-4RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	UG/KG	PEN43SB1101RA	WV0943-3RA	NM	3/4/2005	3/9/2005	3/21/2005	5	12	17
OS	UG/KG	PEN43SB1301RA	WV0943-8RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	UG/KG	PEN43SB1102RA	WV0943-5RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	UG/KG	PEN43SB1501	WV0943-42	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	UG/KG	PEN43SB1201RA	WV0943-6RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	PEN43SB1202	WV0943-39	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	UG/KG	PEN43SB1301	WV0943-40	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	UG/KG	PEN43SB1302	WV0943-41	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	UG/KG	PEN43SB1302RA	WV0943-9RA	NM	3/4/2005	3/9/2005	3/24/2005	5	15	20
OS	UG/KG	PEN43SB1401	WV0943-44	NM	3/4/2005	3/10/2005	3/25/2005	6	15	21
OS	UG/KG	PEN43SB1401DL	WV0943-12DL	NM	3/4/2005	3/10/2005	3/24/2005	6	14	20
OS	UG/KG	PEN43SB1401DL2	WV0943-12DL2	NM	3/4/2005	3/10/2005	3/23/2005	6	13	19
OS	UG/KG	PEN43SB1402	WV0943-13	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1402	WV0943-45	NM	3/4/2005	3/10/2005	3/22/2005	6	12	18
OS	UG/KG	PEN43SB1102	WV0943-37	NM	3/4/2005	3/9/2005	3/18/2005	5	9	14
OS	UG/L	PEN43RB0304	WV0943-1	NM	3/4/2005	3/11/2005	3/17/2005	7	6	13
OS	UG/L	PEN43RB0304	WV0943-2	NM	3/4/2005	3/11/2005	3/16/2005	7	5	12

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CTO 355 NAS PENSACOLA
SDG: CTO355-2

Sample Receipt

The following samples were received on March 5, 2005 and were logged in under Katahdin Analytical Services work order number WV0943 for a hardcopy due date of March 31, 2005.

KATAHDIN Sample No.	TTNUS Sample Identification
WV0943-1	PEN43RB0304
WV0943-2	PEN43RB0304
WV0943-3	PEN43SB1101
WV0943-4	PEN43SB1101D
WV0943-5	PEN43SB1102
WV0943-6	PEN43SB1201
WV0943-7	PEN43SB1202
WV0943-8	PEN43SB1301
WV0943-9	PEN43SB1302
WV0943-10	PEN43SB1501
WV0943-11	PEN43SB1502
WV0943-12	PEN43SB1401
WV0943-13	PEN43SB1402
WV0943-14	PEN43SB1601
WV0943-15	PEN43SB1602
WV0943-16	PEN43SB1701
WV0943-17	PEN43SB1702
WV0943-18	PEN43SB1801
WV0943-19	PEN43SB1802
WV0943-20	PEN43SB1901
WV0943-21	PEN43SB1902
WV0943-35	PEN43SB1101
WV0943-36	PEN43SB1101D
WV0943-37	PEN43SB1102
WV0943-38	PEN43SB1201
WV0943-39	PEN43SB1202
WV0943-40	PEN43SB1301
WV0943-41	PEN43SB1302
WV0943-42	PEN43SB1501
WV0943-43	PEN43SB1502
WV0943-44	PEN43SB1401
WV0943-45	PEN43SB1402
WV0943-46	PEN43SB1601
WV0943-47	PEN43SB1602
WV0943-48	PEN43SB1701

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WV0943-49	PEN43SB1702
WV0943-50	PEN43SB1801
WV0943-51	PEN43SB1802
WV0943-68	PEN43SB1901
WV0943-69	PEN43SB1902

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Andrea J. Colby**. This narrative is an integral part of the Report of Analysis.

Organics Laboratory

The samples of SDG CTO355-2 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, and III 1996, Office of Solid Waste and Emergency Response, U.S. EPA, for the specific methods listed below or on the Report of Analysis. Samples WV0943-7, 16, 39, and 48 were used for matrix spike (MS) and matrix spike duplicate (MSD) samples, as per client request. Some manual integrations may have been performed due to split peaks and/or corrected baselines. All have been flagged with a "M" (software-generated) on the pertinent quantitation reports.

8270C SCAN Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The acceptance limits for the MS/MSD are for a short list of the spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

One or more target analytes may have been detected above the MDL in some method blanks. Any of these analytes that were also detected in any of the associated samples were flagged with a "V" qualifier indicating that the analyte was detected in the method blank analyzed and/or extracted concurrently with the sample.

The initial calibration analyzed on the U instrument on 03/15/05 had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. Also, the target analytes benzaldehyde and pentachlorophenol failed for both the linear and quadratic models in the

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initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the average model.

The initial calibration analyzed on the X instrument on 02/23/05 had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. Also, there were four target analytes that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the average model.

The initial calibration analyzed on the X instrument on 03/15/05 had %RSD values for several analytes that exceeded the method acceptance limit of 15%. For these analytes, either a linear or quadratic model was used for quantitation instead of an average response factor. Also, there were two target analytes (benzaldehyde and phenol) that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. These compounds were calibrated using the average model.

The calibration verification standard (CV) (file X7425) had a high response for the (CCC) calibration check compound di-n-octylphthalate, which resulted in a %D that was outside the method acceptance limit of 20%. Since the recovery for di-n-octylphthalate in the associated LCS were within the laboratory acceptance limits, the associated samples were not reanalyzed.

The CV (file X7495) had a high response for the CCC di-n-octylphthalate, which resulted in a %D that was outside the method acceptance limit of 20%. The associated MS/MSD may be biased high for di-n-octylphthalate.

The CV (file X7512) had a low response for the CCC pentachlorophenol, which resulted in a %D that was outside the method acceptance limit of 20%.

The CV (file X7557) had a low response for the CCC n-nitrosodiphenylamine, which resulted in a %D that was outside the method acceptance limit of 20%.

Samples WV0943-35, 36, 37, 38, 39, 40, 41, 42, 44, 50, 68, 69, method blanks WG14977-1 and WG15035-1RA, laboratory control sample WG14977-2 and matrix spike WG15035-3 had high recoveries for one or two surrogates, which were outside the laboratory established acceptance limits. Since a high recovery would indicate a high bias and there were no target analytes detected above the PQL in the samples, with the exception of WV0943-44, the samples were not reanalyzed. Based on the sample chromatogram, the high surrogate recoveries for sample WV0943-44 were likely due to matrix interference.

The MS and MSD's (WG14977-3 and 4, WG15053-3 and 4) had a few a spiked analytes with recoveries that were outside of the laboratory acceptance limits. Since the associated LCS's were acceptable, no corrective action was taken.

<u>8270C SIM Analysis</u>

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are nominal limits for the full list of spiked compounds. The acceptance limits for the MS/MSD are for a

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short list of the spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory phthalate ester contaminants) in the LCS are outside of the QC limits.

The initial calibration analyzed on the K instrument on 03/17/05 had %RSD values for three analytes that exceeded the method acceptance limit of 15%. For these analytes, a linear model was used for quantitation instead of an average response factor. There was one target analyte, 1-methylnaphthalene, that failed for both the linear and quadratic models in the initial calibration curve due to the correlation coefficient being less than the method acceptance criteria of 0.990. This compound was calibrated using the average model.

Sample WV0943-3 had a high response for one internal standard, which was outside the laboratory acceptance limit of -50% to 100% of the response of the internal standard of the daily calibration verification standard. The sample was reanalyzed with similar failures confirming a matrix effect. The results from both analyses are reported.

Sample WV0943-16DL had a low response for one internal standard, which was outside the laboratory acceptance limit of -50% to 100% of the response of the internal standard of the daily calibration verification standard. Since this sample was analyzed undiluted and had acceptable responses for the internal standards, the sample was not reanalyzed. The results from both analyses are reported.

Sample WV0943-12DL had a low response for one internal standard, which was outside the laboratory acceptance limit of -50% to 100% of the response of the internal standard of the daily calibration verification standard. Since this sample was analyzed at a second dilution and had acceptable responses for the internal standards, the sample was not reanalyzed. The results from both analyses are reported.

The MS and MSD WG15034-3 and WG15034-4 had several spiked target analytes with recoveries that were non-calculable (NC) due to the concentration in the native sample being higher than in the MS and/or MSD. This is likely due to a non-homogeneous sample.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of Katahdin SDG CTO355-2 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Waste", SW-846, November 1986, Third Edition.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix Katahdin Sample No. WV0943-1 was digested for ICP analysis on 03/08/05 (QC Batch VC08ICW0) in accordance with USEPA Method 3010A. Katahdin Sample No. WV0943-1 was prepared with duplicate matrix-spiked aliquots.

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Solid-matrix Katahdin Sample Nos. WV0943-(3-21) were digested for ICP analysis on 03/17/05 (QC Batch VC17ICS0) in accordance with USEPA Method 3050B. Katahdin Sample No. WV0943-(7 and 16) were prepared with duplicate matrix-spiked aliquots.

ICP analyses of SDG CTO355-2 sample digestates were performed using a Thermo Jarrell Ash (TJA) Trace ICP spectrometer and a TJA ICAP 61E ICP spectrometer. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following comments or exceptions:

Some of the results for run QC samples (ICV, ICB, CCV, CCB, ICSA, and ICSAB) included in the accompanying data package may have exceeded acceptance limits for some elements. Please note that all client samples and batch QC samples associated with out-of-control results for run QC samples were subsequently reanalyzed for the analytes in question.

Matrix QC Summary

The matrix-spike recoveries for all analytes for Katahdin Sample No. WV0943-1 are within the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix-spike recoveries for copper and lead for Katahdin Sample No. WV0943-7 are outside the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix-spike recoveries for all analytes for Katahdin Sample No. WV0943-16 are within the laboratory's acceptance criteria (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix spike duplicate analysis of Katahdin Sample No. WV0943-1 is within the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for all analytes.

The matrix spike duplicate analysis of Katahdin Sample No. WV0943-(7 and 16) are outside the laboratory's matrix spike duplicate precision acceptance limit (<20% relative difference between duplicate matrix spiked aliquots) for copper and lead.

The serial dilution analyses of Katahdin Sample Nos. WV0943-(1 and 16) are within the laboratory's ICP serial dilution acceptance limit (<10% difference between the original sample result and the result for a 5-fold dilution of the sample, if the result for the dilution is at least ten times the instrument detection limit) for all analytes.

The serial dilution analysis of Katahdin Sample No. WV0943-7 is outside the laboratory's ICP serial dilution acceptance limit (<10% difference between the original sample result and the result for a 5-fold dilution of the sample, if the result for the dilution is at least ten times the instrument detection limit) for copper.

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Wet Chemistry Analysis

The samples of SDG CTO355-2 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for total solids were performed according to "U.S. EPA Contract Laboratory Program Statement of Work for Inorganic Analysis", SOW 7/88.

All analyses were performed within analytical hold time. All quality control criteria were met.

No deviations were noted by the Wet Chemistry group.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
04.05.05

Leslie Dimond
Quality Assurance Officer

0000007

WW0943

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 2602 PAGE 1 OF 3

PROJECT NO: 4821	FACILITY: NAS PEN	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899
LABORATORY NAME AND CONTACT: Katahdin Analytical Ai. Coby			
SAMPLERS (SIGNATURE) Matt P. Olson		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899
ADDRESS 340 County Rd #5			
CARRIER/WAYBILL NUMBER FEDEX 8428 7247 7090		CITY, STATE Westbrook Me	

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): P G G G G

PRESERVATIVE USED: HNO3 4° 4° 4° 4°

TYPE OF ANALYSIS: 6010B As/Ba/Cu/Pb/VA; 8270 TCL SVOC; 8270 SIM PAHs; 6010B As/Ba/Cu/Pb/VA; 8270 TCL SVOC/PAH

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	6010B As/Ba/Cu/Pb/VA	8270 TCL SVOC	8270 SIM PAHs	6010B As/Ba/Cu/Pb/VA	8270 TCL SVOC/PAH				COMMENTS
3/4	0800	PEN43 RB0304	—	—	—	QC	G	5	1	2	2	—	—				
	0805	PEN43 SB1101		2	3	SO	G	2	—	—	—	1	1				
	0805	PEN43 SB1101D		2	3	SO	G	2	—	—	—	1	1				
	0810	PEN43 SB1102		5	7	SO	G	2	—	—	—	1	1				
	0830	PEN43 SB1201		2	3	SO	G	2	—	—	—	1	1				
	0835	PEN43 SB1202		7	8	SO	G	2	—	—	—	1	1				
	0835	PEN43 SB1202MS		7	8	SO	G	2	—	—	—	1	1				
	0835	PEN43 SB1202MSD		7	8	SO	G	2	—	—	—	1	1				
	0855	PEN43 SB1301		2	3	SO	G	2	—	—	—	1	1				
	0900	PEN43 SB1302		5	7	SO	G	2	—	—	—	1	1				
	0920	PEN43 SB1501		2	3	SO	G	2	—	—	—	1	1				
	0925	PEN43 SB1502		7	8	SO	G	2	—	—	—	1	1				
	0940	PEN43 SB1401		2	3	SO	G	2	—	—	—	1	1				

1. RELINQUISHED BY Matt P. Olson	DATE 3/4/05	TIME 1630	1. RECEIVED BY [signature]	DATE 3/5/05	TIME 1235
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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WW0943, WW0951

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2601 | PAGE 2 OF 3

PROJECT NO: 4821	FACILITY: PEW 43	PROJECT MANAGER G- Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER B. Nilolson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX 8428 7247 7090		CITY, STATE Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 6010B As/Ba/Cu/Pb/Va	8270/SIM TCL SVOC/PAHs							COMMENTS
3/4	0943	PEW43SB1402		4	~~6~~ 4	~~8~~ 50	G	2	1	1							
3/4	1010	PEW43SB1601		2	~~3~~ 2	~~8~~ 50	G	2	1	1							
3/4	1015	PEW43SB1602		7	~~7~~ 8	~~8~~ 50	G	2	1	1							
3/4	1025	PEW43SB1701		2	3	50	G	2	1	1							
3/4	1025	PEW43SB1701MS		2	3	50	G	2	1	1							
3/4	1025	PEW43SB1701MSD		2	3	50	G	2	1	1							
3/4	1030	PEW43SB1702		5	7	50	G	2	1	1							
3/4	1050	PEW43SB1801		2	3	50	G	2	1	1							
3/4	1055	PEW43SB1802		7	9	50	G	2	1	1							
3/4	1120	PEW43SB1901		2	3	50	G	2	1	1							
3/4	1125	PEW43SB1902		6	8	50	G	2	1	1							
3/4	1225	PEW43SB2501		2	3	50	G	2	1	1							
3/4	1225	PEW43SB2501D		2	3	50	G	2	1	1							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY Nilo D. Olson	3/4/05	1630	1. RECEIVED BY [signature]	3/5/05	1235
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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FORM NO. TtNUS-001

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WV0951, WV0952

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2610 | PAGE 3 OF 3

PROJECT NO: 4821	FACILITY: PEN 43	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE) Matt D. Olson		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER FEDEX 8428 7247 7090		CITY, STATE Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G
PRESERVATIVE USED: 4° 4°

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 6010B As/Ba/Cu/Pb/Na	8270/SIM TCL SVOC PAHs							COMMENTS
3/4	1230	PEN 43 SB2502		4	5	SO	G	2	1	1							
3/4	1240	PEN 43 SB2001		2	3	SO	G	2	1	1							
3/4	1245	PEN 43 SB2002		5	7	SO	G	2	1	1							
3/4	1305	PEN 43 SB 2101		2	3	SO	G	2	1	1							
3/4	1310	PEN43SB2102		5	7	SO	G	2	1	1							
3/4	1320	PEN 43SB2201		2	3	SO	G	2	1	1							
3/4	1325	PEN 43 SB2202		7	8	SO	G	2	1	1							
3/4	1335	PEN 43 SB 2301		2	3	SO	G	2	1	1							
3/4	1340	PEN43 SB2302		6	7	SO	G	2	1	1							
3/4		PEN43SB 2401		~~6~~	~~7~~	SO	G	2	1	1							
3/4		PEN 43 SB 2402				SO	G	2	1	1							

Scanning 3/11/05

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
Matt D. Olson	3/4/05	1630	[illegible]	3/5/05	1235
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

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1100000

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: XD434 DFTPP Injection Date: 02/23/05

Instrument ID: GCMS-X DFTPP Injection Time: 0939

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	50.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.8
70	Less than 2.0% of mass 69	0.4 (0.7)1
127	40.0 - 60.0% of mass 198	40.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.5
275	10.0 - 30.0% of mass 198	19.6
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	10.1 (84.6)2
442	40.0 - 100.0% of mass 198	58.7
443	17.0 - 23.0% of mass 442	12.0 (20.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD108X0223	X7289	02/23/05	1251
02		SSTD036X0223	X7290	02/23/05	1357
03		SSTD009X0223	X7291	02/23/05	1439
04		SSTD144X0223	X7292	02/23/05	1522
05		SSTD180X0223	X7293	02/23/05	1604
06		SSTD072X0223	X7294	02/23/05	1650
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date(s): 02/23/05 02/23/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1251 1650

LAB FILE ID: RF9: X7291 RF36: X7290 RF72: X7294
RF108: X7289 RF144: X7292 RF180: X7293

COMPOUND	RF9	RF36	RF72	RF108	RF144	RF180	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.492	0.064	0.004	0.026	0.053	0.008	AVRG		0.10793365		175.840	15.000	<
Phenol	1.068	1.288	1.162	1.097	1.032	1.043	AVRG		1.11488883		8.686	15.000	
Bis(2-Chloroethyl)ether	1.021	1.115	0.977	0.881	0.807	0.747	AVRG		0.92482857		14.960	15.000	
2-Chlorophenol	1.046	1.115	1.051	0.996	0.961	0.968	AVRG		1.02267591		5.786	15.000	
2,2'-Oxybis(1-Chloropropa	2.583	2.842	2.642	2.691	2.634	2.767	AVRG		2.69305879		3.555	15.000	
2-Methylphenol	0.691	0.844	0.784	0.789	0.749	0.957	AVRG		0.80244189		11.356	15.000	
Hexachloroethane	0.524	0.534	0.504	0.461	0.434	0.424	AVRG		0.48021889		9.746	15.000	
N-Nitroso-di-n-propylamin	0.800	0.870	0.758	0.793	0.772	0.832	AVRG		0.80430881		5.086	15.000	
4-Methylphenol	0.758	0.844	0.824	0.846	0.838	0.883	AVRG		0.83220423		4.976	15.000	
Nitrobenzene	0.324	0.345	0.349	0.322	0.329	0.350	AVRG		0.33669820		3.792	15.000	
Isophorone	0.514	0.590	0.595	0.581	0.596	0.623	AVRG		0.58322323		6.301	15.000	
2-Nitrophenol	0.147	0.181	0.188	0.185	0.189	0.198	AVRG		0.18138932		9.917	15.000	
Caprolactam	0.070	0.078	0.079	0.077	0.086	0.075	AVRG		7.751e-002		6.617	15.000	
Bis(2-Chloroethoxy)methan	0.459	0.386	0.403	0.374	0.400	0.396	AVRG		0.40293804		7.340	15.000	
2,4-Dichlorophenol	0.197	0.251	0.262	0.248	0.252	0.248	AVRG		0.24315751		9.568	15.000	
1,1'-Biphenyl	1.218	1.263	1.275	1.180	1.140	0.972	AVRG		1.17459454		9.481	15.000	
4-Chloroaniline	0.319	0.346	0.355	0.305	0.305	0.308	AVRG		0.32281063		6.828	15.000	
Hexachlorobutadiene	0.198	0.190	0.214	0.182	0.178	0.184	AVRG		0.19085005		6.917	15.000	
4-Chloro-3-Methylphenol	0.207	0.224	0.228	0.231	0.248	0.234	AVRG		0.22851922		5.778	15.000	
Hexachlorocyclopentadiene	0.091	0.197	0.294	0.142	0.120	0.330	AVRG		0.19587165		49.637	15.000	<
2,4,6-Trichlorophenol	0.261	0.334	0.374	0.356	0.364	0.345	AVRG		0.33914757		12.046	15.000	
2,4,5-Trichlorophenol	0.350	0.310	0.354	0.340	0.358	0.327	AVRG		0.33990131		5.402	15.000	
2-Chloronaphthalene	1.417	1.547	1.616	1.437	1.456	1.413	AVRG		1.48115812		5.567	15.000	
2,4-Dimethylphenol	0.242	0.285	0.274	0.270	0.276	0.287	AVRG		0.27232624		5.998	15.000	
2-Nitroaniline	0.279	0.352	0.357	0.369	0.373	0.347	AVRG		0.34618822		9.886	15.000	
Dimethyl Phthalate	1.113	1.131	1.144	1.074	1.131	1.024	AVRG		1.10295485		4.150	15.000	
2,6-Dinitrotoluene	0.238	0.280	0.294	0.265	0.283	0.268	AVRG		0.27145545		7.247	15.000	
3-Nitroaniline	0.248	0.290	0.286	0.272	0.281	0.274	AVRG		0.27516322		5.457	15.000	
2,4-Dinitrophenol	7154	105110	225260	440500	731010	1299100	2ORDR	0.15441613	8.71211609	-4.1110617	0.99587	0.99000	
Dibenzofuran	1.303	1.375	1.396	1.295	1.365	1.457	AVRG		1.36529434		4.442	15.000	
4-Nitrophenol	0.095	0.138	0.133	0.136	0.160	0.128	AVRG		0.13176115		15.905	15.000	<
2,4-Dinitrotoluene	78509	446510	732920	1154900	1693100	2795200	LINR	5.331e-002	2.72684178		0.99785	0.99000	
Atrazine	0.158	0.154	0.151	0.067	0.044	0.112	AVRG		0.11428806		42.834	15.000	<
Diethylphthalate	1.128	1.167	1.127	1.043	1.079	0.972	AVRG		1.08601007		6.489	15.000	
4-Chlorophenyl-phenylethe	0.528	0.527	0.560	0.477	0.504	0.430	AVRG		0.50413672		9.085	15.000	
4-Nitroaniline	59065	331660	526590	975720	1348700	2368900	LINR	0.13058271	3.23629069		0.99423	0.99000	
4,6-Dinitro-2-Methylpheno	27605	202290	379670	679520	999180	1445600	LINR	0.12558377	7.28635130		0.99550	0.99000	
N-Nitrosodiphenylamine	0.547	0.561	0.577	0.536	0.537	0.530	AVRG		0.54808168		3.277	15.000	
4-Bromophenyl-phenylether	0.194	0.195	0.218	0.175	0.200	0.193	AVRG		0.19589471		7.058	15.000	
Hexachlorobenzene	0.254	0.238	0.275	0.224	0.266	0.264	AVRG		0.25369974		7.557	15.000	
Pentachlorophenol	10857	148160	266160	478630	803500	1450600	2ORDR	9.899e-002	12.2590323	-8.2289964	0.99820	0.99000	
Carbazole	0.788	0.849	0.864	0.863	0.951	0.985	AVRG		0.88334008		8.158	15.000	
Di-n-butylphthalate	1.082	1.225	1.271	1.236	1.339	1.275	AVRG		1.23828908		6.963	15.000	
Butylbenzylphthalate	0.502	0.558	0.585	0.591	0.566	0.557	AVRG		0.55982716		5.665	15.000	

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date(s): 02/23/05 02/23/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1251 1650

LAB FILE ID: RF9: X7291 RF36: X7290 RF72: X7294
RF108: X7289 RF144: X7292 RF180: X7293

COMPOUND	RF9	RF36	RF72	RF108	RF144	RF180	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dichlorobenzidine	0.285	0.340	0.347	0.344	0.340	0.309	AVRG		0.32751001		7.576	15.000
bis(2-Ethylhexyl)phthalat	0.703	0.784	0.820	0.838	0.797	0.792	AVRG		0.78893027		5.912	15.000
Di-n-octylphthalate	1.412	1.712	1.975	1.981	1.975	1.705	AVRG		1.79333054		12.734	15.000
Acetophenone	0.358	0.399	0.408	0.397	0.395	0.407	AVRG		0.39382879		4.691	15.000
2-Fluorophenol	0.873	0.970	0.963	0.916	0.858	0.961	AVRG		0.92361698		5.308	15.000
Phenol-D6	1.071	1.233	1.044	0.986	0.960	1.066	AVRG		1.05994828		9.025	15.000
Nitrobenzene-D5	0.294	0.339	0.378	0.331	0.326	0.380	AVRG		0.34138029		9.628	15.000
2-Fluorobiphenyl	1.124	1.161	1.359	1.080	1.090	1.179	AVRG		1.16543471		8.789	15.000
2,4,6-Tribromophenol	0.157	0.173	0.214	0.166	0.207	0.222	AVRG		0.18992634		14.556	15.000
Terphenyl-D14	0.701	0.693	0.845	0.689	0.729	0.797	AVRG		0.74230430		8.679	15.000

Average %RSD test result.

Calculate Average %RSD: 10.39395618
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 2
SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 2FP#	S2 PHL#	S3 NBZ#	S4 FBP#	S5 TBP#	S6 TPH#	S7 #	S8 #	TOT OUT
01	WG14977-BLANK	WG14977-1	85	88	81	95	61	115J			1
02	WG14977-LCS	WG14977-2	93	90	89	91	81	119J			1
03	PEN43SB0601	WV0922-11	91	94	83	87	88	113J			1
04	PEN43SB0602	WV0922-12	82	86	74	80	79	107			0
05	PEN43SB0701	WV0922-13	82	84	74	78	74	104			0
06	PEN43SB0702	WV0922-14	75	78	69	73	72	106			0
07	PEN43SB0801	WV0922-15	81	89	72	82	86	121J			1
08	PEN43SB0802	WV0922-16	44	46	34J	42	40	53J			2
09	PEN43SB0901	WV0922-17	84	82	72	86	97	132J			1
10	PEN43SB0902	WV0922-18	79	78	78	82	68	98			0
11	PEN43SB1001	WV0922-19	94	98	87	93	82	120J			1
12	PEN43SB1002	WV0922-20	79	84	68	70	62	94			0
13	WG15035-BLANK	WG15035-1RA	96	104	82	95	53	130J			1
14	WG15362-BLANK	WG15362-1	55	69	50	73	57	91			0
15	WG15362-LCS	WG15362-2	78	85	63	73	87	91			0
16	WG15362-LCSD	WG15362-3	80	84	67	77	106J	94			1
17	PEN43SB0802	WV0922-16RE	88	94	69	83	83	96			0
18	PEN43SB2501	WV0951-11	72	80	58	73	90	96			0
19	PEN43SB2501D	WV0951-12	81	88	65	77	92	96			0
20	PEN43SB2502	WV0951-13	90	100	75	86	95	106			0
21	PEN43SB2001	WV0951-14	84	91	64	76	94	91			0
22	PEN43SB2002	WV0951-15	72	78	59	66	81	95			0
23	PEN43SB2101	WV0951-16	80	87	66	76	92	97			0
24	PEN43SB2102	WV0951-17	73	81	58	70	84	96			0
25	PEN43SB2201	WV0951-18	69	73	55	68	76	88			0
26	WG15035-LCS	WG15035-2RA	88	72	80	94	97	80			0
27	WG15039-BLANK	WG15039-1	66	68	59	70	44	79			0
28	WG15039-LCS	WG15039-2	79	68	69	77	87	74J			1

		QC LIMITS
S1 (2FP)	= 2-Fluorophenol	(40-130)
S2 (PHL)	= Phenol-D6	(35-120)
S3 (NBZ)	= Nitrobenzene-D5	(35-125)
S4 (FBP)	= 2-Fluorobiphenyl	(34-107)
S5 (TBP)	= 2,4,6-Tribromophenol	(37- 99)
S6 (TPH)	= Terphenyl-D14	(75-111)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM 2
SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 2FP#	S2 PHL#	S3 NBZ#	S4 FBP#	S5 TBP#	S6 TPH#	S7 #	S8 #	TOT OUT
01	PEN43SB2301	WV0951-20	94	87	70	75	88	75			0
02	PEN43SB2202	WV0951-19RA	80	74	62	68	46	74J			1
03											
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		QC LIMITS
S1 (2FP)	= 2-Fluorophenol	(40-130)
S2 (PHL)	= Phenol-D6	(35-120)
S3 (NBZ)	= Nitrobenzene-D5	(35-125)
S4 (FBP)	= 2-Fluorobiphenyl	(34-107)
S5 (TBP)	= 2,4,6-Tribromophenol	(37- 99)
S6 (TPH)	= Terphenyl-D14	(75-111)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM 2
SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 2FP#	S2 PHL#	S3 NBZ#	S4 FBP#	S5 TBP#	S6 TPH#	S7 #	S8 #	TOT OUT
01	WG15659-BLANK	WG15659-1	74	88	89	103	69	103			0
02	WG15659-LCS	WG15659-2	86	88	102	100	100J	124J			2
03	PEN43SB2202	WV0951-19RE	79	93	92	109J	96	107			1
04											
05											
06											
07											
08											
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27											
28											

		QC LIMITS
S1 (2FP)	= 2-Fluorophenol	(40-130)
S2 (PHL)	= Phenol-D6	(35-120)
S3 (NBZ)	= Nitrobenzene-D5	(35-125)
S4 (FBP)	= 2-Fluorobiphenyl	(34-107)
S5 (TBP)	= 2,4,6-Tribromophenol	(37- 99)
S6 (TPH)	= Terphenyl-D14	(75-111)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: XD443 DFTPP Injection Date: 03/10/05

Instrument ID: GCMS-X DFTPP Injection Time: 1239

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	67.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	47.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 30.0% of mass 198	20.9
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	8.1 (91.2)2
442	40.0 - 100.0% of mass 198	42.1
443	17.0 - 23.0% of mass 442	8.8 (21.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD072X0310	X7425	03/10/05	1258
02	WG14977-BLANK	WG14977-1	X7426	03/10/05	1349
03	WG14977-LCS	WG14977-2	X7427	03/10/05	1432
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/10/05 Time: 1258

Lab File ID: X7425 Init. Calib. Date(s): 02/23/05 02/23/05

Init. Calib. Times: 1251 1650

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF72.000 or AMOUNT	CCAL RRF72.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Benzaldehyde	0.1080000	8.64e-003	8.64e-003	0.01	-92.00	100.00	AVRG	<-
Phenol	1.1150000	1.0569000	1.0569000	0.01	-5.21	20.00	AVRG	
Bis(2-Chloroethyl)ether	0.9250000	0.8524900	0.8524900	0.01	-7.84	100.00	AVRG	
2-Chlorophenol	1.0230000	0.9596200	0.9596200	0.01	-6.20	100.00	AVRG	
2,2'-Oxybis(1-Chloropropane)	2.6930000	2.3133000	2.3133000	0.01	-14.10	100.00	AVRG	
2-Methylphenol	0.8020000	0.7272800	0.7272800	0.01	-9.32	100.00	AVRG	
Hexachloroethane	0.4800000	0.4539300	0.4539300	0.01	-5.43	100.00	AVRG	
N-Nitroso-di-n-propylamine	0.8040000	0.6857700	0.6857700	0.05	-14.70	100.00	AVRG	
4-Methylphenol	0.8320000	0.7481500	0.7481500	0.01	-10.08	100.00	AVRG	
Nitrobenzene	0.3360000	0.3413600	0.3413600	0.01	1.60	100.00	AVRG	
Isophorone	0.5830000	0.5744300	0.5744300	0.01	-1.47	100.00	AVRG	
2-Nitrophenol	0.1810000	0.1822100	0.1822100	0.01	0.67	20.00	AVRG	
Caprolactam	7.8e-002	6.07e-002	6.07e-002	0.01	-22.18	100.00	AVRG	
Bis(2-Chloroethoxy)methane	0.4030000	0.3616900	0.3616900	0.01	-10.25	100.00	AVRG	
2,4-Dichlorophenol	0.2430000	0.2387100	0.2387100	0.01	-1.76	20.00	AVRG	
1,1'-Biphenyl	1.1750000	1.1857000	1.1857000	0.01	0.91	100.00	AVRG	
4-Chloroaniline	0.3230000	0.2971500	0.2971500	0.01	-8.00	100.00	AVRG	
Hexachlorobutadiene	0.1910000	0.1758600	0.1758600	0.01	-7.93	20.00	AVRG	
4-Chloro-3-Methylphenol	0.2290000	0.1853500	0.1853500	0.01	-19.06	20.00	AVRG	
Hexachlorocyclopentadiene	0.1960000	0.2670500	0.2670500	0.05	36.25	100.00	AVRG	
2,4,6-Trichlorophenol	0.3390000	0.3191500	0.3191500	0.01	-5.86	20.00	AVRG	
2,4,5-Trichlorophenol	0.3400000	0.3265600	0.3265600	0.01	-3.95	100.00	AVRG	
2-Chloronaphthalene	1.4810000	1.4204000	1.4204000	0.01	-4.09	100.00	AVRG	
2,4-Dimethylphenol	0.2720000	0.2606800	0.2606800	0.01	-4.16	100.00	AVRG	
2-Nitroaniline	0.3460000	0.3129900	0.3129900	0.01	-9.54	100.00	AVRG	
Dimethyl Phthalate	1.1030000	1.0508000	1.0508000	0.01	-4.73	100.00	AVRG	
2,6-Dinitrotoluene	0.2710000	0.2473700	0.2473700	0.01	-8.72	100.00	AVRG	
3-Nitroaniline	0.2750000	0.2308200	0.2308200	0.01	-16.06	100.00	AVRG	
2,4-Dinitrophenol	64.567000	72.000000	0.1019100	0.05	-10.32	100.00	2RDR	

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/10/05 Time: 1258

Lab File ID: X7425 Init. Calib. Date(s): 02/23/05 02/23/05

Init. Calib. Times: 1251 1650

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF72.000 or AMOUNT	CCAL RRF72.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	1.3650000	1.2452000	1.2452000	0.01	-8.78	100.00	AVRG	
4-Nitrophenol	0.1320000	0.1013400	0.1013400	0.05	-23.23	100.00	AVRG	
2,4-Dinitrotoluene	61.560000	72.000000	0.3026900	0.01	-14.50	100.00	LINR	
Atrazine	0.1140000	0.1318400	0.1318400	0.01	15.65	100.00	AVRG	
Diethylphthalate	1.0860000	0.9691300	0.9691300	0.01	-10.76	100.00	AVRG	
4-Chlorophenyl-phenylether	0.5040000	0.4529900	0.4529900	0.01	-10.12	100.00	AVRG	
4-Nitroaniline	53.932000	72.000000	0.2090400	0.01	-25.09	100.00	LINR	
4,6-Dinitro-2-Methylphenol	62.757000	72.000000	0.1100500	0.01	-12.84	100.00	LINR	
N-Nitrosodiphenylamine	0.5480000	0.5445600	0.5445600	0.01	-0.63	20.00	AVRG	
4-Bromophenyl-phenylether	0.1960000	0.1885600	0.1885600	0.01	-3.80	100.00	AVRG	
Hexachlorobenzene	0.2540000	0.2116600	0.2116600	0.01	-16.67	100.00	AVRG	
Pentachlorophenol	64.456000	72.000000	7.54e-002	0.01	-10.48	20.00	2RDR	
Carbazole	0.8830000	0.7682600	0.7682600	0.01	-12.99	100.00	AVRG	
Di-n-butylphthalate	1.2380000	1.1414000	1.1414000	0.01	-7.80	100.00	AVRG	
Butylbenzylphthalate	0.5600000	0.5608100	0.5608100	0.01	0.14	100.00	AVRG	
3,3'-Dichlorobenzidine	0.3280000	0.2517600	0.2517600	0.01	-23.24	100.00	AVRG	
bis(2-Ethylhexyl)phthalate	0.7890000	0.7687200	0.7687200	0.01	-2.57	100.00	AVRG	
Di-n-octylphthalate	1.7930000	2.4369000	2.4369000	0.01	-35.91	20.00	AVRG	<-
Acetophenone	0.3940000	0.4008100	0.4008100	0.01	1.73	100.00	AVRG	
2-Fluorophenol	0.9240000	0.9387700	0.9387700	0.01	1.60	100.00	AVRG	
Phenol-D6	1.0600000	0.9511800	0.9511800	0.01	-10.27	100.00	AVRG	
Nitrobenzene-D5	0.3410000	0.3597300	0.3597300	0.01	5.49	100.00	AVRG	
2-Fluorobiphenyl	1.1660000	1.2737000	1.2737000	0.01	9.24	100.00	AVRG	
2,4,6-Tribromophenol	0.1900000	0.1411400	0.1411400	0.01	-25.72	100.00	AVRG	
Terphenyl-D14	0.7420000	0.8375400	0.8375400	0.01	12.88	100.00	AVRG	

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/09/05
Analysis Date: 10-MAR-2005 13:49
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG14977-1
Client ID: WG14977-Blank
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/09/05
Analysis Date: 10-MAR-2005 13:49
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG14977-1
Client ID: WG14977-Blank
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	U	74	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-86-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		85%				
13127-88-3	Phenol-D6		88%				
4165-60-0	Nitrobenzene-D5		81%				
321-60-8	2-Fluorobiphenyl		95%				
118-79-6	2,4,6-Tribromophenol		61%				
1718-51-0	Terphenyl-D14		J115%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/09/05
Analysis Date: 03/10/05
Report Date: 04/06/2005
Matrix: SOIL

Lab ID: WG14977-2
Client ID: WG14977-LCS
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Phenol	3333	NA	3180		95	48-106
Bis(2-Chloroethyl)ether	1667	NA	1710		103	42-106
2-Chlorophenol	3333	NA	3150		94	47-106
2,2'-Oxybis(1-Chloropropane)	1667	NA	1450		87	47-100
2-Methylphenol	3333	NA	2910		87	47-106
Hexachloroethane	1667	NA	1510		91	30-101
N-Nitroso-di-n-propylamine	1667	NA	1370		82	48-100
4-Methylphenol	3333	NA	2870		86	47-114
Nitrobenzene	1667	NA	1640		98	47-100
Isophorone	1667	NA	1480		89	46- 94
2-Nitrophenol	3333	NA	3140		94	41-113
Bis(2-Chloroethoxy)methane	1667	NA	1460		88	48- 98
2,4-Dichlorophenol	3333	NA	3140		94	49-106
4-Chloroaniline	1667	NA	294		18	0-100
Hexachlorobutadiene	1667	NA	1550		93	30-110
4-Chloro-3-Methylphenol	3333	NA	3130		94	51-115
Hexachlorocyclopentadiene	1667	NA	1480		89	10-108
2,4,6-Trichlorophenol	3333	NA	3090		93	52-116
2,4,5-Trichlorophenol	3333	NA	3260		98	50-116
2-Chloronaphthalene	1667	NA	1080		65	49-138
2,4-Dimethylphenol	1667	NA	3000	*	180	0-100
2-Nitroaniline	1667	NA	1530		92	50-123
Dimethyl Phthalate	1667	NA	1720		103	54-112
2,6-Dinitrotoluene	1667	NA	1600		96	44-121
3-Nitroaniline	1667	NA	618		37	0-256
2,4-Dinitrophenol	3333	NA	1210		36	0-123
Dibenzofuran	1667	NA	1570		94	51-108
4-Nitrophenol	3333	NA	2100		63	23-137
2,4-Dinitrotoluene	1667	NA	1610		97	42-121
Diethylphthalate	1667	NA	1720		103	49-114
4-Chlorophenyl-phenylether	1667	NA	1590		95	52-111
4-Nitroaniline	1667	NA	1230		74	0-193
4,6-Dinitro-2-Methylphenol	3333	NA	2680		80	19-137
N-Nitrosodiphenylamine	3333	NA	1420	*	43	56-140
4-Bromophenyl-phenylether	1667	NA	1820		109	48-122
Hexachlorobenzene	1667	NA	1480		89	42-122
Pentachlorophenol	3333	NA	2980		89	31-133
Carbazole	1667	NA	1620		97	37-170
Di-n-butylphthalate	1667	NA	1710		103	49-127
Butylbenzylphthalate	1667	NA	2070		124	50-130
3,3'-Dichlorobenzidine	1667	NA	714		43	0-197
bis(2-Ethylhexyl)phthalate	1667	NA	1980		119	45-129
Di-n-octylphthalate	1667	NA	2950	*	177	38-155

FORM III SV-2
X7427.D

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7425 Date Analyzed: 03/10/05

Instrument ID: GCMS-X Time Analyzed: 1258

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		1245263	7.73	3347526	10.36	1511358	14.12
UPPER LIMIT		2490526	8.23	6695052	10.86	3022716	14.62
LOWER LIMIT		622632	7.23	1673763	9.86	755679	13.62
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 WG14977-BLANK	WG14977-1	1117715	7.74	3259234	10.36	1508271	14.11
02 WG14977-LCS	WG14977-2	1160156	7.74	3398200	10.36	1684016	14.12
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7425 Date Analyzed: 03/10/05

Instrument ID: GCMS-X Time Analyzed: 1258

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		2110745	17.25	1481295	22.96	691584	25.80
UPPER LIMIT		4221490	17.75	2962590	23.46	1383168	26.30
LOWER LIMIT		1055373	16.75	740648	22.46	345792	25.30
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG14977-BLANK	WG14977-1	2035890	17.24	1456140	22.95	821173	25.80
02	WG14977-LCS	WG14977-2	2333261	17.25	1536718	22.95	708667	25.81
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: XD448 DFTPP Injection Date: 03/17/05

Instrument ID: GCMS-X DFTPP Injection Time: 0926

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	59.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	58.3
70	Less than 2.0% of mass 69	0.3 (0.4)1
127	40.0 - 60.0% of mass 198	44.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	22.2
365	1.0 - 100.0% of mass 198	2.3
441	0.0 - 100.0% of mass 443	11.2 (93.4)2
442	40.0 - 100.0% of mass 198	64.4
443	17.0 - 23.0% of mass 442	12.0 (18.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD072X0317	X7495	03/17/05	0951
02	PEN43SB0601	WV0922-11	X7501	03/17/05	1414
03	PEN43SB0602	WV0922-12	X7502	03/17/05	1457
04	PEN43SB0701	WV0922-13	X7503	03/17/05	1540
05	PEN43SB0702	WV0922-14	X7504	03/17/05	1622
06	PEN43SB0801	WV0922-15	X7505	03/17/05	1705
07	PEN43SB0802	WV0922-16	X7506	03/17/05	1748
08	PEN43SB0901	WV0922-17	X7507	03/17/05	1831
09	PEN43SB0902	WV0922-18	X7508	03/17/05	1914
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/17/05 Time: 0951

Lab File ID: X7495 Init. Calib. Date(s): 02/23/05 02/23/05

Init. Calib. Times: 1251 1650

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF72.000 or AMOUNT	CCAL RRF72.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Benzaldehyde	0.1080000	3.64e-003	3.64e-003	0.01	-96.63	100.00	AVRG	<-
Phenol	1.1150000	1.1617000	1.1617000	0.01	4.19	20.00	AVRG	
Bis(2-Chloroethyl)ether	0.9250000	0.9771300	0.9771300	0.01	5.64	100.00	AVRG	
2-Chlorophenol	1.0230000	1.0508000	1.0508000	0.01	2.72	100.00	AVRG	
2,2'-Oxybis(1-Chloropropane)	2.6930000	2.6418000	2.6418000	0.01	-1.90	100.00	AVRG	
2-Methylphenol	0.8020000	0.7839100	0.7839100	0.01	-2.26	100.00	AVRG	
Hexachloroethane	0.4800000	0.5035200	0.5035200	0.01	4.90	100.00	AVRG	
N-Nitroso-di-n-propylamine	0.8040000	0.7585300	0.7585300	0.05	-5.66	100.00	AVRG	
4-Methylphenol	0.8320000	0.8239000	0.8239000	0.01	-0.97	100.00	AVRG	
Nitrobenzene	0.3360000	0.3492000	0.3492000	0.01	3.93	100.00	AVRG	
Isophorone	0.5830000	0.5953600	0.5953600	0.01	2.12	100.00	AVRG	
2-Nitrophenol	0.1810000	0.1882000	0.1882000	0.01	3.98	20.00	AVRG	
Caprolactam	7.8e-002	7.91e-002	7.91e-002	0.01	1.41	100.00	AVRG	
Bis(2-Chloroethoxy)methane	0.4030000	0.4027100	0.4027100	0.01	-0.07	100.00	AVRG	
2,4-Dichlorophenol	0.2430000	0.2625000	0.2625000	0.01	8.02	20.00	AVRG	
1,1'-Biphenyl	1.1750000	1.2754000	1.2754000	0.01	8.54	100.00	AVRG	
4-Chloroaniline	0.3230000	0.3548900	0.3548900	0.01	9.87	100.00	AVRG	
Hexachlorobutadiene	0.1910000	0.2136700	0.2136700	0.01	11.87	20.00	AVRG	
4-Chloro-3-Methylphenol	0.2290000	0.2283300	0.2283300	0.01	-0.29	20.00	AVRG	
Hexachlorocyclopentadiene	0.1960000	0.2945600	0.2945600	0.05	50.29	100.00	AVRG	
2,4,6-Trichlorophenol	0.3390000	0.3745100	0.3745100	0.01	10.48	20.00	AVRG	
2,4,5-Trichlorophenol	0.3400000	0.3543000	0.3543000	0.01	4.20	100.00	AVRG	
2-Chloronaphthalene	1.4810000	1.6164000	1.6164000	0.01	9.14	100.00	AVRG	
2,4-Dimethylphenol	0.2720000	0.2745100	0.2745100	0.01	0.92	100.00	AVRG	
2-Nitroaniline	0.3460000	0.3573900	0.3573900	0.01	3.29	100.00	AVRG	
Dimethyl Phthalate	1.1030000	1.1442000	1.1442000	0.01	3.74	100.00	AVRG	
2,6-Dinitrotoluene	0.2710000	0.2943800	0.2943800	0.01	8.63	100.00	AVRG	
3-Nitroaniline	0.2750000	0.2859700	0.2859700	0.01	3.99	100.00	AVRG	
2,4-Dinitrophenol	57.956000	72.000000	0.1101400	0.05	-19.51	100.00	2RDR	

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/17/05 Time: 0951

Lab File ID: X7495 Init. Calib. Date(s): 02/23/05 02/23/05

Init. Calib. Times: 1251 1650

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF72.000 or AMOUNT	CCAL RRF72.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dibenzofuran	1.3650000	1.3961000	1.3961000	0.01	2.28	100.00	AVRG
4-Nitrophenol	0.1320000	0.1329200	0.1329200	0.05	0.70	100.00	AVRG
2,4-Dinitrotoluene	65.439000	72.000000	0.3583600	0.01	-9.11	100.00	LINR
Atrazine	0.1140000	0.1511000	0.1511000	0.01	32.54	100.00	AVRG
Diethylphthalate	1.0860000	1.1272000	1.1272000	0.01	3.79	100.00	AVRG
4-Chlorophenyl-phenylether	0.5040000	0.5599000	0.5599000	0.01	11.09	100.00	AVRG
4-Nitroaniline	61.531000	72.000000	0.2574700	0.01	-14.54	100.00	LINR
4,6-Dinitro-2-Methylphenol	53.695000	72.000000	0.1214500	0.01	-25.42	100.00	LINR
N-Nitrosodiphenylamine	0.5480000	0.5773400	0.5773400	0.01	5.35	20.00	AVRG
4-Bromophenyl-phenylether	0.1960000	0.2178400	0.2178400	0.01	11.14	100.00	AVRG
Hexachlorobenzene	0.2540000	0.2751800	0.2751800	0.01	8.34	100.00	AVRG
Pentachlorophenol	80.786000	72.000000	8.51e-002	0.01	12.20	20.00	2RDR
Carbazole	0.8830000	0.8635400	0.8635400	0.01	-2.20	100.00	AVRG
Di-n-butylphthalate	1.2380000	1.2714000	1.2714000	0.01	2.70	100.00	AVRG
Butylbenzylphthalate	0.5600000	0.5854600	0.5854600	0.01	4.55	100.00	AVRG
3,3'-Dichlorobenzidine	0.3280000	0.3466500	0.3466500	0.01	5.69	100.00	AVRG
bis(2-Ethylhexyl)phthalate	0.7890000	0.8198800	0.8198800	0.01	3.91	100.00	AVRG
Di-n-octylphthalate	1.7930000	1.9749000	1.9749000	0.01	10.14	20.00	AVRG
Acetophenone	0.3940000	0.4075500	0.4075500	0.01	3.44	100.00	AVRG
2-Fluorophenol	0.9240000	0.9630300	0.9630300	0.01	4.22	100.00	AVRG
Phenol-D6	1.0600000	1.0443000	1.0443000	0.01	-1.48	100.00	AVRG
Nitrobenzene-D5	0.3410000	0.3781700	0.3781700	0.01	10.90	100.00	AVRG
2-Fluorobiphenyl	1.1660000	1.3589000	1.3589000	0.01	16.54	100.00	AVRG
2,4,6-Tribromophenol	0.1900000	0.2142600	0.2142600	0.01	12.77	100.00	AVRG
Terphenyl-D14	0.7420000	0.8451900	0.8451900	0.01	13.91	100.00	AVRG

FORM VII PEST

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7495 Date Analyzed: 03/17/05

Instrument ID: GCMS-X Time Analyzed: 0951

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		823157	7.63	2495568	10.26	1206130	14.01
UPPER LIMIT		1646314	8.13	4991136	10.76	2412260	14.51
LOWER LIMIT		411579	7.13	1247784	9.76	603065	13.51
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB0601	WV0922-11	849569	7.65	2749529	10.25	1333611	14.01
02 PEN43SB0602	WV0922-12	783118	7.65	2504175	10.25	1183132	14.00
03 PEN43SB0701	WV0922-13	833671	7.64	2630946	10.25	1238621	14.01
04 PEN43SB0702	WV0922-14	809643	7.65	2505857	10.26	1219752	14.01
05 PEN43SB0801	WV0922-15	848108	7.65	2813990	10.26	1316652	14.01
06 PEN43SB0802	WV0922-16	784008	7.64	2355714	10.25	1092102	14.00
07 PEN43SB0901	WV0922-17	813896	7.64	2520243	10.25	1156727	14.01
08 PEN43SB0902	WV0922-18	735787	7.64	2106629	10.25	981064	14.00
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7495 Date Analyzed: 03/17/05

Instrument ID: GCMS-X Time Analyzed: 0951

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		1771253	17.14	1507934	22.84	785911	25.69
UPPER LIMIT		3542506	17.64	3015868	23.34	1571822	26.19
LOWER LIMIT		885627	16.64	753967	22.34	392956	25.19
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	PEN43SB0601	WV0922-11	1872327	17.13	1182896	22.84	604634	25.69
02	PEN43SB0602	WV0922-12	1685774	17.13	1247934	22.84	613437	25.69
03	PEN43SB0701	WV0922-13	1744634	17.13	1193477	22.83	622984	25.69
04	PEN43SB0702	WV0922-14	1707939	17.13	1124082	22.83	545784	25.69
05	PEN43SB0801	WV0922-15	1923676	17.13	1301521	22.83	647530	25.69
06	PEN43SB0802	WV0922-16	1660186	17.13	1375435	22.84	798156	25.70
07	PEN43SB0901	WV0922-17	1617926	17.13	978025	22.83	482402	25.69
08	PEN43SB0902	WV0922-18	1414283	17.13	1015429	22.83	522728	25.69
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: XD446 DFTPP Injection Date: 03/15/05

Instrument ID: GCMS-X DFTPP Injection Time: 1435

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	60.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	41.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	22.0
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	4.8 (35.0)2
442	40.0 - 100.0% of mass 198	71.5
443	17.0 - 23.0% of mass 442	13.8 (19.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0315	X7466	03/15/05	1455
02		SSTD200X0315	X7467	03/15/05	1545
03		SSTD150X0315	X7468	03/15/05	1628
04		SSTD100X0315	X7469	03/15/05	1710
05		SSTD025X0315	X7470	03/15/05	1753
06		SSTD010X0315	X7471	03/15/05	1835
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date(s): 03/15/05 03/15/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1455 1835

LAB FILE ID: RF10: X7471 RF25: X7470 RF50: X7466
RF100: X7469 RF150: X7468 RF200: X7467

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.023	0.018	0.030	0.049	0.077	0.055	AVRG		4.204e-002		53.339	15.000	<
Phenol	1.206	1.244	1.302	1.122	0.917	0.706	AVRG		1.08296486		21.060	15.000	<
Bis(2-Chloroethyl)ether	195060	467530	1035100	1455400	2193100	2741900	2ORDR	0.14973440	0.12576519	0.50013151	0.99207	0.99000	
2-Chlorophenol	1.053	1.009	1.100	0.978	0.864	0.765	AVRG		0.96149802		12.994	15.000	
2,2'-Oxybis(1-Chloropropa	2.980	2.913	3.120	2.997	2.714	2.539	AVRG		2.87734127		7.386	15.000	
2-Methylphenol	0.732	0.738	0.850	0.751	0.699	0.654	AVRG		0.73743574		8.844	15.000	
Hexachloroethane	0.504	0.504	0.542	0.489	0.435	0.391	AVRG		0.47761044		11.405	15.000	
N-Nitroso-di-n-propylamin	0.848	0.822	0.886	0.807	0.744	0.691	AVRG		0.79955338		8.908	15.000	
4-Methylphenol	0.687	0.810	0.909	0.836	0.753	0.717	AVRG		0.78525417		10.503	15.000	
Nitrobenzene	0.350	0.349	0.364	0.347	0.307	0.295	AVRG		0.33555281		8.185	15.000	
Isophorone	0.583	0.572	0.621	0.577	0.553	0.537	AVRG		0.57378620		4.991	15.000	
2-Nitrophenol	0.149	0.174	0.181	0.167	0.167	0.156	AVRG		0.16581372		7.091	15.000	
2,4-Dimethylphenol	0.234	0.252	0.286	0.269	0.260	0.222	AVRG		0.25387360		9.212	15.000	
Caprolactam	0.053	0.066	0.070	0.069	0.058	0.060	AVRG		6.281e-002		10.818	15.000	
Bis(2-Chloroethoxy)methan	0.369	0.370	0.392	0.358	0.331	0.309	AVRG		0.35468405		8.412	15.000	
2,4-Dichlorophenol	0.223	0.232	0.263	0.230	0.233	0.207	AVRG		0.23129040		7.917	15.000	
1,1'-Biphenyl	303980	793750	1745000	2602500	4488000	5566700	2ORDR	9.954e-002	0.35755052	0.23934715	0.99738	0.99000	
4-Chloroaniline	0.268	0.323	0.330	0.317	0.324	0.292	AVRG		0.30887040		7.868	15.000	
Hexachlorobutadiene	0.193	0.206	0.198	0.188	0.175	0.153	AVRG		0.18565853		10.276	15.000	
4-Chloro-3-Methylphenol	0.186	0.203	0.216	0.217	0.207	0.188	AVRG		0.20267751		6.652	15.000	
Hexachlorocyclopentadiene	27936	140060	428640	767580	1692300	2249600	LINR	0.10914853	3.10561830		0.99688	0.99000	
2,4,6-Trichlorophenol	0.295	0.342	0.350	0.330	0.310	0.296	AVRG		0.32066683		7.272	15.000	
2,4,5-Trichlorophenol	0.243	0.322	0.366	0.348	0.339	0.319	AVRG		0.32306234		13.206	15.000	
2-Chloronaphthalene	0.938	0.987	0.988	0.896	0.817	0.754	AVRG		0.89671807		10.556	15.000	
2-Nitroaniline	0.303	0.331	0.361	0.360	0.341	0.348	AVRG		0.34079174		6.344	15.000	
Dimethyl Phthalate	1.082	1.138	1.138	1.003	0.955	0.899	AVRG		1.03590447		9.578	15.000	
2,6-Dinitrotoluene	0.228	0.257	0.273	0.263	0.256	0.246	AVRG		0.25404788		6.055	15.000	
3-Nitroaniline	0.184	0.235	0.246	0.238	0.220	0.230	AVRG		0.22536410		9.776	15.000	
2,4-Dinitrophenol	5820	47762	152320	296710	781430	1132700	2ORDR	0.16948183	8.25114486	-2.7481004	0.99501	0.99000	
Dibenzofuran	1.178	1.321	1.310	1.216	1.148	1.105	AVRG		1.21279322		7.214	15.000	
4-Nitrophenol	23267	35709	129150	222460	539180	803010	LINR	0.19276240	9.04102107		0.99118	0.99000	
2,4-Dinitrotoluene	0.243	0.316	0.330	0.334	0.333	0.316	AVRG		0.31187212		11.145	15.000	
Atrazine	0.147	0.172	0.170	0.171	0.162	0.154	AVRG		0.16260903		6.483	15.000	
Diethylphthalate	1.040	1.110	1.072	0.948	0.824	0.783	AVRG		0.96286630		14.024	15.000	
4-Chlorophenyl-phenylethe	0.463	0.512	0.493	0.455	0.382	0.365	AVRG		0.44507940		13.265	15.000	
4-Nitroaniline	37013	112890	343830	601740	1285700	1870800	LINR	0.11256233	3.87077072		0.99862	0.99000	
4,6-Dinitro-2-Methylpheno	18268	76770	232950	468880	979480	1312200	LINR	8.384e-002	8.39263420		0.99634	0.99000	
N-Nitrosodiphenylamine	176690	539760	1164000	1882000	3417300	4256600	2ORDR	9.93e-002	0.91798533	0.92247165	0.99761	0.99000	
4-Bromophenyl-phenylether	0.182	0.213	0.220	0.202	0.187	0.184	AVRG		0.19815140		8.057	15.000	
Hexachlorobenzene	0.237	0.270	0.254	0.252	0.235	0.227	AVRG		0.24598763		6.400	15.000	
Pentachlorophenol	7995	70831	220660	403080	1005500	1485000	LINR	0.22179315	7.63202419		0.99352	0.99000	
Carbazole	0.710	0.801	0.806	0.783	0.721	0.726	AVRG		0.75769108		5.742	15.000	
Di-n-butylphthalate	0.951	1.120	1.175	1.170	1.047	1.008	AVRG		1.07842886		8.455	15.000	
Butylbenzylphthalate	0.398	0.483	0.532	0.502	0.510	0.530	AVRG		0.49241492		10.096	15.000	

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date(s): 03/15/05 03/15/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1455 1835

LAB FILE ID: RF10: X7471 RF25: X7470 RF50: X7466
RF100: X7469 RF150: X7468 RF200: X7467

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dichlorobenzidine	0.238	0.263	0.232	0.215	0.207	0.202	AVRG		0.22621530		10.129	15.000
bis(2-Ethylhexyl)phthalat	0.553	0.698	0.754	0.713	0.712	0.727	AVRG		0.69302415		10.270	15.000
Di-n-octylphthalate	277910	1090500	2274700	4810300	7852000	1.e+007	LINR	0.14430876	0.41857713		0.99702	0.99000
Acetophenone	1.197	1.267	1.349	1.224	1.162	1.086	AVRG		1.21427333		7.395	15.000
2-Fluorophenol	0.901	0.908	1.038	0.908	0.843	0.739	AVRG		0.88956540		10.993	15.000
Phenol-D6	0.990	1.043	1.197	1.054	0.941	0.857	AVRG		1.01370088		11.376	15.000
Nitrobenzene-D5	0.348	0.357	0.394	0.370	0.351	0.334	AVRG		0.35898591		5.874	15.000
2-Fluorobiphenyl	1.296	1.309	1.287	1.178	1.030	0.957	AVRG		1.17621578		12.820	15.000
2,4,6-Tribromophenol	0.151	0.213	0.202	0.208	0.223	0.221	AVRG		0.20299016		13.167	15.000
Terphenyl-D14	0.668	0.784	0.815	0.763	0.783	0.797	AVRG		0.76823603		6.786	15.000

Average %RSD test result.

Calculate Average %RSD: 10.80202770
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: XD449 DFTPP Injection Date: 03/18/05

Instrument ID: GCMS-X DFTPP Injection Time: 0855

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	49.7
68	Less than 2.0% of mass 69	0.3 (0.6)1
69	Less than 100.0% of mass 198	55.0
70	Less than 2.0% of mass 69	0.2 (0.3)1
127	40.0 - 60.0% of mass 198	40.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 30.0% of mass 198	21.4
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	11.4 (90.2)2
442	40.0 - 100.0% of mass 198	66.9
443	17.0 - 23.0% of mass 442	12.7 (19.0)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0318	X7512	03/18/05	1002
02	PEN43SB1001	WV0922-19	X7513	03/18/05	1048
03	PEN43SB1002	WV0922-20	X7514	03/18/05	1131
04	WG15035-BLANK	WG15035-1RA	X7523	03/18/05	1751
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/18/05 Time: 1002

Lab File ID: X7512 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Benzaldehyde	4.2e-002	7.66e-002	7.66e-002	0.01	82.38	100.00	AVRG
Phenol	1.0830000	1.1821000	1.1821000	0.01	9.15	20.00	AVRG
Bis(2-Chloroethyl)ether	39.093000	50.000000	0.9334100	0.01	-21.81	100.00	2RDR
2-Chlorophenol	0.9620000	1.0166000	1.0166000	0.01	5.68	100.00	AVRG
2,2'-Oxybis(1-Chloropropane)	2.8770000	2.7531000	2.7531000	0.01	-4.31	100.00	AVRG
2-Methylphenol	0.7370000	0.7526700	0.7526700	0.01	2.13	100.00	AVRG
Hexachloroethane	0.4780000	0.4738900	0.4738900	0.01	-0.86	100.00	AVRG
N-Nitroso-di-n-propylamine	0.8000000	0.8008000	0.8008000	0.05	0.10	100.00	AVRG
4-Methylphenol	0.7850000	0.7171900	0.7171900	0.01	-8.64	100.00	AVRG
Nitrobenzene	0.3350000	0.3476800	0.3476800	0.01	3.78	100.00	AVRG
Isophorone	0.5740000	0.5845200	0.5845200	0.01	1.83	100.00	AVRG
2-Nitrophenol	0.1660000	0.1757200	0.1757200	0.01	5.86	20.00	AVRG
2,4-Dimethylphenol	0.2540000	0.2716500	0.2716500	0.01	6.95	100.00	AVRG
Caprolactam	6.3e-002	6.79e-002	6.79e-002	0.01	7.78	100.00	AVRG
Bis(2-Chloroethoxy)methane	0.3550000	0.3723200	0.3723200	0.01	4.88	100.00	AVRG
2,4-Dichlorophenol	0.2310000	0.2238300	0.2238300	0.01	-3.10	20.00	AVRG
1,1'-Biphenyl	43.459000	50.000000	1.1334000	0.01	-13.08	100.00	2RDR
4-Chloroaniline	0.3090000	0.3113500	0.3113500	0.01	0.76	100.00	AVRG
Hexachlorobutadiene	0.1860000	0.1931100	0.1931100	0.01	3.82	20.00	AVRG
4-Chloro-3-Methylphenol	0.2030000	0.1882700	0.1882700	0.01	-7.26	20.00	AVRG
Hexachlorocyclopentadiene	41.610000	50.000000	0.2398500	0.05	-16.78	100.00	LINR
2,4,6-Trichlorophenol	0.3200000	0.3217900	0.3217900	0.01	0.56	20.00	AVRG
2,4,5-Trichlorophenol	0.3230000	0.3174100	0.3174100	0.01	-1.73	100.00	AVRG
2-Chloronaphthalene	0.8970000	0.9354800	0.9354800	0.01	4.29	100.00	AVRG
2-Nitroaniline	0.3410000	0.3330300	0.3330300	0.01	-2.34	100.00	AVRG
Dimethyl Phthalate	1.0360000	1.0757000	1.0757000	0.01	3.83	100.00	AVRG
2,6-Dinitrotoluene	0.2540000	0.2523900	0.2523900	0.01	-0.63	100.00	AVRG
3-Nitroaniline	0.2260000	0.2230100	0.2230100	0.01	-1.32	100.00	AVRG
2,4-Dinitrophenol	35.820000	50.000000	7.26e-002	0.05	-28.36	100.00	2RDR

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/18/05 Time: 1002

Lab File ID: X7512 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	1.2130000	1.2456000	1.2456000	0.01	2.69	100.00	AVRG	
4-Nitrophenol	43.337000	50.000000	7.88e-002	0.05	-13.33	100.00	LINR	
2,4-Dinitrotoluene	0.3120000	0.3049400	0.3049400	0.01	-2.26	100.00	AVRG	
Atrazine	0.1630000	0.1632800	0.1632800	0.01	0.17	100.00	AVRG	
Diethylphthalate	0.9630000	1.0306000	1.0306000	0.01	7.02	100.00	AVRG	
4-Chlorophenyl-phenylether	0.4450000	0.4704400	0.4704400	0.01	5.72	100.00	AVRG	
4-Nitroaniline	40.006000	50.000000	0.1834500	0.01	-19.99	100.00	LINR	
4,6-Dinitro-2-Methylphenol	42.378000	50.000000	9.3e-002	0.01	-15.24	100.00	LINR	
N-Nitrosodiphenylamine	43.721000	50.000000	0.5227500	0.01	-12.56	20.00	2RDR	
4-Bromophenyl-phenylether	0.1980000	0.2004600	0.2004600	0.01	1.24	100.00	AVRG	
Hexachlorobenzene	0.2460000	0.2398900	0.2398900	0.01	-2.48	100.00	AVRG	
Pentachlorophenol	38.843000	50.000000	7.85e-002	0.01	-22.31	20.00	LINR	<-
Carbazole	0.7580000	0.7539800	0.7539800	0.01	-0.53	100.00	AVRG	
Di-n-butylphthalate	1.0780000	1.1075000	1.1075000	0.01	2.74	100.00	AVRG	
Butylbenzylphthalate	0.4920000	0.5356800	0.5356800	0.01	8.88	100.00	AVRG	
3,3'-Dichlorobenzidine	0.2260000	0.2488300	0.2488300	0.01	10.10	100.00	AVRG	
bis(2-Ethylhexyl)phthalate	0.6930000	0.7722400	0.7722400	0.01	11.43	100.00	AVRG	
Di-n-octylphthalate	58.008000	50.000000	2.4959000	0.01	16.02	20.00	LINR	
Acetophenone	1.2140000	1.2368000	1.2368000	0.01	1.88	100.00	AVRG	
2-Fluorophenol	0.8900000	0.9011200	0.9011200	0.01	1.25	100.00	AVRG	
Phenol-D6	1.0140000	1.0240000	1.0240000	0.01	0.99	100.00	AVRG	
Nitrobenzene-D5	0.3590000	0.3541600	0.3541600	0.01	-1.35	100.00	AVRG	
2-Fluorobiphenyl	1.1760000	1.2241000	1.2241000	0.01	4.09	100.00	AVRG	
2,4,6-Tribromophenol	0.2030000	0.1734500	0.1734500	0.01	-14.56	100.00	AVRG	
Terphenyl-D14	0.7680000	0.8094000	0.8094000	0.01	5.39	100.00	AVRG	

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 18-MAR-2005 17:51
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15035-1RA
Client ID: WG15035-Blank
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 18-MAR-2005 17:51
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15035-1RA
Client ID: WG15035-Blank
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	U	74	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-96-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		96%				
13127-88-3	Phenol-D6		104%				
4165-60-0	Nitrobenzene-D5		82%				
321-60-8	2-Fluorobiphenyl		95%				
118-79-6	2,4,6-Tribromophenol		53%				
1718-51-0	Terphenyl-D14		J130%				

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7512 Date Analyzed: 03/18/05

Instrument ID: GCMS-X Time Analyzed: 1002

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	783737	7.62	2371757	10.25	1164605	14.01
UPPER LIMIT	1567474	8.12	4743514	10.75	2329210	14.51
LOWER LIMIT	391869	7.12	1185879	9.75	582303	13.51

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	PEN43SB1001	WV0922-19	773941	7.65	2317138	10.25	1093126	14.00
02	PEN43SB1002	WV0922-20	908870	7.65	2927940	10.25	1455781	14.00
03	WG15035-BLANK	WG15035-1RA	739099	7.64	2382643	10.25	1032341	14.00
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7512 Date Analyzed: 03/18/05

Instrument ID: GCMS-X Time Analyzed: 1002

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		1675341	17.13	1291836	22.84	638423	25.69
UPPER LIMIT		3350682	17.63	2583672	23.34	1276846	26.19
LOWER LIMIT		837671	16.63	645918	22.34	319212	25.19
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB1001	WV0922-19	1541448	17.13	1117176	22.84	524094	25.69
02 PEN43SB1002	WV0922-20	2107906	17.13	1448841	22.84	700954	25.69
03 WG15035-BLANK	WG15035-1RA	1412297	17.12	850513	22.84	349627	25.70
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: XD453 DFTPP Injection Date: 03/24/05

Instrument ID: GCMS-X DFTPP Injection Time: 1200

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.7
70	Less than 2.0% of mass 69	0.7 (1.1)1
127	40.0 - 60.0% of mass 198	42.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 30.0% of mass 198	24.3
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	13.3 (92.8)2
442	40.0 - 100.0% of mass 198	76.0
443	17.0 - 23.0% of mass 442	14.3 (18.8)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0324	X7572	03/24/05	1221
02	WG15362-BLANK	WG15362-1	X7573	03/24/05	1304
03	WG15362-LCS	WG15362-2	X7574	03/24/05	1347
04	WG15362-LCSD	WG15362-3	X7575	03/24/05	1430
05	PEN43SB0802	WV0922-16RE	X7576	03/24/05	1512
06	PEN43SB2501	WV0951-11	X7581	03/24/05	1845
07	PEN43SB2501D	WV0951-12	X7582	03/24/05	1928
08	PEN43SB2502	WV0951-13	X7583	03/24/05	2011
09	PEN43SB2001	WV0951-14	X7584	03/24/05	2054
10	PEN43SB2002	WV0951-15	X7585	03/24/05	2136
11	PEN43SB2101	WV0951-16	X7586	03/24/05	2218
12	PEN43SB2102	WV0951-17	X7587	03/24/05	2301
13	PEN43SB2201	WV0951-18	X7588	03/24/05	2344
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/24/05 Time: 1221

Lab File ID: X7572 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Benzaldehyde	4.2e-002	0.1143900	0.1143900	0.01	172.36	100.00	AVRG	<-
Phenol	1.0830000	1.0492000	1.0492000	0.01	-3.12	20.00	AVRG	
Bis(2-Chloroethyl)ether	31.978000	50.000000	0.8167700	0.01	-36.04	100.00	2RDR	
2-Chlorophenol	0.9620000	0.9281200	0.9281200	0.01	-3.52	100.00	AVRG	
2,2'-Oxybis(1-Chloropropane)	2.8770000	2.3531000	2.3531000	0.01	-18.21	100.00	AVRG	
2-Methylphenol	0.7370000	0.6653100	0.6653100	0.01	-9.73	100.00	AVRG	
Hexachloroethane	0.4780000	0.4435900	0.4435900	0.01	-7.20	100.00	AVRG	
N-Nitroso-di-n-propylamine	0.8000000	0.6842500	0.6842500	0.05	-14.47	100.00	AVRG	
4-Methylphenol	0.7850000	0.7383600	0.7383600	0.01	-5.94	100.00	AVRG	
Nitrobenzene	0.3350000	0.2956300	0.2956300	0.01	-11.75	100.00	AVRG	
Isophorone	0.5740000	0.5050200	0.5050200	0.01	-12.02	100.00	AVRG	
2-Nitrophenol	0.1660000	0.1580000	0.1580000	0.01	-4.82	20.00	AVRG	
2,4-Dimethylphenol	0.2540000	0.2507200	0.2507200	0.01	-1.29	100.00	AVRG	
Caprolactam	6.3e-002	5.66e-002	5.66e-002	0.01	-10.16	100.00	AVRG	
Bis(2-Chloroethoxy)methane	0.3550000	0.3227600	0.3227600	0.01	-9.08	100.00	AVRG	
2,4-Dichlorophenol	0.2310000	0.2195800	0.2195800	0.01	-4.94	20.00	AVRG	
1,1'-Biphenyl	39.480000	50.000000	1.0548000	0.01	-21.04	100.00	2RDR	
4-Chloroaniline	0.3090000	0.2819500	0.2819500	0.01	-8.75	100.00	AVRG	
Hexachlorobutadiene	0.1860000	0.1767800	0.1767800	0.01	-4.96	20.00	AVRG	
4-Chloro-3-Methylphenol	0.2030000	0.1801900	0.1801900	0.01	-11.24	20.00	AVRG	
Hexachlorocyclopentadiene	48.026000	50.000000	0.2811700	0.05	-3.95	100.00	LINR	
2,4,6-Trichlorophenol	0.3200000	0.3081400	0.3081400	0.01	-3.71	20.00	AVRG	
2,4,5-Trichlorophenol	0.3230000	0.3260000	0.3260000	0.01	0.93	100.00	AVRG	
2-Chloronaphthalene	0.8970000	0.8658100	0.8658100	0.01	-3.48	100.00	AVRG	
2-Nitroaniline	0.3410000	0.2719000	0.2719000	0.01	-20.26	100.00	AVRG	
Dimethyl Phthalate	1.0360000	0.9472000	0.9472000	0.01	-8.57	100.00	AVRG	
2,6-Dinitrotoluene	0.2540000	0.2264800	0.2264800	0.01	-10.84	100.00	AVRG	
3-Nitroaniline	0.2260000	0.2086900	0.2086900	0.01	-7.66	100.00	AVRG	
2,4-Dinitrophenol	42.384000	50.000000	8.96e-002	0.05	-15.23	100.00	2RDR	

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/24/05 Time: 1221

Lab File ID: X7572 Init. Calib. Date(s): 03/15/05 03/15/05

Init. Calib. Times: 1455 1835

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Dibenzofuran	1.2130000	1.1140000	1.1140000	0.01	-8.16	100.00	AVRG	
4-Nitrophenol	45.387000	50.000000	8.33e-002	0.05	-9.23	100.00	LINR	
2,4-Dinitrotoluene	0.3120000	0.2688700	0.2688700	0.01	-13.82	100.00	AVRG	
Atrazine	0.1630000	0.1444900	0.1444900	0.01	-11.36	100.00	AVRG	
Diethylphthalate	0.9630000	0.8807800	0.8807800	0.01	-8.54	100.00	AVRG	
4-Chlorophenyl-phenylether	0.4450000	0.4321400	0.4321400	0.01	-2.89	100.00	AVRG	
4-Nitroaniline	42.067000	50.000000	0.1940900	0.01	-15.87	100.00	LINR	
4,6-Dinitro-2-Methylphenol	44.823000	50.000000	9.88e-002	0.01	-10.35	100.00	LINR	
N-Nitrosodiphenylamine	41.036000	50.000000	0.4971100	0.01	-17.93	20.00	2RDR	
4-Bromophenyl-phenylether	0.1980000	0.1986600	0.1986600	0.01	0.33	100.00	AVRG	
Hexachlorobenzene	0.2460000	0.2375800	0.2375800	0.01	-3.42	100.00	AVRG	
Pentachlorophenol	46.457000	50.000000	9.85e-002	0.01	-7.09	20.00	LINR	
Carbazole	0.7580000	0.6815300	0.6815300	0.01	-10.09	100.00	AVRG	
Di-n-butylphthalate	1.0780000	0.9599400	0.9599400	0.01	-10.95	100.00	AVRG	
Butylbenzylphthalate	0.4920000	0.4487100	0.4487100	0.01	-8.80	100.00	AVRG	
3,3'-Dichlorobenzidine	0.2260000	0.2354200	0.2354200	0.01	4.17	100.00	AVRG	
bis(2-Ethylhexyl)phthalate	0.6930000	0.6311300	0.6311300	0.01	-8.93	100.00	AVRG	
Di-n-octylphthalate	39.401000	50.000000	1.6068000	0.01	-21.20	20.00	LINR	<-
Acetophenone	1.2140000	1.1005000	1.1005000	0.01	-9.35	100.00	AVRG	
2-Fluorophenol	0.8900000	0.8213300	0.8213300	0.01	-7.72	100.00	AVRG	
Phenol-D6	1.0140000	0.9317700	0.9317700	0.01	-8.11	100.00	AVRG	
Nitrobenzene-D5	0.3590000	0.3146200	0.3146200	0.01	-12.36	100.00	AVRG	
2-Fluorobiphenyl	1.1760000	1.1571000	1.1571000	0.01	-1.61	100.00	AVRG	
2,4,6-Tribromophenol	0.2030000	0.1661100	0.1661100	0.01	-18.17	100.00	AVRG	
Terphenyl-D14	0.7680000	0.7050300	0.7050300	0.01	-8.20	100.00	AVRG	

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/22/05
Analysis Date: 24-MAR-2005 13:04
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15362-1
Client ID: WG15362-Blank
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15362
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/22/05
Analysis Date: 24-MAR-2005 13:04
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15362-1
Client ID: WG15362-Blank
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15362
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	U	74	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-96-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		55%				
13127-88-3	Phenol-D6		69%				
4165-60-0	Nitrobenzene-D5		50%				
321-60-8	2-Fluorobiphenyl		73%				
118-79-6	2,4,6-Tribromophenol		57%				
1718-51-0	Terphenyl-D14		91%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/22/05
Analysis Date: 03/24/05
Report Date: 04/06/2005
Matrix: SOIL

Lab ID: WG15362-2 & WG15362-3
Client ID: WG15362-LCS & WG15362-LCSD
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15362
Units: ug/Kg

COMPOUND	LCS SPIKE	LCSD SPIKE	SAMPLE CONC.	LCS CONC.	LCSD CONC.	LCS %REC.	LCSD %REC.	%RPD	%RPD LIMIT	QC. LIMITS
Phenol	3333	3333	NA	2860	2890	86	87	1	50	48-116
Bis(2-Chloroethyl)ether	1667	1667	NA	942	1040	56	62	10	50	54-114
2-Chlorophenol	3333	3333	NA	2680	2700	80	81	0.7	50	60-118
2,2'-Oxybis(1-Chloropropane)	1667	1667	NA	1230	1240	74	74	0.8	50	49-122
2-Methylphenol	3333	3333	NA	2860	2800	86	84	2	50	53-121
Hexachloroethane	1667	1667	NA	1130	1270	68	76	12	50	40- 99
N-Nitroso-di-n-propylamine	1667	1667	NA	1210	1240	73	74	2	50	36-115
4-Methylphenol	3333	3333	NA	2910	2840	87	85	2	50	59-127
Nitrobenzene	1667	1667	NA	1250	1310	75	79	5	50	49-113
Isophorone	1667	1667	NA	1190	1210	71	73	2	50	46-112
2-Nitrophenol	3333	3333	NA	2590	2680	78	80	3	50	57-120
2,4-Dimethylphenol	3333	3333	NA	2730	2740	82	82	0.4	50	54-113
Bis(2-Chloroethoxy)methane	1667	1667	NA	1310	1350	79	81	3	50	50-117
2,4-Dichlorophenol	3333	3333	NA	2580	2720	77	82	5	50	59-116
4-Chloroaniline	1667	1667	NA	492	360	30	22	31	50	20-120
Hexachlorobutadiene	1667	1667	NA	1250	1400	75	84	11	50	53-114
4-Chloro-3-Methylphenol	3333	3333	NA	3010	3130	90	94	4	50	62-126
Hexachlorocyclopentadiene	1667	1667	NA	939	989	56	59	5	50	28- 73
2,4,6-Trichlorophenol	3333	3333	NA	2800	2820	84	85	0.7	50	62-120
2,4,5-Trichlorophenol	3333	3333	NA	2830	2980	85	89	5	50	62-124
2-Chloronaphthalene	1667	1667	NA	1480	1460	89	88	1	50	42-160
2-Nitroaniline	1667	1667	NA	1410	1580	85	95	11	50	66-121
Dimethyl Phthalate	1667	1667	NA	1530	1680	92	101	9	50	56-133
2,6-Dinitrotoluene	1667	1667	NA	1450	1590	87	95	9	50	66-127
3-Nitroaniline	1667	1667	NA	897	887	* 54	* 53	1	50	57-120
2,4-Dinitrophenol	3333	3333	NA	1040	1330	31	40	24	50	3-118
Dibenzofuran	1667	1667	NA	1490	1520	89	91	2	50	66-119
4-Nitrophenol	3333	3333	NA	2560	2830	77	85	10	50	41-149
2,4-Dinitrotoluene	1667	1667	NA	1550	1700	93	102	9	50	60-125
Diethylphthalate	1667	1667	NA	1510	1620	91	97	7	50	57-135
4-Chlorophenyl-phenylether	1667	1667	NA	1500	1680	90	101	11	50	53-133
4-Nitroaniline	1667	1667	NA	1400	1490	84	89	6	50	62-125
4,6-Dinitro-2-Methylphenol	3333	3333	NA	2190	2520	66	76	14	50	46-125
N-Nitrosodiphenylamine	3333	3333	NA	954	949	* 29	* 28	0.5	50	70-131
4-Bromophenyl-phenylether	1667	1667	NA	1530	1640	92	98	7	50	67-138
Hexachlorobenzene	1667	1667	NA	1550	1700	93	102	9	50	63-131
Pentachlorophenol	3333	3333	NA	2120	2360	64	71	11	50	54-131
Carbazole	1667	1667	NA	1530	1570	92	94	2	50	78-133
Di-n-butylphthalate	1667	1667	NA	1590	1530	95	92	4	50	65-139
Butylbenzylphthalate	1667	1667	NA	1600	1550	96	93	3	50	44-155
3,3'-Dichlorobenzidine	1667	1667	NA	1250	1250	75	75	0.0	50	38-137
bis(2-Ethylhexyl)phthalate	1667	1667	NA	1620	1570	97	94	3	50	45-154
Di-n-octylphthalate	1667	1667	NA	1420	1370	85	82	4	50	53-143

 FORM III SV-2 X7574.D & X7575.D

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7572 Date Analyzed: 03/24/05

Instrument ID: GCMS-X Time Analyzed: 1221

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
12 HOUR STD	750973	7.56	2278958	10.18	1060150	13.93
UPPER LIMIT	1501946	8.06	4557916	10.68	2120300	14.43
LOWER LIMIT	375487	7.06	1139479	9.68	530075	13.43

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	WG15362-BLANK	WG15362-1	647377	7.57	1983246	10.17	975606	13.92
02	WG15362-LCS	WG15362-2	683151	7.57	2292977	10.18	1140457	13.93
03	WG15362-LCSD	WG15362-3	704210	7.57	2232761	10.19	1145981	13.93
04	PEN43SB0802	WV0922-16RE	687928	7.57	2255764	10.17	1076843	13.92
05	PEN43SB2501	WV0951-11	715408	7.56	2249785	10.17	1156677	13.93
06	PEN43SB2501D	WV0951-12	714865	7.56	2390222	10.18	1137270	13.93
07	PEN43SB2502	WV0951-13	675104	7.56	2247330	10.18	1112285	13.93
08	PEN43SB2001	WV0951-14	741428	7.57	2412425	10.18	1253937	13.93
09	PEN43SB2002	WV0951-15	774709	7.57	2587952	10.18	1257911	13.93
10	PEN43SB2101	WV0951-16	707277	7.56	2250739	10.18	1185039	13.92
11	PEN43SB2102	WV0951-17	712373	7.57	2277879	10.17	1179139	13.93
12	PEN43SB2201	WV0951-18	713131	7.58	2197054	10.18	1082675	13.93
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7572 Date Analyzed: 03/24/05

Instrument ID: GCMS-X Time Analyzed: 1221

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	1422853	17.04	1207594	22.75	823510	25.59
UPPER LIMIT	2845706	17.54	2415188	23.25	1647020	26.09
LOWER LIMIT	711427	16.54	603797	22.25	411755	25.09

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	WG15362-BLANK	WG15362-1	1415089	17.04	1110508	22.74	742219	25.58
02	WG15362-LCS	WG15362-2	1722796	17.05	1405288	22.75	853972	25.59
03	WG15362-LCSD	WG15362-3	1911691	17.05	1666409	22.75	1065336	25.60
04	PEN43SB0802	WV0922-16RE	1598578	17.04	1214531	22.75	754885	25.59
05	PEN43SB2501	WV0951-11	1761802	17.05	1233566	22.74	648805	25.59
06	PEN43SB2501D	WV0951-12	1728370	17.04	1389441	22.75	645733	25.59
07	PEN43SB2502	WV0951-13	1657158	17.05	1277662	22.75	691326	25.59
08	PEN43SB2001	WV0951-14	1981473	17.05	1591233	22.74	808648	25.59
09	PEN43SB2002	WV0951-15	1985841	17.05	1335934	22.75	670830	25.59
10	PEN43SB2101	WV0951-16	1852342	17.04	1403947	22.75	769140	25.59
11	PEN43SB2102	WV0951-17	1795072	17.05	1308830	22.74	696655	25.59
12	PEN43SB2201	WV0951-18	1707003	17.04	1270638	22.75	545765	25.59
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: XD455 DFTPP Injection Date: 03/28/05

Instrument ID: GCMS-X DFTPP Injection Time: 1101

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	62.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	45.4
197	Less than 1.0% of mass 198	0.9
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.5
275	10.0 - 30.0% of mass 198	21.5
365	1.0 - 100.0% of mass 198	2.6
441	0.0 - 100.0% of mass 443	12.7 (92.6)2
442	40.0 - 100.0% of mass 198	62.7
443	17.0 - 23.0% of mass 442	13.7 (21.9)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0328	X7606	03/28/05	1206
02		SSTD200X0328	X7607	03/28/05	1258
03		SSTD150X0328	X7608	03/28/05	1341
04		SSTD100X0328	X7609	03/28/05	1423
05		SSTD025X0328	X7610	03/28/05	1505
06		SSTD010X0328	X7611	03/28/05	1548
07	WG15035-LCS	WG15035-2RA	X7612	03/28/05	1631
08	WG15039-BLANK	WG15039-1	X7613	03/28/05	1713
09	WG15039-LCS	WG15039-2	X7614	03/28/05	1757
10	PEN43SB2301	WV0951-20	X7619	03/28/05	2130
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date(s): 03/28/05 03/28/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1206 1548

LAB FILE ID: RF10: X7611 RF25: X7610 RF50: X7606
RF100: X7609 RF150: X7608 RF200: X7607

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.089	0.108	0.053	0.042	0.024	0.011	AVRG		5.464e-002		68.593	15.000	<
Phenol	1.168	1.203	1.116	1.066	0.876	0.841	AVRG		1.04495955		14.549	15.000	
Bis(2-Chloroethyl)ether	0.983	0.984	0.913	0.837	0.738	0.689	AVRG		0.85722886		14.554	15.000	
2-Chlorophenol	0.968	1.019	0.929	0.898	0.750	0.758	AVRG		0.88715331		12.494	15.000	
2,2'-Oxybis(1-Chloropropa	2.908	3.181	2.907	2.741	2.579	2.493	AVRG		2.80145951		8.953	15.000	
2-Methylphenol	0.669	0.770	0.747	0.712	0.574	0.590	AVRG		0.67687764		12.018	15.000	
Hexachloroethane	0.418	0.500	0.447	0.455	0.432	0.397	AVRG		0.44141153		8.040	15.000	
N-Nitroso-di-n-propylamin	0.906	0.893	0.854	0.797	0.682	0.689	AVRG		0.80353239		12.307	15.000	
4-Methylphenol	0.652	0.771	0.762	0.774	0.603	0.637	AVRG		0.69998049		11.093	15.000	
Nitrobenzene	0.293	0.348	0.323	0.330	0.342	0.304	AVRG		0.32358541		6.678	15.000	
Isophorone	0.515	0.547	0.529	0.523	0.487	0.485	AVRG		0.51427011		4.733	15.000	
2-Nitrophenol	0.128	0.155	0.144	0.156	0.144	0.152	AVRG		0.14641014		7.075	15.000	
2,4-Dimethylphenol	0.226	0.254	0.245	0.259	0.236	0.231	AVRG		0.24176747		5.393	15.000	
Caprolactam	0.065	0.058	0.065	0.066	0.055	0.065	AVRG		6.242e-002		7.834	15.000	
Bis(2-Chloroethoxy)methan	0.312	0.345	0.335	0.324	0.330	0.314	AVRG		0.32682795		3.861	15.000	
2,4-Dichlorophenol	0.202	0.205	0.207	0.215	0.184	0.203	AVRG		0.20279148		4.988	15.000	
1,1'-Biphenyl	1.118	1.172	1.070	1.101	1.130	0.978	AVRG		1.09469350		6.066	15.000	
4-Chloroaniline	0.219	0.263	0.248	0.277	0.240	0.266	AVRG		0.25236630		8.338	15.000	
Hexachlorobutadiene	0.134	0.164	0.150	0.153	0.140	0.155	AVRG		0.14927939		7.194	15.000	
4-Chloro-3-Methylphenol	0.211	0.194	0.207	0.209	0.174	0.188	AVRG		0.19713738		7.376	15.000	
Hexachlorocyclopentadiene	28126	120690	205160	531910	610580	1206000	LINR	0.21919406	3.39311435		0.99364	0.99000	
2,4,6-Trichlorophenol	0.259	0.295	0.279	0.300	0.273	0.282	AVRG		0.28136317		5.229	15.000	
2,4,5-Trichlorophenol	0.257	0.291	0.286	0.330	0.292	0.305	AVRG		0.29359350		8.185	15.000	
2-Chloronaphthalene	0.816	0.947	0.860	0.864	0.873	0.769	AVRG		0.85515924		6.976	15.000	
2-Nitroaniline	0.324	0.340	0.356	0.377	0.367	0.345	AVRG		0.35160744		5.466	15.000	
Dimethyl Phthalate	0.925	0.866	0.939	0.962	0.888	0.874	AVRG		0.90891883		4.246	15.000	
2,6-Dinitrotoluene	0.223	0.210	0.209	0.241	0.213	0.229	AVRG		0.22096605		5.667	15.000	
3-Nitroaniline	0.203	0.189	0.192	0.234	0.226	0.217	AVRG		0.21030157		8.707	15.000	
2,4-Dinitrophenol	0.034	0.042	0.080	0.112	0.093	0.122	AVRG		8.072e-002		44.485	15.000	<
Dibenzofuran	1.174	1.168	1.129	1.218	1.100	1.043	AVRG		1.13853272		5.423	15.000	
4-Nitrophenol	0.107	0.106	0.128	0.138	0.080	0.134	AVRG		0.11559912		19.064	15.000	<
2,4-Dinitrotoluene	0.211	0.220	0.271	0.309	0.277	0.295	AVRG		0.26374573		15.085	15.000	<
Atrazine	0.120	0.126	0.133	0.147	0.134	0.140	AVRG		0.13341129		7.141	15.000	
Diethylphthalate	0.904	0.829	0.933	0.950	0.862	0.815	AVRG		0.88214725		6.293	15.000	
4-Chlorophenyl-phenylethe	0.406	0.446	0.417	0.425	0.390	0.387	AVRG		0.41179763		5.381	15.000	
4-Nitroaniline	38495	86382	179680	487630	456100	903460	LINR	0.12977514	4.52166674		0.99552	0.99000	
4,6-Dinitro-2-Methylpheno	21757	54193	110600	350360	297150	716030	2ORDR	9.745e-002	11.2786000	-4.4515473	0.99355	0.99000	
N-Nitrosodiphenylamine	0.476	0.542	0.498	0.487	0.474	0.437	AVRG		0.48578894		7.140	15.000	
4-Bromophenyl-phenylether	0.160	0.198	0.165	0.181	0.168	0.171	AVRG		0.17380392		7.911	15.000	
Hexachlorobenzene	0.183	0.238	0.194	0.210	0.197	0.211	AVRG		0.20570958		9.279	15.000	
Pentachlorophenol	10381	37559	108340	275340	243080	669420	2ORDR	8.135e-002	14.7372820	-10.088195	0.99457	0.99000	
Carbazole	0.582	0.645	0.624	0.683	0.676	0.655	AVRG		0.64424233		5.788	15.000	
Di-n-butylphthalate	0.813	0.888	0.890	0.955	0.973	0.945	AVRG		0.91086905		6.509	15.000	
Butylbenzylphthalate	0.503	0.517	0.470	0.537	0.492	0.476	AVRG		0.49927535		5.049	15.000	

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date(s): 03/28/05 03/28/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1206 1548

LAB FILE ID: RF10: X7611 RF25: X7610 RF50: X7606
RF100: X7609 RF150: X7608 RF200: X7607

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dichlorobenzidine	0.256	0.320	0.252	0.232	0.233	0.213	AVRG		0.25111025		14.830	15.000
bis(2-Ethylhexyl)phthalat	0.589	0.706	0.670	0.702	0.718	0.654	AVRG		0.67338550		7.086	15.000
Di-n-octylphthalate	1.420	1.558	1.689	1.849	1.868	1.688	AVRG		1.67854665		10.191	15.000
Acetophenone	1.208	1.296	1.224	1.179	0.999	1.010	AVRG		1.15278376		10.504	15.000
2-Fluorophenol	0.724	0.866	0.768	0.790	0.688	0.716	AVRG		0.75869196		8.460	15.000
Phenol-D6	1.053	1.199	1.037	1.039	0.858	0.830	AVRG		1.00271318		13.694	15.000
Nitrobenzene-D5	0.318	0.359	0.340	0.323	0.348	0.318	AVRG		0.33454842		5.154	15.000
2-Fluorobiphenyl	1.091	1.162	1.052	1.070	1.072	0.954	AVRG		1.06695821		6.313	15.000
2,4,6-Tribromophenol	0.132	0.133	0.136	0.172	0.136	0.178	AVRG		0.14801744		14.414	15.000
Terphenyl-D14	0.880	0.814	0.764	0.838	0.718	0.781	AVRG		0.79930559		7.166	15.000

Average %RSD test result.

Calculate Average %RSD: 9.224775314
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM VI SV

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 17:13
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15039-1
Client ID: WG15039-Blank
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 17:13
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15039-1
Client ID: WG15039-Blank
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	U	74	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-96-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		66%				
13127-88-3	Phenol-D6		68%				
4165-60-0	Nitrobenzene-D5		59%				
321-60-8	2-Fluorobiphenyl		70%				
118-79-6	2,4,6-Tribromophenol		44%				
1718-51-0	Terphenyl-D14		79%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 03/28/05
Report Date: 04/06/2005
Matrix: SOIL

Lab ID: WG15035-2RA
Client ID: WG15035-LCS
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15035
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Phenol	3333	NA	2630		79	48-116
Bis(2-Chloroethyl)ether	1667	NA	1560		94	54-114
2-Chlorophenol	3333	NA	2600		78	60-118
2,2'-Oxybis(1-Chloropropane)	1667	NA	1350		81	49-122
2-Methylphenol	3333	NA	2590		78	53-121
Hexachloroethane	1667	NA	1400		84	40- 99
N-Nitroso-di-n-propylamine	1667	NA	1200		72	36-115
4-Methylphenol	3333	NA	2620		79	59-127
Nitrobenzene	1667	NA	1500		90	49-113
Isophorone	1667	NA	1330		80	46-112
2-Nitrophenol	3333	NA	3020		91	57-120
2,4-Dimethylphenol	3333	NA	2620		79	54-113
Bis(2-Chloroethoxy)methane	1667	NA	1420		85	50-117
2,4-Dichlorophenol	3333	NA	2620		79	59-116
4-Chloroaniline	1667	NA	338		20	20-120
Hexachlorobutadiene	1667	NA	1500		90	53-114
4-Chloro-3-Methylphenol	3333	NA	2740		82	62-126
Hexachlorocyclopentadiene	1667	NA	1040		62	28- 73
2,4,6-Trichlorophenol	3333	NA	3170		95	62-120
2,4,5-Trichlorophenol	3333	NA	3140		94	62-124
2-Chloronaphthalene	1667	NA	1760		106	42-160
2-Nitroaniline	1667	NA	1690		101	66-121
Dimethyl Phthalate	1667	NA	1730		104	56-133
2,6-Dinitrotoluene	1667	NA	1480		89	66-127
3-Nitroaniline	1667	NA	1050		63	57-120
2,4-Dinitrophenol	3333	NA	635		19	3-118
Dibenzofuran	1667	NA	1660		100	66-119
4-Nitrophenol	3333	NA	2860		86	41-149
2,4-Dinitrotoluene	1667	NA	1580		95	60-125
Diethylphthalate	1667	NA	1650		99	57-135
4-Chlorophenyl-phenylether	1667	NA	1650		99	53-133
4-Nitroaniline	1667	NA	1560		94	62-125
4,6-Dinitro-2-Methylphenol	3333	NA	1760		53	46-125
N-Nitrosodiphenylamine	3333	NA	1320	*	40	70-131
4-Bromophenyl-phenylether	1667	NA	1700		102	67-138
Hexachlorobenzene	1667	NA	1570		94	63-131
Pentachlorophenol	3333	NA	2310		69	54-131
Carbazole	1667	NA	1800		108	78-133
Di-n-butylphthalate	1667	NA	1770		106	65-139
Butylbenzylphthalate	1667	NA	1630		98	44-155
3,3'-Dichlorobenzidine	1667	NA	759		46	38-137
bis(2-Ethylhexyl)phthalate	1667	NA	1740		104	45-154
Di-n-octylphthalate	1667	NA	1880		113	53-143

FORM III SV-2
X7612.D

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 03/28/05
Report Date: 04/06/2005
Matrix: SOIL

Lab ID: WG15039-2
Client ID: WG15039-LCS
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15039
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.		%REC.	QC. LIMITS
Phenol	3333	NA	2420		73	48-116
Bis(2-Chloroethyl)ether	1667	NA	1460		88	54-114
2-Chlorophenol	3333	NA	2440		73	60-118
2,2'-Oxybis(1-Chloropropane)	1667	NA	1150		69	49-122
2-Methylphenol	3333	NA	2350		70	53-121
Hexachloroethane	1667	NA	1160		70	40- 99
N-Nitroso-di-n-propylamine	1667	NA	1030		62	36-115
4-Methylphenol	3333	NA	2340		70	59-127
Nitrobenzene	1667	NA	1300		78	49-113
Isophorone	1667	NA	1130		68	46-112
2-Nitrophenol	3333	NA	2580		77	57-120
2,4-Dimethylphenol	3333	NA	2190		66	54-113
Bis(2-Chloroethoxy)methane	1667	NA	1280		77	50-117
2,4-Dichlorophenol	3333	NA	2150		64	59-116
4-Chloroaniline	1667	NA	317	*	19	20-120
Hexachlorobutadiene	1667	NA	1380		83	53-114
4-Chloro-3-Methylphenol	3333	NA	2300		69	62-126
Hexachlorocyclopentadiene	1667	NA	900		54	28- 73
2,4,6-Trichlorophenol	3333	NA	2770		83	62-120
2,4,5-Trichlorophenol	3333	NA	2260		68	62-124
2-Chloronaphthalene	1667	NA	1520		91	42-160
2-Nitroaniline	1667	NA	1320		79	66-121
Dimethyl Phthalate	1667	NA	1400		84	56-133
2,6-Dinitrotoluene	1667	NA	1230		74	66-127
3-Nitroaniline	1667	NA	699	*	42	57-120
2,4-Dinitrophenol	3333	NA	762		23	3-118
Dibenzofuran	1667	NA	1410		85	66-119
4-Nitrophenol	3333	NA	2520		76	41-149
2,4-Dinitrotoluene	1667	NA	1340		80	60-125
Diethylphthalate	1667	NA	1390		83	57-135
4-Chlorophenyl-phenylether	1667	NA	1470		88	53-133
4-Nitroaniline	1667	NA	1220		73	62-125
4,6-Dinitro-2-Methylphenol	3333	NA	1810		54	46-125
N-Nitrosodiphenylamine	3333	NA	1100	*	33	70-131
4-Bromophenyl-phenylether	1667	NA	1500		90	67-138
Hexachlorobenzene	1667	NA	1590		95	63-131
Pentachlorophenol	3333	NA	1880		56	54-131
Carbazole	1667	NA	1480		89	78-133
Di-n-butylphthalate	1667	NA	1470		88	65-139
Butylbenzylphthalate	1667	NA	1430		86	44-155
3,3'-Dichlorobenzidine	1667	NA	728		44	38-137
bis(2-Ethylhexyl)phthalate	1667	NA	1460		88	45-154
Di-n-octylphthalate	1667	NA	1480		89	53-143

FORM III SV-2
X7614.D

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7606 Date Analyzed: 03/28/05

Instrument ID: GCMS-X Time Analyzed: 1206

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		504606	7.48	1677737	10.11	843297	13.86
UPPER LIMIT		1009212	7.98	3355474	10.61	1686594	14.36
LOWER LIMIT		252303	6.98	838869	9.61	421649	13.36
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG15035-LCS	WG15035-2RA	532815	7.49	1471112	10.11	560331	13.85
02	WG15039-BLANK	WG15039-1	522869	7.49	1617628	10.11	709377	13.85
03	WG15039-LCS	WG15039-2	456311	7.49	1324994	10.11	526239	13.85
04	PEN43SB2301	WV0951-20	481599	7.49	1594899	10.11	726043	13.86
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7606 Date Analyzed: 03/28/05

Instrument ID: GCMS-X Time Analyzed: 1206

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD		1207787	16.98	778906	22.66	533016	25.51
UPPER LIMIT		2415574	17.48	1557812	23.16	1066032	26.01
LOWER LIMIT		603894	16.48	389453	22.16	266508	25.01
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 WG15035-LCS	WG15035-2RA	767694	16.97	616290	22.66	390185	25.51
02 WG15039-BLANK	WG15039-1	891263	16.97	482812	22.66	287722	25.51
03 WG15039-LCS	WG15039-2	723340	16.97	500530	22.66	332434	25.51
04 PEN43SB2301	WV0951-20	1069050	16.97	821556	22.66	607333	25.51
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: XD457 DFTPP Injection Date: 03/30/05

Instrument ID: GCMS-X DFTPP Injection Time: 1115

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.9
68	Less than 2.0% of mass 69	0.3 (0.5)1
69	Less than 100.0% of mass 198	61.9
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	40.0 - 60.0% of mass 198	42.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	21.6
365	1.0 - 100.0% of mass 198	2.8
441	0.0 - 100.0% of mass 443	13.4 (83.4)2
442	40.0 - 100.0% of mass 198	72.5
443	17.0 - 23.0% of mass 442	16.1 (22.2)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050X0330	X7642	03/30/05	1134
02	PEN43SB2202	WV0951-19RA	X7644	03/30/05	1303
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/30/05 Time: 1134

Lab File ID: X7642 Init. Calib. Date(s): 03/28/05 03/28/05

Init. Calib. Times: 1206 1548

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Benzaldehyde	5.4e-002	6.91e-002	6.91e-002	0.01	27.96	100.00	AVRG	
Phenol	1.0450000	1.0324000	1.0324000	0.01	-1.20	20.00	AVRG	
Bis(2-Chloroethyl)ether	0.8570000	0.8484400	0.8484400	0.01	-1.00	100.00	AVRG	
2-Chlorophenol	0.8870000	0.8267300	0.8267300	0.01	-6.79	100.00	AVRG	
2,2'-Oxybis(1-Chloropropane)	2.8020000	2.6882000	2.6882000	0.01	-4.06	100.00	AVRG	
2-Methylphenol	0.6770000	0.6386000	0.6386000	0.01	-5.67	100.00	AVRG	
Hexachloroethane	0.4420000	0.4313000	0.4313000	0.01	-2.42	100.00	AVRG	
N-Nitroso-di-n-propylamine	0.8040000	0.6891600	0.6891600	0.05	-14.28	100.00	AVRG	
4-Methylphenol	0.7000000	0.6323600	0.6323600	0.01	-9.66	100.00	AVRG	
Nitrobenzene	0.3230000	0.3266300	0.3266300	0.01	1.12	100.00	AVRG	
Isophorone	0.5140000	0.4783900	0.4783900	0.01	-6.93	100.00	AVRG	
2-Nitrophenol	0.1460000	0.1364200	0.1364200	0.01	-6.56	20.00	AVRG	
2,4-Dimethylphenol	0.2420000	0.2201500	0.2201500	0.01	-9.03	100.00	AVRG	
Caprolactam	6.2e-002	4.7e-002	4.7e-002	0.01	-24.19	100.00	AVRG	
Bis(2-Chloroethoxy)methane	0.3270000	0.3053900	0.3053900	0.01	-6.61	100.00	AVRG	
2,4-Dichlorophenol	0.2030000	0.1747900	0.1747900	0.01	-13.90	20.00	AVRG	
1,1'-Biphenyl	1.0950000	1.0393000	1.0393000	0.01	-5.09	100.00	AVRG	
4-Chloroaniline	0.2520000	0.2514200	0.2514200	0.01	-0.23	100.00	AVRG	
Hexachlorobutadiene	0.1490000	0.1323400	0.1323400	0.01	-11.18	20.00	AVRG	
4-Chloro-3-Methylphenol	0.1970000	0.1675000	0.1675000	0.01	-14.98	20.00	AVRG	
Hexachlorocyclopentadiene	35.051000	50.000000	0.1549200	0.05	-29.90	100.00	LINR	
2,4,6-Trichlorophenol	0.2810000	0.2425200	0.2425200	0.01	-13.69	20.00	AVRG	
2,4,5-Trichlorophenol	0.2940000	0.2362400	0.2362400	0.01	-19.65	100.00	AVRG	
2-Chloronaphthalene	0.8550000	0.7834200	0.7834200	0.01	-8.37	100.00	AVRG	
2-Nitroaniline	0.3520000	0.3183200	0.3183200	0.01	-9.57	100.00	AVRG	
Dimethyl Phthalate	0.9090000	0.8282000	0.8282000	0.01	-8.89	100.00	AVRG	
2,6-Dinitrotoluene	0.2210000	0.1965200	0.1965200	0.01	-11.08	100.00	AVRG	
3-Nitroaniline	0.2100000	0.1942100	0.1942100	0.01	-7.52	100.00	AVRG	
2,4-Dinitrophenol	8.e-002	4.36e-002	4.36e-002	0.05	-45.50	100.00	AVRG	<-

FORM VII PEST

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date: 03/30/05 Time: 1134

Lab File ID: X7642 Init. Calib. Date(s): 03/28/05 03/28/05

Init. Calib. Times: 1206 1548

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dibenzofuran	1.1390000	1.0429000	1.0429000	0.01	-8.44	100.00	AVRG
4-Nitrophenol	0.1160000	0.1073700	0.1073700	0.05	-7.44	100.00	AVRG
2,4-Dinitrotoluene	0.2640000	0.2311300	0.2311300	0.01	-12.45	100.00	AVRG
Atrazine	0.1330000	0.1330500	0.1330500	0.01	0.04	100.00	AVRG
Diethylphthalate	0.8820000	0.8082800	0.8082800	0.01	-8.36	100.00	AVRG
4-Chlorophenyl-phenylether	0.4120000	0.3939500	0.3939500	0.01	-4.38	100.00	AVRG
4-Nitroaniline	42.916000	50.000000	0.1668600	0.01	-14.17	100.00	LINR
4,6-Dinitro-2-Methylphenol	41.216000	50.000000	6.85e-002	0.01	-17.57	100.00	2RDR
N-Nitrosodiphenylamine	0.4860000	0.4573100	0.4573100	0.01	-5.90	20.00	AVRG
4-Bromophenyl-phenylether	0.1740000	0.1592300	0.1592300	0.01	-8.49	100.00	AVRG
Hexachlorobenzene	0.2060000	0.1921700	0.1921700	0.01	-6.71	100.00	AVRG
Pentachlorophenol	43.513000	50.000000	5.75e-002	0.01	-12.97	20.00	2RDR
Carbazole	0.6440000	0.6412300	0.6412300	0.01	-0.43	100.00	AVRG
Di-n-butylphthalate	0.9110000	0.8806200	0.8806200	0.01	-3.33	100.00	AVRG
Butylbenzylphthalate	0.4990000	0.4603300	0.4603300	0.01	-7.75	100.00	AVRG
3,3'-Dichlorobenzidine	0.2510000	0.2557400	0.2557400	0.01	1.89	100.00	AVRG
bis(2-Ethylhexyl)phthalate	0.6730000	0.6223500	0.6223500	0.01	-7.53	100.00	AVRG
Di-n-octylphthalate	1.6790000	1.5052000	1.5052000	0.01	-10.35	20.00	AVRG
Acetophenone	1.1530000	1.0090000	1.0090000	0.01	-12.49	100.00	AVRG
2-Fluorophenol	0.7590000	0.7298700	0.7298700	0.01	-3.84	100.00	AVRG
Phenol-D6	1.0030000	0.8565200	0.8565200	0.01	-14.60	100.00	AVRG
Nitrobenzene-D5	0.3340000	0.3127400	0.3127400	0.01	-6.36	100.00	AVRG
2-Fluorobiphenyl	1.0670000	1.0442000	1.0442000	0.01	-2.14	100.00	AVRG
2,4,6-Tribromophenol	0.1480000	0.1256600	0.1256600	0.01	-15.09	100.00	AVRG
Terphenyl-D14	0.7990000	0.6795100	0.6795100	0.01	-14.96	100.00	AVRG

FORM VII PEST

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7642 Date Analyzed: 03/30/05

Instrument ID: GCMS-X Time Analyzed: 1134

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	452828	7.45	1366541	10.07	601559	13.82
UPPER LIMIT	905656	7.95	2733082	10.57	1203118	14.32
LOWER LIMIT	226414	6.95	683271	9.57	300780	13.32

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	PEN43SB2202	WV0951-19RA	441137	7.46	1479675	10.07	585720	13.81
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): X7642 Date Analyzed: 03/30/05

Instrument ID: GCMS-X Time Analyzed: 1134

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	805585	16.93	607623	22.61	416801	25.46
UPPER LIMIT	1611170	17.43	1215246	23.11	833602	25.96
LOWER LIMIT	402793	16.43	303812	22.11	208401	24.96

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	PEN43SB2202	WV0951-19RA	748193	16.93	432585	22.62	295239	25.46
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: UD950 DFTPP Injection Date: 04/05/05

Instrument ID: GCMS-U DFTPP Injection Time: 1018

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	43.1
68	Less than 2.0% of mass 69	0.5 (1.0)1
69	Less than 100.0% of mass 198	51.0
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	58.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	22.4
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	15.2 (84.4)2
442	40.0 - 100.0% of mass 198	94.7
443	17.0 - 23.0% of mass 442	18.0 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050U0405	U0607	04/05/05	1043
02		SSTD200U0405	U0608	04/05/05	1129
03		SSTD150U0405	U0609	04/05/05	1213
04		SSTD100U0405	U0610	04/05/05	1256
05		SSTD025U0405	U0611	04/05/05	1339
06		SSTD010U0405	U0612	04/05/05	1422
07	WG15659-BLANK	WG15659-1	U0613	04/05/05	1504
08	WG15659-LCS	WG15659-2	U0614	04/05/05	1546
09	PEN43SB2202	WV0951-19RE	U0615	04/05/05	1630
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-U Calibration Date(s): 04/05/05 04/05/05

Column: RTX-5SILMS ID: 0.25 (mm) Calibration Time(s): 1043 1422

LAB FILE ID: RF10: U0612 RF25: U0611 RF50: U0607
RF100: U0610 RF150: U0609 RF200: U0608

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.032	0.104	0.015	0.043	0.028	0.019	AVRG		.038e-002		81.311	15.000	<
Phenol	1.194	1.152	1.098	0.886	0.760	0.612	AVRG		0.95048370		24.737	15.000	<
Bis(2-Chloroethyl)ether	0.973	0.815	0.772	0.634	0.578	0.387	AVRG		0.69328263		29.555	15.000	<
2-Chlorophenol	218840	524310	1025600	1683700	2264600	2724600	2ORDR	7.183e-002	0.55261421	0.44639448	0.99734	0.99000	
2,2'-Oxybis(1-Chloropropa	269460	635110	1205500	2061900	2877400	3544200	2ORDR	3.395e-002	0.65393377	0.20515653	0.99853	0.99000	
2-Methylphenol	199580	500170	1084800	1686900	2461600	3063600	2ORDR	3.339e-002	0.83973989	0.25008209	0.99692	0.99000	
Hexachloroethane	90709	220970	422640	751520	1043800	1273600	2ORDR	5.293e-002	1.77421188	1.59345739	0.99771	0.99000	
N-Nitroso-di-n-propylamin	0.655	0.634	0.627	0.562	0.561	0.486	AVRG		0.58762880		10.740	15.000	
4-Methylphenol	0.910	0.939	0.971	0.846	0.785	0.694	AVRG		0.85748513		12.167	15.000	
Nitrobenzene	223900	550340	1021600	1761300	2567500	3328800	2ORDR	1.744e-002	2.86143732	2.69377921	0.99990	0.99000	
Isophorone	0.494	0.483	0.477	0.460	0.450	0.421	AVRG		0.46420466		5.680	15.000	
2-Nitrophenol	0.134	0.142	0.147	0.133	0.116	0.101	AVRG		0.12883970		13.336	15.000	
2,4-Dimethylphenol	0.255	0.248	0.262	0.224	0.204	0.183	AVRG		0.22938485		13.741	15.000	
Caprolactam	0.083	0.091	0.085	0.083	0.085	0.082	AVRG		8.466e-002		3.929	15.000	
Bis(2-Chloroethoxy)methan	259240	617100	1158700	1974800	2772000	3547100	2ORDR	4.151e-002	2.09427119	2.93520697	0.99964	0.99000	
2,4-Dichlorophenol	0.193	0.198	0.210	0.189	0.165	0.144	AVRG		0.18312608		13.248	15.000	
1,1'-Biphenyl	455370	1028600	1731300	2678900	3446600	3956800	2ORDR	9.937e-002	-3.93e-002	1.36712102	0.99605	0.99000	
4-Chloroaniline	242520	613470	1253500	2108300	3004900	3760800	2ORDR	7.365e-002	1.79128640	2.71251135	0.99858	0.99000	
Hexachlorobutadiene	82527	197120	374690	618320	811650	990050	2ORDR	0.12027716	2.15059702	54.6003512	0.99513	0.99000	
4-Chloro-3-Methylphenol	0.210	0.212	0.227	0.209	0.185	0.156	AVRG		0.19979899		12.566	15.000	
Hexachlorocyclopentadiene	11448	69614	267450	533640	818000	1032900	LINR	6.535e-002	9.57640405		0.99127	0.99000	
2,4,6-Trichlorophenol	89136	238940	515470	866770	1243600	1545000	2ORDR	3.653e-002	3.44291416	4.51980005	0.99969	0.99000	
2,4,5-Trichlorophenol	0.211	0.212	0.207	0.180	0.179	0.174	AVRG		0.19390981		9.261	15.000	
2-Chloronaphthalene	343950	803200	1374400	2067900	2806300	3333100	2ORDR	3.371e-002	0.55630394	1.62069051	0.99979	0.99000	
2-Nitroaniline	0.206	0.216	0.224	0.211	0.203	0.200	AVRG		0.20993114		4.226	15.000	
Dimethyl Phthalate	396720	940190	1771400	3105400	4603600	6068300	LINR	-0.2042421	1.76206397		0.99444	0.99000	
2,6-Dinitrotoluene	0.212	0.209	0.204	0.185	0.166	0.160	AVRG		0.18939545		11.787	15.000	
3-Nitroaniline	0.157	0.166	0.169	0.150	0.160	0.176	AVRG		0.16319618		5.639	15.000	
2,4-Dinitrophenol	1808	43642	198580	462440	748570	1091100	LINR	0.23416855	9.38932029		0.99503	0.99000	
Dibenzofuran	486910	1155000	2161400	3451800	4933200	5986300	2ORDR	7.493e-003	0.71476312	0.36412403	0.99979	0.99000	
4-Nitrophenol	20131	40826	97156	232550	435520	894160	2ORDR	3.958e-002	23.8371337	-28.666479	0.99932	0.99000	
2,4-Dinitrotoluene	0.244	0.260	0.260	0.235	0.215	0.204	AVRG		0.23643021		9.780	15.000	
Atrazine	94025	242590	490440	919850	1298600	1641900	2ORDR	8.284e-002	3.88907980	12.5773067	0.99667	0.99000	
Diethylphthalate	405230	975850	1768100	2822600	3640000	4459700	2ORDR	4.821e-002	0.48978692	0.87586185	0.99793	0.99000	
4-Chlorophenyl-phenylethe	0.393	0.377	0.336	0.240	0.182	0.147	AVRG		0.27909167		37.236	15.000	<
4-Nitroaniline	41465	143270	381970	807920	1213300	1597500	LINR	2.267e-002	6.38782122		0.99663	0.99000	
4,6-Dinitro-2-Methylpheno	0.034	0.061	0.084	0.064	0.043	0.027	AVRG		5.217e-002		40.748	15.000	<
N-Nitrosodiphenylamine	0.513	0.488	0.427	0.316	0.270	0.218	AVRG		0.37199300		32.589	15.000	<
4-Bromophenyl-phenylether	98804	246630	482620	776310	1076200	1325100	2ORDR	8.802e-002	2.21317121	25.7960735	0.99556	0.99000	
Hexachlorobenzene	120440	290540	527650	823390	1106600	1356600	2ORDR	9.612e-002	0.71367611	28.1950911	0.99566	0.99000	
Pentachlorophenol	4594	50366	203590	412850	730430	1045100	LINR	0.17306124	15.6433437		0.99595	0.99000	
Carbazole	445340	1104000	2085700	3584700	4705600	6100900	2ORDR	7.421e-002	0.62818145	1.17829537	0.99855	0.99000	
Di-n-butylphthalate	704140	1701600	2908900	4661000	6127200	7692700	2ORDR	7.984e-002	0.17229958	0.87405772	0.99818	0.99000	
Butylbenzylphthalate	0.521	0.562	0.542	0.486	0.492	0.447	AVRG		0.50848140		8.206	15.000	

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-U Calibration Date(s): 04/05/05 04/05/05

Column: RTX-5SILMS ID: 0.25 (mm) Calibration Time(s): 1043 1422

LAB FILE ID: RF10: U0612 RF25: U0611 RF50: U0607
RF100: U0610 RF150: U0609 RF200: U0608

COMPOUND	RF10	RF25	RF50	RF100	RF150	RF200	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dichlorobenzidine	73983	161090	212870	419270	444930	547370	LINR	-0.1424311	9.64592297		0.99172	0.99000
bis(2-Ethylhexyl)phthalat	0.740	0.794	0.732	0.633	0.622	0.562	AVRG		0.68049652		12.931	15.000
Di-n-octylphthalate	1.598	1.976	1.975	1.680	1.720	1.541	AVRG		1.74841545		10.667	15.000
Acetophenone	1.256	1.220	1.157	1.005	0.990	0.936	AVRG		1.09384049		12.260	15.000
2-Fluorophenol	0.853	0.884	0.909	0.782	0.726	0.680	AVRG		0.80583850		11.330	15.000
Phenol-D6	249780	564100	1145900	1968900	2770300	3368700	2ORDR	5.09e-002	0.67424256	0.22645324	0.99726	0.99000
Nitrobenzene-D5	0.300	0.294	0.286	0.267	0.253	0.231	AVRG		0.27203406		9.794	15.000
2-Fluorobiphenyl	436810	1005600	1747400	2790600	3953300	4926600	2ORDR	-3.43e-002	0.98705231	0.50465703	0.99936	0.99000
2,4,6-Tribromophenol	0.092	0.102	0.108	0.093	0.071	0.074	AVRG		9.021e-002		16.338	15.000 <
Terphenyl-D14	0.789	0.835	0.782	0.676	0.700	0.639	AVRG		0.73692401		10.341	15.000

Average %RSD test result.

Calculate Average %RSD: 15.59808064
Maximum Average %RSD: 15.00000000

Note: Failed Average %RSD Test.

FORM VI SV

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 15:04
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15659-1
Client ID: WG15659-Blank
SDG: CTO355-1
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	160	1.0	330	330	160
108-95-2	Phenol	U	91	1.0	330	330	91
111-44-4	Bis(2-Chloroethyl)ether	U	33	1.0	330	330	33
95-57-8	2-Chlorophenol	U	90	1.0	330	330	90
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	31	1.0	330	330	31
95-48-7	2-Methylphenol	U	140	1.0	330	330	140
67-72-1	Hexachloroethane	U	61	1.0	330	330	61
621-64-7	N-Nitroso-di-n-propylamine	U	56	1.0	330	330	56
106-44-5	4-Methylphenol	U	150	1.0	330	330	150
98-95-3	Nitrobenzene	U	74	1.0	330	330	74
78-59-1	Isophorone	U	52	1.0	330	330	52
88-75-5	2-Nitrophenol	U	110	1.0	330	330	110
105-67-9	2,4-Dimethylphenol	U	120	1.0	330	330	120
105-60-2	Caprolactam	U	160	1.0	330	330	160
111-91-1	Bis(2-Chloroethoxy)methane	U	52	1.0	330	330	52
120-83-2	2,4-Dichlorophenol	U	130	1.0	330	330	130
92-52-4	1,1'-Biphenyl	U	160	1.0	330	330	160
106-47-8	4-Chloroaniline	U	53	1.0	330	330	53
87-68-3	Hexachlorobutadiene	U	44	1.0	330	330	44
59-50-7	4-Chloro-3-Methylphenol	U	120	1.0	330	330	120
77-47-4	Hexachlorocyclopentadiene	U	75	1.0	330	330	75
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	330	120
95-95-4	2,4,5-Trichlorophenol	U	180	1.0	330	330	180
91-58-7	2-Chloronaphthalene	U	48	1.0	330	330	48
88-74-4	2-Nitroaniline	U	75	1.0	330	330	75
131-11-3	Dimethyl Phthalate	U	62	1.0	330	330	62
606-20-2	2,6-Dinitrotoluene	U	77	1.0	330	330	77
99-09-2	3-Nitroaniline	U	71	1.0	330	330	71
51-28-5	2,4-Dinitrophenol	U	62	1.0	330	330	62
132-64-9	Dibenzofuran	U	62	1.0	330	330	62
100-02-7	4-Nitrophenol	U	160	1.0	330	330	160
121-14-2	2,4-Dinitrotoluene	U	98	1.0	330	330	98
1912-24-9	Atrazine	U	160	1.0	330	330	160
84-66-2	Diethylphthalate	U	100	1.0	330	330	100
7005-72-3	4-Chlorophenyl-phenylether	U	50	1.0	330	330	50
100-01-6	4-Nitroaniline	U	86	1.0	330	330	86
534-52-1	4,6-Dinitro-2-Methylphenol	U	210	1.0	330	330	210
86-30-6	N-Nitrosodiphenylamine	U	72	1.0	330	330	72
101-55-3	4-Bromophenyl-phenylether	U	56	1.0	330	330	56
118-74-1	Hexachlorobenzene	U	230	1.0	330	330	230
87-86-5	Pentachlorophenol	U	140	1.0	330	330	140
86-74-8	Carbazole	U	60	1.0	330	330	60
84-74-2	Di-n-butylphthalate	U	84	1.0	330	330	84

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 04/01/05
Analysis Date: 05-APR-2005 15:04
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15659-1
Client ID: WG15659-Blank
SDG: CTO355-1
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
85-68-7	Butylbenzylphthalate	U	68	1.0	330	330	68
91-94-1	3,3'-Dichlorobenzidine	U	130	1.0	330	330	130
117-81-7	bis(2-Ethylhexyl)phthalate	I	160	1.0	330	330	74
117-84-0	Di-n-octylphthalate	U	74	1.0	330	330	74
98-96-2	Acetophenone	U	56	1.0	330	330	56
367-12-4	2-Fluorophenol		74%				
13127-88-3	Phenol-D6		88%				
4165-60-0	Nitrobenzene-D5		89%				
321-60-8	2-Fluorobiphenyl		103%				
118-79-6	2,4,6-Tribromophenol		69%				
1718-51-0	Terphenyl-D14		103%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 04/01/05
Analysis Date: 04/05/05
Report Date: 04/06/2005
Matrix: SOIL

Lab ID: WG15659-2
Client ID: WG15659-LCS
SDG: CTO355-1
Extracted by: AZ
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG15659
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Phenol	3333	NA	2880	86	0-140
Bis(2-Chloroethyl)ether	1667	NA	1510	91	51-125
2-Chlorophenol	3333	NA	3010	90	59-127
2,2'-Oxybis(1-Chloropropane)	1667	NA	1380	83	52-120
2-Methylphenol	3333	NA	2840	85	59-122
Hexachloroethane	1667	NA	1160	70	23- 98
N-Nitroso-di-n-propylamine	1667	NA	1360	82	55-109
4-Methylphenol	3333	NA	2820	85	46-139
Nitrobenzene	1667	NA	1360	82	66-114
Isophorone	1667	NA	1380	83	59-114
2-Nitrophenol	3333	NA	2850	86	18-162
2,4-Dimethylphenol	3333	NA	2850	86	73-109
Bis(2-Chloroethoxy)methane	1667	NA	1360	82	60-122
2,4-Dichlorophenol	3333	NA	2990	90	60-125
4-Chloroaniline	1667	NA	487	29	21-142
Hexachlorobutadiene	1667	NA	1140	68	37-102
4-Chloro-3-Methylphenol	3333	NA	3340	100	74-120
Hexachlorocyclopentadiene	1667	NA	931	56	6- 67
2,4,6-Trichlorophenol	3333	NA	3120	94	67-128
2,4,5-Trichlorophenol	3333	NA	3400	102	61-136
2-Chloronaphthalene	1667	NA	1600	96	53-153
2-Nitroaniline	1667	NA	1700	102	76-118
Dimethyl Phthalate	1667	NA	1740	104	38-131
2,6-Dinitrotoluene	1667	NA	1670	100	71-127
3-Nitroaniline	1667	NA	1290	77	12-178
2,4-Dinitrophenol	3333	NA	1450	* 44	53-130
Dibenzofuran	1667	NA	1590	95	73-120
4-Nitrophenol	3333	NA	3640	109	0-169
2,4-Dinitrotoluene	1667	NA	1820	109	68-120
Diethylphthalate	1667	NA	1680	101	70-120
4-Chlorophenyl-phenylether	1667	NA	1910	115	61-134
4-Nitroaniline	1667	NA	1960	118	32-127
4,6-Dinitro-2-Methylphenol	3333	NA	3870	116	61-148
N-Nitrosodiphenylamine	3333	NA	1490	45	31-177
4-Bromophenyl-phenylether	1667	NA	1610	97	65-149
Hexachlorobenzene	1667	NA	1560	94	57-154
Pentachlorophenol	3333	NA	2860	86	25-173
Carbazole	1667	NA	1770	106	36-170
Di-n-butylphthalate	1667	NA	1670	100	67-137
Butylbenzylphthalate	1667	NA	1760	106	60-130
3,3'-Dichlorobenzidine	1667	NA	1900	114	68-173
bis(2-Ethylhexyl)phthalate	1667	NA	1700	102	49-150
Di-n-octylphthalate	1667	NA	1770	106	58-147

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): U0607 Date Analyzed: 04/05/05

Instrument ID: GCMS-U Time Analyzed: 1043

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		916435	8.41	3109931	11.04	1906621	14.83
UPPER LIMIT		1832870	8.91	6219862	11.54	3813242	15.33
LOWER LIMIT		458218	7.91	1554966	10.54	953311	14.33
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 WG15659-BLANK	WG15659-1	895367	8.43	3227980	11.05	1823719	14.82
02 WG15659-LCS	WG15659-2	938086	8.43	3245995	11.05	1970638	14.83
03 PEN43SB2202	WV0951-19RE	996845	8.43	3515110	11.04	1938239	14.82
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): U0607 Date Analyzed: 04/05/05

Instrument ID: GCMS-U Time Analyzed: 1043

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		2767481	18.00	1527370	23.78	680174	26.65
UPPER LIMIT		5534962	18.50	3054740	24.28	1360348	27.15
LOWER LIMIT		1383741	17.50	763685	23.28	340087	26.15
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 WG15659-BLANK	WG15659-1	2578824	17.99	1887441	23.77	915829	26.65
02 WG15659-LCS	WG15659-2	2977464	18.00	1643724	23.78	762339	26.65
03 PEN43SB2202	WV0951-19RE	2655420	17.99	1997553	23.77	991964	26.66
04							
05							
06							
07							
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09							
10							
11							
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14							
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16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE _____ OF _____

CLIENT NAS Pensacola CTO-355	JOB NUMBER Job-4821 SAG-3552
SUBJECT Sample Calculation	
BASED ON	DRAWING NUMBER
BY Bernard F Spada III / CHECKED BY	APPROVED BY / DATE 4/28/05

Sample - PEN43SB0901 Di-n-butylphthalate = 1200 ug/kg

$$\text{Di-n-butylphthalate} = \frac{(163/232)(40\,ng/ul)(1000\,ul)}{(16/7926)(1.238)(30g)(0.934)} = 1162\,ng/g = ug/kg$$

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 17-MAR-2005 18:31
Report Date: 04/06/2005
Matrix: SOIL
% Solids: 93.4

Lab ID: WV0922-17
Client ID: PEN43SB0901
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 8270C
Lab Prep Batch: WG14977
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
100-52-7	Benzaldehyde	U	180	1.0	330	350	180
108-95-2	Phenol	U	98	1.0	330	350	98
111-44-4	Bis(2-Chloroethyl)ether	U	35	1.0	330	350	35
95-57-8	2-Chlorophenol	U	96	1.0	330	350	96
108-60-1	2,2'-Oxybis(1-Chloropropane)	U	33	1.0	330	350	33
95-48-7	2-Methylphenol	U	140	1.0	330	350	140
67-72-1	Hexachloroethane	U	65	1.0	330	350	65
621-64-7	N-Nitroso-di-n-propylamine	U	60	1.0	330	350	60
106-44-5	4-Methylphenol	U	160	1.0	330	350	160
98-95-3	Nitrobenzene	U	80	1.0	330	350	80
78-59-1	Isophorone	U	56	1.0	330	350	56
88-75-5	2-Nitrophenol	U	110	1.0	330	350	110
105-60-2	Caprolactam	U	180	1.0	330	350	180
111-91-1	Bis(2-Chloroethoxy)methane	U	56	1.0	330	350	56
120-83-2	2,4-Dichlorophenol	U	140	1.0	330	350	140
92-52-4	1,1'-Biphenyl	U	180	1.0	330	350	180
106-47-8	4-Chloroaniline	U	57	1.0	330	350	57
87-68-3	Hexachlorobutadiene	U	47	1.0	330	350	47
59-50-7	4-Chloro-3-Methylphenol	U	130	1.0	330	350	130
77-47-4	Hexachlorocyclopentadiene	U	80	1.0	330	350	80
88-06-2	2,4,6-Trichlorophenol	U	120	1.0	330	350	120
95-95-4	2,4,5-Trichlorophenol	U	190	1.0	330	350	190
91-58-7	2-Chloronaphthalene	U	52	1.0	330	350	52
105-67-9	2,4-Dimethylphenol	U	120	1.0	9	10	120
88-74-4	2-Nitroaniline	U	80	1.0	330	350	80
131-11-3	Dimethyl Phthalate	U	67	1.0	330	350	67
606-20-2	2,6-Dinitrotoluene	U	83	1.0	330	350	83
99-09-2	3-Nitroaniline	U	76	1.0	330	350	76
51-28-5	2,4-Dinitrophenol	U	66	1.0	330	350	66
132-64-9	Dibenzofuran	U	66	1.0	330	350	66
100-02-7	4-Nitrophenol	U	160	1.0	330	350	160
121-14-2	2,4-Dinitrotoluene	U	100	1.0	330	350	100
1912-24-9	Atrazine	U	180	1.0	330	350	180
84-66-2	Diethylphthalate	U	110	1.0	330	350	110
7005-72-3	4-Chlorophenyl-phenylether	U	54	1.0	330	350	54
100-01-6	4-Nitroaniline	U	92	1.0	330	350	92
534-52-1	4,6-Dinitro-2-Methylphenol	U	220	1.0	330	350	220
86-30-6	N-Nitrosodiphenylamine	U	77	1.0	330	350	77
101-55-3	4-Bromophenyl-phenylether	U	60	1.0	330	350	60
118-74-1	Hexachlorobenzene	U	250	1.0	330	350	250
87-86-5	Pentachlorophenol	U	150	1.0	330	350	150
86-74-8	Carbazole	U	64	1.0	330	350	64
84-74-2	Di-n-butylphthalate		1200	1.0	330	350	90

Data File: \\Target_server\GG\chem\gcms-x.i\X031705.b\X7507.D
Report Date: 06-Apr-2005 11:23

Katahdin Analytical Services

Data file : \\Target_server\GG\chem\gcms-x.i\X031705.b\X7507.D
Lab Smp Id: WV0922-17 Client Smp ID: PEN43SB0901
Inj Date : 17-MAR-2005 18:31 MS Autotune Date: 28-OCT-2004 15:15
Operator : JCG Inst ID: gcms-x.i
Smp Info : WV0922-17
Misc Info : SW846 8270C
Comment :
Method : \\Target_server\GG\chem\gcms-x.i\X031705.b\xappix03.m
Meth Date : 30-Mar-2005 15:09 cgomez Quant Type: ISTD
Cal Date : 23-FEB-2005 16:50 Cal File: X7294.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tetrat355001.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*(Vt/Ws*Vi)*(100/(100-M)) * CpndVariab

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Volume of final extract (L)
Ws	0.03000	Weight of sample extracted (Kg)
Vi	1.000	Volume injected (uL)
M	6.555	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kg)
$ 6 2-Fluorophenol	112	5.388	5.578	(0.705)	1570849	83.5860	2980
$ 11 Phenol-D6	99	7.254	7.502	(0.949)	1770162	82.0766	2930
* 16 1,4-Dichlorobenzene-D4	152	7.642	7.891	(1.000)	813896	40.0000	
$ 31 Nitrobenzene-D5	82	8.848	9.106	(0.863)	772980	35.9375	1280
* 42 Naphthalene-D8	136	10.247	10.525	(1.000)	2520243	40.0000	
$ 58 2-Fluorobiphenyl	172	12.657	12.935	(0.904)	1447871	42.9607	1530
* 68 Acenaphthene-D10	164	14.008	14.286	(1.000)	1156727	40.0000	
$ 89 2,4,6-Tribromophenol	330	15.729	16.035	(1.123)	532732	96.9958	3460
* 102 Phenanthrene-D10	188	17.128	17.435	(1.000)	1617926	40.0000	
110 Di-n-butylphthalate	149	18.761	19.039	(1.095)	1631232	32.5683	1160
$ 118 Terphenyl-D14	244	20.695	21.002	(0.906)	1196081	65.9005	2350(R)
* 127 Chrysene-D12	240	22.833	23.159	(1.000)	978025	40.0000	
130 bis(2-Ethylhexyl)phthalate	149	23.329	23.606	(1.022)	57680	2.99018	107(a)
* 137 Perylene-D12	264	25.690	26.017	(1.000)	482402	40.0000	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-X Calibration Date(s): 02/23/05 02/23/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1251 1650

LAB FILE ID: RF9: X7291 RF36: X7290 RF72: X7294
RF108: X7289 RF144: X7292 RF180: X7293

COMPOUND	RF9	RF36	RF72	RF108	RF144	RF180	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2	
Benzaldehyde	0.492	0.064	0.004	0.026	0.053	0.008	AVRG		0.10793365		175.840	15.000	<
Phenol	1.068	1.288	1.162	1.097	1.032	1.043	AVRG		1.11488883		8.686	15.000	
Bis(2-Chloroethyl)ether	1.021	1.115	0.977	0.881	0.807	0.747	AVRG		0.92482857		14.960	15.000	
2-Chlorophenol	1.046	1.115	1.051	0.996	0.961	0.968	AVRG		1.02267591		5.786	15.000	
2,2'-Oxybis(1-Chloropropa	2.583	2.842	2.642	2.691	2.634	2.767	AVRG		2.69305879		3.555	15.000	
2-Methylphenol	0.691	0.844	0.784	0.789	0.749	0.957	AVRG		0.80244189		11.356	15.000	
Hexachloroethane	0.524	0.534	0.504	0.461	0.434	0.424	AVRG		0.48021889		9.746	15.000	
N-Nitroso-di-n-propylamin	0.800	0.870	0.758	0.793	0.772	0.832	AVRG		0.80430881		5.086	15.000	
4-Methylphenol	0.758	0.844	0.824	0.846	0.838	0.883	AVRG		0.83220423		4.976	15.000	
Nitrobenzene	0.324	0.345	0.349	0.322	0.329	0.350	AVRG		0.33669820		3.792	15.000	
Isophorone	0.514	0.590	0.595	0.581	0.596	0.623	AVRG		0.58322323		6.301	15.000	
2-Nitrophenol	0.147	0.181	0.188	0.185	0.189	0.198	AVRG		0.18138932		9.917	15.000	
Caprolactam	0.070	0.078	0.079	0.077	0.086	0.075	AVRG		7.751e-002		6.617	15.000	
Bis(2-Chloroethoxy)methan	0.459	0.386	0.403	0.374	0.400	0.396	AVRG		0.40293804		7.340	15.000	
2,4-Dichlorophenol	0.197	0.251	0.262	0.248	0.252	0.248	AVRG		0.24315751		9.568	15.000	
1,1'-Biphenyl	1.218	1.263	1.275	1.180	1.140	0.972	AVRG		1.17459454		9.481	15.000	
4-Chloroaniline	0.319	0.346	0.355	0.305	0.305	0.308	AVRG		0.32281063		6.828	15.000	
Hexachlorobutadiene	0.198	0.190	0.214	0.182	0.178	0.184	AVRG		0.19085005		6.917	15.000	
4-Chloro-3-Methylphenol	0.207	0.224	0.228	0.231	0.248	0.234	AVRG		0.22851922		5.778	15.000	
Hexachlorocyclopentadiene	0.091	0.197	0.294	0.142	0.120	0.330	AVRG		0.19587165		49.637	15.000	<
2,4,6-Trichlorophenol	0.261	0.334	0.374	0.356	0.364	0.345	AVRG		0.33914757		12.046	15.000	
2,4,5-Trichlorophenol	0.350	0.310	0.354	0.340	0.358	0.327	AVRG		0.33990131		5.402	15.000	
2-Chloronaphthalene	1.417	1.547	1.616	1.437	1.456	1.413	AVRG		1.48115812		5.567	15.000	
2,4-Dimethylphenol	0.242	0.285	0.274	0.270	0.276	0.287	AVRG		0.27232624		5.998	15.000	
2-Nitroaniline	0.279	0.352	0.357	0.369	0.373	0.347	AVRG		0.34618822		9.886	15.000	
Dimethyl Phthalate	1.113	1.131	1.144	1.074	1.131	1.024	AVRG		1.10295485		4.150	15.000	
2,6-Dinitrotoluene	0.238	0.280	0.294	0.265	0.283	0.268	AVRG		0.27145545		7.247	15.000	
3-Nitroaniline	0.248	0.290	0.286	0.272	0.281	0.274	AVRG		0.27516322		5.457	15.000	
2,4-Dinitrophenol	7154	105110	225260	440500	731010	1299100	2ORDR	0.15441613	8.71211609	-4.1110617	0.99587	0.99000	
Dibenzofuran	1.303	1.375	1.396	1.295	1.365	1.457	AVRG		1.36529434		4.442	15.000	
4-Nitrophenol	0.095	0.138	0.133	0.136	0.160	0.128	AVRG		0.13176115		15.905	15.000	<
2,4-Dinitrotoluene	78509	446510	732920	1154900	1693100	2795200	LINR	5.331e-002	2.72684178		0.99785	0.99000	
Atrazine	0.158	0.154	0.151	0.067	0.044	0.112	AVRG		0.11428806		42.839	15.000	<
Diethylphthalate	1.128	1.167	1.127	1.043	1.079	0.972	AVRG		1.08601007		6.489	15.000	
4-Chlorophenyl-phenylethe	0.528	0.527	0.560	0.477	0.504	0.430	AVRG		0.50413672		9.085	15.000	
4-Nitroaniline	59065	331660	526590	975720	1348700	2368900	LINR	0.13058271	3.23629069		0.99423	0.99000	
4,6-Dinitro-2-Methylpheno	27605	202290	379670	679520	999180	1445600	LINR	0.12558377	7.28635130		0.99550	0.99000	
N-Nitrosodiphenylamine	0.547	0.561	0.577	0.536	0.537	0.530	AVRG		0.54808168		3.277	15.000	
4-Bromophenyl-phenylether	0.194	0.195	0.218	0.175	0.200	0.193	AVRG		0.19589471		7.058	15.000	
Hexachlorobenzene	0.254	0.238	0.275	0.224	0.266	0.264	AVRG		0.25369974		7.557	15.000	
Pentachlorophenol	10857	148160	266160	478630	803500	1450600	2ORDR	9.899e-002	12.2590323	-8.2289964	0.99820	0.99000	
Carbazole	0.788	0.849	0.864	0.863	0.951	0.985	AVRG		0.88334008		8.158	15.000	
Di-n-butylphthalate	1.082	1.225	1.271	1.236	1.339	1.275	AVRG		1.23828908		6.963	15.000	
Butylbenzylphthalate	0.502	0.558	0.585	0.591	0.566	0.557	AVRG		0.55982716		5.665	15.000	

FORM VI SV

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: KD510 DFTPP Injection Date: 03/17/05

Instrument ID: GCMS-K DFTPP Injection Time: 1542

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	55.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.6
70	Less than 2.0% of mass 69	0.5 (0.8)1
127	40.0 - 60.0% of mass 198	47.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.4
275	10.0 - 30.0% of mass 198	23.1
365	1.0 - 100.0% of mass 198	3.0
441	0.0 - 100.0% of mass 443	8.1 (75.7)2
442	40.0 - 100.0% of mass 198	50.0
443	17.0 - 23.0% of mass 442	10.6 (21.3)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0317	K8844	03/17/05	1607
02		SSTD5.00K0317	K8845	03/17/05	1656
03		SSTD3.00K0317	K8846	03/17/05	1747
04		SSTD2.00K0317	K8847	03/17/05	1836
05		SSTD0.50K0317	K8848	03/17/05	1927
06		SSTD0.20K0317	K8849	03/17/05	2015
07	WG14979-BLANK	WG14979-1	K8855	03/18/05	0115
08	WG14979-LCS	WG14979-2	K8856	03/18/05	0206
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-K Calibration Date(s): 03/17/05 03/17/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1607 2015

LAB FILE ID: RF0.2: K8849 RF0.5: K8848 RF1: K8844
RF2: K8847 RF3: K8846 RF5: K8845

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF3	RF5	CURVE	COEFFICENTS A0	A1	%RSD OR R^2	MAX %RSD OR R^2	
Naphthalene	0.784	0.746	0.672	0.662	0.654	0.594	AVRG		0.68545520	9.999	15.000	
2-Methylnaphthalene	0.439	0.431	0.412	0.369	0.466	0.351	AVRG		0.41154927	10.628	15.000	
Acenaphthylene	1.329	1.318	1.337	1.285	1.038	1.222	AVRG		1.25488766	9.100	15.000	
Acenaphthene	0.818	0.806	0.815	0.888	0.621	0.802	AVRG		0.79176438	11.294	15.000	
Fluorene	0.866	0.863	0.946	0.856	0.688	0.872	AVRG		0.84846492	10.068	15.000	
Phenanthrene	0.595	0.595	0.654	0.614	0.620	0.623	AVRG		0.61683770	3.520	15.000	
Anthracene	0.942	0.850	0.891	0.832	0.849	0.872	AVRG		0.87270874	4.555	15.000	
Fluoranthene	0.652	0.625	0.659	0.550	0.677	0.660	AVRG		0.63703182	7.203	15.000	
Pyrene	1.620	1.329	1.404	1.377	1.222	1.277	AVRG		1.37141792	10.106	15.000	
Benzo(a)anthracene	1728	6522	18582	27060	53461	99751	LINR	0.18810650	1.79793739	0.99246	0.99000	
Chrysene	1.458	1.210	1.241	1.195	1.145	1.165	AVRG		1.23554729	9.231	15.000	
Benzo(b)fluoranthene	1520	4187	13844	19725	45987	76636	LINR	0.11729370	1.37987365	0.99682	0.99000	
Benzo(k)fluoranthene	2.143	2.097	2.035	2.016	1.814	1.822	AVRG		1.98795698	6.992	15.000	
Benzo(a)pyrene	1.226	1.118	1.231	1.152	1.118	1.129	AVRG		1.16241804	4.521	15.000	
Indeno(1,2,3-cd)pyrene	1.286	1.196	1.295	1.169	1.225	1.244	AVRG		1.23571521	4.008	15.000	
Dibenzo(a,h)anthracene	1.090	0.911	0.891	0.977	0.942	0.952	AVRG		0.96050835	7.341	15.000	
Benzo(g,h,i)perylene	1.314	1.197	1.253	1.181	1.195	1.205	AVRG		1.22422990	4.134	15.000	
1-Methylnaphthalene	0.496	0.414	0.384	0.337	0.424	0.328	AVRG		0.39724361	15.697	15.000	<-
2-Methylnaphthalene-d10	0.352	0.305	0.295	0.274	0.334	0.248	AVRG		0.30144854	12.581	15.000	
Fluorene-d10	0.942	0.857	1.035	0.956	0.753	0.931	AVRG		0.91227850	10.596	15.000	
Pyrene-d10	1.293	1.159	1.144	1.181	1.011	1.095	AVRG		1.14713989	8.157	15.000	

Average %RSD test result.

Calculate Average %RSD: 9.960339546
Maximum Average %RSD: 30.00000000

Note: Passes Average %RSD Test.

FORM VI SV

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 01:15
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG14979-1
Client ID: WG14979-Blank
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	20	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	20	0.6
208-96-8	Acenaphthylene	U	0.5	1.0	20	20	0.5
83-32-9	Acenaphthene	U	0.7	1.0	20	20	0.7
86-73-7	Fluorene	U	0.6	1.0	20	20	0.6
85-01-8	Phenanthrene	U	1	1.0	20	20	1
120-12-7	Anthracene	U	0.8	1.0	20	20	0.8
206-44-0	Fluoranthene	U	2	1.0	20	20	2
129-00-0	Pyrene	U	2	1.0	20	20	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	20	1
218-01-9	Chrysene	U	1	1.0	20	20	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	20	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	20	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	20	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	20	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	20	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	20	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	20	10
7297-45-2	2-Methylnaphthalene-d10		86%				
81103-79-9	Fluorene-d10		83%				
1718-52-1	Pyrene-d10		97%				

FORM 2

SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	WG14979-BLANK	WG14979-1	86	83	97						0
02	WG14979-LCS	WG14979-2	80	78	86						0
03	PEN43SB0601	WV0922-1	92	80	90						0
04	PEN43SB0701	WV0922-3	76	69	88						0
05	WG15034-BLANK	WG15034-1	98	79	85						0
06	WG15034-LCS	WG15034-2	88	88	78						0
07	PEN43SB0602	WV0922-2RA	86	69	75						0
08	PEN43SB0702	WV0922-4RA	81	84	83						0
09	PEN43SB0801	WV0922-5RA	83	92	89						0
10	PEN43SB0802	WV0922-6RA	44	50	52						0
11	PEN43SB0901	WV0922-7RA	84	92	91						0
12	PEN43SB0902	WV0922-8RA	98	76	83						0
13	PEN43SB1001	WV0922-9RA	108	85	94						0
14	PEN43SB1002	WV0922-10RA	77	68	71						0
15	WG15038-BLANK	WG15038-1	85	83	76						0
16	WG15038-LCS	WG15038-2	75	75	75						0
17	PEN43SB2202	WV0951-9	93	80	85						0
18	PEN43SB2301	WV0951-10	82	73	80						0
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											

		QC LIMITS
S1	= 2-Methylnaphthalene-d1	(30-150)
S2	= Fluorene-d10	(30-150)
S3	= Pyrene-d10	(30-150)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/09/05
Analysis Date: 03/18/05
Report Date: 03/29/2005
Matrix: SOIL

Lab ID: WG14979-2
Client ID: WG14979-LCS
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Naphthalene	67	NA	60	90	30-150
2-Methylnaphthalene	67	NA	66	99	30-150
Acenaphthylene	67	NA	54	81	30-150
Acenaphthene	67	NA	55	83	30-150
Fluorene	67	NA	58	88	30-150
Phenanthrene	67	NA	74	112	30-150
Anthracene	67	NA	64	95	30-150
Fluoranthene	67	NA	76	114	30-150
Pyrene	67	NA	66	99	30-150
Benzo(a)anthracene	67	NA	76	114	30-150
Chrysene	67	NA	62	92	30-150
Benzo(b)fluoranthene	67	NA	79	118	30-150
Benzo(k)fluoranthene	67	NA	73	110	30-150
Benzo(a)pyrene	67	NA	71	107	30-150
Indeno(1,2,3-cd)pyrene	67	NA	72	107	30-150
Dibenzo(a,h)anthracene	67	NA	69	103	30-150
Benzo(g,h,i)perylene	67	NA	71	107	30-150

FORM III SV-2

K8856.D

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): K8844 Date Analyzed: 03/17/05

Instrument ID: GCMS-K Time Analyzed: 1607

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		22449	9.84	89389	12.65	38472	16.79
UPPER LIMIT		44898	10.34	178778	13.15	76944	17.29
LOWER LIMIT		11225	9.34	44695	12.15	19236	16.29
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 WG14979-BLANK	WG14979-1	27812	9.84	96714	12.66	50794	16.80
02 WG14979-LCS	WG14979-2	22667	9.84	85371	12.65	44613	16.79
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): K8844 Date Analyzed: 03/17/05

Instrument ID: GCMS-K Time Analyzed: 1607

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		59391	20.34	29789	26.69	16226	29.88
UPPER LIMIT		118782	20.84	59578	27.19	32452	30.38
LOWER LIMIT		29696	19.84	14895	26.19	8113	29.38
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 WG14979-BLANK	WG14979-1	71555	20.34	33799	26.69	18079	29.87
02 WG14979-LCS	WG14979-2	65571	20.34	33945	26.69	16916	29.87
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: KD511 DFTPP Injection Date: 03/18/05

Instrument ID: GCMS-K DFTPP Injection Time: 0859

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	55.3
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	45.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	23.3
365	1.0 - 100.0% of mass 198	3.1
441	0.0 - 100.0% of mass 443	5.6 (48.3)2
442	40.0 - 100.0% of mass 198	56.1
443	17.0 - 23.0% of mass 442	11.5 (20.6)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0318	K8857	03/18/05	0925
02	PEN43SB0601	WV0922-1	K8860	03/18/05	1154
03	PEN43SB0701	WV0922-3	K8862	03/18/05	1335
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-K Calibration Date: 03/18/05 Time: 0925

Lab File ID: K8857 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.7299600	0.7299600	0.01	6.56	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.4400600	0.4400600	0.01	7.07	100.00	AVRG
Acenaphthylene	1.2550000	1.2760000	1.2760000	0.01	1.67	100.00	AVRG
Acenaphthene	0.7920000	0.7868600	0.7868600	0.01	-0.65	20.00	AVRG
Fluorene	0.8480000	0.9052200	0.9052200	0.01	6.75	100.00	AVRG
Phenanthrene	0.6170000	0.6088800	0.6088800	0.01	-1.32	100.00	AVRG
Anthracene	0.8730000	0.8267500	0.8267500	0.01	-5.30	100.00	AVRG
Fluoranthene	0.6370000	0.6031200	0.6031200	0.01	-5.32	20.00	AVRG
Pyrene	1.3720000	1.4203000	1.4203000	0.01	3.52	100.00	AVRG
Benzo(a)anthracene	0.8115000	1.0000000	0.3676500	0.01	-18.85	100.00	LINR
Chrysene	1.2360000	1.2443000	1.2443000	0.01	0.67	100.00	AVRG
Benzo(b)fluoranthene	0.7143500	1.0000000	0.4496900	0.01	-28.56	100.00	LINR
Benzo(k)fluoranthene	1.9880000	2.0113000	2.0113000	0.01	1.17	100.00	AVRG
Benzo(a)pyrene	1.1620000	1.1133000	1.1133000	0.01	-4.19	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	1.1193000	1.1193000	0.01	-9.44	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.9749100	0.9749100	0.01	1.55	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	1.2181000	1.2181000	0.01	-0.48	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.4287100	0.4287100	0.01	7.99	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3476300	0.3476300	0.01	15.49	100.00	AVRG
Fluorene-d10	0.9120000	1.0137000	1.0137000	0.01	11.15	100.00	AVRG
Pyrene-d10	1.1470000	1.1889000	1.1889000	0.01	3.65	100.00	AVRG

FORM VII PEST

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): K8857 Date Analyzed: 03/18/05

Instrument ID: GCMS-K Time Analyzed: 0925

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		18308	9.83	67695	12.65	32517	16.79
UPPER LIMIT		36616	10.33	135390	13.15	65034	17.29
LOWER LIMIT		9154	9.33	33848	12.15	16259	16.29
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB0601	WV0922-1	28181	9.84	96136	12.66	51541	16.80
02 PEN43SB0701	WV0922-3	27573	9.84	87020	12.66	46376	16.80
03							
04							
05							
06							
07							
08							
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IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): K8857 Date Analyzed: 03/18/05

Instrument ID: GCMS-K Time Analyzed: 0925

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	47827	20.34	21516	26.70	11366	29.90
UPPER LIMIT	95654	20.84	43032	27.20	22732	30.40
LOWER LIMIT	23914	19.84	10758	26.20	5683	29.40

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	PEN43SB0601	WV0922-1	46935	20.34	27635	26.69	19668	29.87
02	PEN43SB0701	WV0922-3	57677	20.34	28260	26.69	16744	29.88
03								
04								
05								
06								
07								
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17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: KD514 DFTPP Injection Date: 03/22/05

Instrument ID: GCMS-K DFTPP Injection Time: 1035

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	53.8
70	Less than 2.0% of mass 69	0.4 (0.7)1
127	40.0 - 60.0% of mass 198	44.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	25.5
365	1.0 - 100.0% of mass 198	3.0
441	0.0 - 100.0% of mass 443	9.1 (71.8)2
442	40.0 - 100.0% of mass 198	64.9
443	17.0 - 23.0% of mass 442	12.6 (19.4)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0322	K8896	03/22/05	1103
02	WG15034-BLANK	WG15034-1	K8906	03/22/05	1919
03	WG15034-LCS	WG15034-2	K8907	03/22/05	2009
04					
05					
06					
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-K Calibration Date: 03/22/05 Time: 1103

Lab File ID: K8896 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.6523100	0.6523100	0.01	-4.77	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.3632200	0.3632200	0.01	-11.62	100.00	AVRG
Acenaphthylene	1.2550000	1.1780000	1.1780000	0.01	-6.14	100.00	AVRG
Acenaphthene	0.7920000	0.7281800	0.7281800	0.01	-8.06	20.00	AVRG
Fluorene	0.8480000	0.8751300	0.8751300	0.01	3.20	100.00	AVRG
Phenanthrene	0.6170000	0.5321400	0.5321400	0.01	-13.75	100.00	AVRG
Anthracene	0.8730000	0.6847600	0.6847600	0.01	-21.56	100.00	AVRG
Fluoranthene	0.6370000	0.5620200	0.5620200	0.01	-11.77	20.00	AVRG
Pyrene	1.3720000	0.9749300	0.9749300	0.01	-28.94	100.00	AVRG
Benzo(a)anthracene	0.9028400	1.0000000	0.4184500	0.01	-9.72	100.00	LINR
Chrysene	1.2360000	1.0230000	1.0230000	0.01	-17.23	100.00	AVRG
Benzo(b)fluoranthene	0.9309300	1.0000000	0.6066400	0.01	-6.91	100.00	LINR
Benzo(k)fluoranthene	1.9880000	1.4786000	1.4786000	0.01	-25.62	100.00	AVRG
Benzo(a)pyrene	1.1620000	0.9498800	0.9498800	0.01	-18.26	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	0.9631500	0.9631500	0.01	-22.08	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.6443900	0.6443900	0.01	-32.88	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	1.0359000	1.0359000	0.01	-15.37	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.3732000	0.3732000	0.01	-6.00	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3240900	0.3240900	0.01	7.67	100.00	AVRG
Fluorene-d10	0.9120000	0.9389500	0.9389500	0.01	2.96	100.00	AVRG
Pyrene-d10	1.1470000	0.8281400	0.8281400	0.01	-27.80	100.00	AVRG

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 19:19
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15034-1
Client ID: WG15034-Blank
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	20	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	20	0.6
208-96-8	Acenaphthylene	U	0.5	1.0	20	20	0.5
83-32-9	Acenaphthene	U	0.7	1.0	20	20	0.7
86-73-7	Fluorene	U	0.6	1.0	20	20	0.6
85-01-8	Phenanthrene	U	1	1.0	20	20	1
120-12-7	Anthracene	U	0.8	1.0	20	20	0.8
206-44-0	Fluoranthene	U	2	1.0	20	20	2
129-00-0	Pyrene	U	2	1.0	20	20	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	20	1
218-01-9	Chrysene	U	1	1.0	20	20	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	20	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	20	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	20	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	20	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	20	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	20	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	20	10
7297-45-2	2-Methylnaphthalene-d10		98%				
81103-79-9	Fluorene-d10		79%				
1718-52-1	Pyrene-d10		85%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 03/22/05
Report Date: 03/29/2005
Matrix: SOIL

Lab ID: WG15034-2
Client ID: WG15034-LCS
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Naphthalene	67	NA	71	106	30-150
2-Methylnaphthalene	67	NA	85	127	30-150
Acenaphthylene	67	NA	70	104	30-150
Acenaphthene	67	NA	68	103	30-150
Fluorene	67	NA	77	116	30-150
Phenanthrene	67	NA	91	137	30-150
Anthracene	67	NA	69	103	30-150
Fluoranthene	67	NA	98	147	30-150
Pyrene	67	NA	69	103	30-150
Benzo(a)anthracene	67	NA	108	* 162	30-150
Chrysene	67	NA	79	119	30-150
Benzo(b)fluoranthene	67	NA	106	* 159	30-150
Benzo(k)fluoranthene	67	NA	72	109	30-150
Benzo(a)pyrene	67	NA	82	123	30-150
Indeno(1,2,3-cd)pyrene	67	NA	74	111	30-150
Dibenzo(a,h)anthracene	67	NA	72	108	30-150
Benzo(g,h,i)perylene	67	NA	72	109	30-150

FORM III SV-2

K8907.D

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): K8896 Date Analyzed: 03/22/05

Instrument ID: GCMS-K Time Analyzed: 1103

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		13114	9.82	59737	12.64	27100	16.77
UPPER LIMIT		26228	10.32	119474	13.14	54200	17.27
LOWER LIMIT		6557	9.32	29869	12.14	13550	16.27
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 WG15034-BLANK	WG15034-1	22796	9.82	78343	12.64	47659	16.79
02 WG15034-LCS	WG15034-2	17964	9.82	73709	12.63	38474	16.77
03							
04							
05							
06							
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17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): K8896 Date Analyzed: 03/22/05

Instrument ID: GCMS-K Time Analyzed: 1103

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		45782	20.31	27723	26.65	19413	29.84
UPPER LIMIT		91564	20.81	55446	27.15	38826	30.34
LOWER LIMIT		22891	19.81	13862	26.15	9707	29.34
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 WG15034-BLANK	WG15034-1	74030	20.31	44717	26.67	30871	29.85
02 WG15034-LCS	WG15034-2	64535	20.31	43232	26.65	28841	29.84
03							
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16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: KD515 DFTPP Injection Date: 03/23/05

Instrument ID: GCMS-K DFTPP Injection Time: 0958

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	50.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	53.2
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	45.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.5
275	10.0 - 30.0% of mass 198	26.3
365	1.0 - 100.0% of mass 198	3.2
441	0.0 - 100.0% of mass 443	2.6 (18.3)2
442	40.0 - 100.0% of mass 198	69.3
443	17.0 - 23.0% of mass 442	14.2 (20.5)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0323	K8914	03/23/05	1113
02	PEN43SB0602	WV0922-2RA	K8919	03/23/05	1520
03	PEN43SB0702	WV0922-4RA	K8920	03/23/05	1609
04	PEN43SB0801	WV0922-5RA	K8921	03/23/05	1658
05	PEN43SB0802	WV0922-6RA	K8922	03/23/05	1748
06	PEN43SB0901	WV0922-7RA	K8923	03/23/05	1836
07	PEN43SB0902	WV0922-8RA	K8924	03/23/05	1925
08	PEN43SB1001	WV0922-9RA	K8925	03/23/05	2016
09	PEN43SB1002	WV0922-10RA	K8926	03/23/05	2106
10					
11					
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19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-K Calibration Date: 03/23/05 Time: 1113

Lab File ID: K8914 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.6355900	0.6355900	0.01	-7.21	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.3324100	0.3324100	0.01	-19.12	100.00	AVRG
Acenaphthylene	1.2550000	1.1632000	1.1632000	0.01	-7.31	100.00	AVRG
Acenaphthene	0.7920000	0.8875500	0.8875500	0.01	12.06	20.00	AVRG
Fluorene	0.8480000	0.8780400	0.8780400	0.01	3.54	100.00	AVRG
Phenanthrene	0.6170000	0.5933600	0.5933600	0.01	-3.83	100.00	AVRG
Anthracene	0.8730000	0.7123200	0.7123200	0.01	-18.40	100.00	AVRG
Fluoranthene	0.6370000	0.6489500	0.6489500	0.01	1.88	20.00	AVRG
Pyrene	1.3720000	0.9662000	0.9662000	0.01	-29.58	100.00	AVRG
Benzo(a)anthracene	1.1404000	1.0000000	0.5506100	0.01	14.04	100.00	LINR
Chrysene	1.2360000	1.1091000	1.1091000	0.01	-10.27	100.00	AVRG
Benzo(b)fluoranthene	1.1280000	1.0000000	0.7494700	0.01	12.80	100.00	LINR
Benzo(k)fluoranthene	1.9880000	1.7656000	1.7656000	0.01	-11.19	100.00	AVRG
Benzo(a)pyrene	1.1620000	1.1246000	1.1246000	0.01	-3.22	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	0.9569300	0.9569300	0.01	-22.58	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.7718200	0.7718200	0.01	-19.60	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	0.8887700	0.8887700	0.01	-27.39	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.4511700	0.4511700	0.01	13.64	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3196200	0.3196200	0.01	6.19	100.00	AVRG
Fluorene-d10	0.9120000	0.9205200	0.9205200	0.01	0.93	100.00	AVRG
Pyrene-d10	1.1470000	0.8374700	0.8374700	0.01	-26.99	100.00	AVRG

FORM VII PEST

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): K8914 Date Analyzed: 03/23/05

Instrument ID: GCMS-K Time Analyzed: 1113

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		17558	9.81	77658	12.64	36175	16.80
UPPER LIMIT		35116	10.31	155316	13.14	72350	17.30
LOWER LIMIT		8779	9.31	38829	12.14	18088	16.30
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB0602	WV0922-2RA	21736	9.82	82639	12.65	46756	16.79
02 PEN43SB0702	WV0922-4RA	27553	9.82	94624	12.65	46404	16.79
03 PEN43SB0801	WV0922-5RA	23526	9.82	90655	12.65	43004	16.79
04 PEN43SB0802	WV0922-6RA	22358	9.82	89789	12.65	39803	16.78
05 PEN43SB0901	WV0922-7RA	26236	9.82	87912	12.65	45670	16.79
06 PEN43SB0902	WV0922-8RA	23938	9.82	82012	12.65	48532	16.79
07 PEN43SB1001	WV0922-9RA	21680	9.82	66508	12.65	38343	16.79
08 PEN43SB1002	WV0922-10RA	24688	9.82	93963	12.64	49629	16.78
09							
10							
11							
12							
13							
14							
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16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): K8914 Date Analyzed: 03/23/05

Instrument ID: GCMS-K Time Analyzed: 1113

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		64335	20.34	45308	26.67	29955	29.85
UPPER LIMIT		128670	20.84	90616	27.17	59910	30.35
LOWER LIMIT		32168	19.84	22654	26.17	14978	29.35
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB0602	WV0922-2RA	66697	20.31	45675	26.67	22231	29.86
02 PEN43SB0702	WV0922-4RA	80273	20.31	51037	26.67	27716	29.85
03 PEN43SB0801	WV0922-5RA	79845	20.31	50805	26.67	24108	29.86
04 PEN43SB0802	WV0922-6RA	65784	20.31	40585	26.66	22018	29.86
05 PEN43SB0901	WV0922-7RA	74942	20.31	53659	26.67	23903	29.85
06 PEN43SB0902	WV0922-8RA	74473	20.34	47780	26.68	23126	29.86
07 PEN43SB1001	WV0922-9RA	56713	20.34	37820	26.67	19619	29.86
08 PEN43SB1002	WV0922-10RA	76081	20.34	52382	26.68	24773	29.86
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: KD518 DFTPP Injection Date: 03/28/05

Instrument ID: GCMS-K DFTPP Injection Time: 1007

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	57.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Less than 100.0% of mass 198	57.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	50.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	21.9
365	1.0 - 100.0% of mass 198	2.7
441	0.0 - 100.0% of mass 443	6.4 (82.0)2
442	40.0 - 100.0% of mass 198	40.5
443	17.0 - 23.0% of mass 442	7.8 (19.2)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00K0328	K8944	03/28/05	1036
02	WG15038-BLANK	WG15038-1	K8945	03/28/05	1125
03	WG15038-LCS	WG15038-2	K8946	03/28/05	1216
04	PEN43SB2202	WV0951-9	K8949	03/28/05	1446
05	PEN43SB2301	WV0951-10	K8950	03/28/05	1534
06					
07					
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20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-K Calibration Date: 03/28/05 Time: 1036

Lab File ID: K8944 Init. Calib. Date(s): 03/17/05 03/17/05

Init. Calib. Times: 1607 2015

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6850000	0.7574800	0.7574800	0.01	10.58	100.00	AVRG
2-Methylnaphthalene	0.4110000	0.2835100	0.2835100	0.01	-31.02	100.00	AVRG
Acenaphthylene	1.2550000	0.8657200	0.8657200	0.01	-31.02	100.00	AVRG
Acenaphthene	0.7920000	0.7715000	0.7715000	0.01	-2.59	20.00	AVRG
Fluorene	0.8480000	0.7362800	0.7362800	0.01	-13.17	100.00	AVRG
Phenanthrene	0.6170000	0.6163100	0.6163100	0.01	-0.11	100.00	AVRG
Anthracene	0.8730000	0.7910800	0.7910800	0.01	-9.38	100.00	AVRG
Fluoranthene	0.6370000	0.6327500	0.6327500	0.01	-0.67	20.00	AVRG
Pyrene	1.3720000	1.1697000	1.1697000	0.01	-14.74	100.00	AVRG
Benzo(a)anthracene	0.9917000	1.0000000	0.4678800	0.01	-0.83	100.00	LINR
Chrysene	1.2360000	1.1217000	1.1217000	0.01	-9.25	100.00	AVRG
Benzo(b)fluoranthene	1.0726000	1.0000000	0.7093500	0.01	7.26	100.00	LINR
Benzo(k)fluoranthene	1.9880000	2.1838000	2.1838000	0.01	9.85	100.00	AVRG
Benzo(a)pyrene	1.1620000	1.1484000	1.1484000	0.01	-1.17	20.00	AVRG
Indeno(1,2,3-cd)pyrene	1.2360000	0.7731500	0.7731500	0.01	-37.45	100.00	AVRG
Dibenzo(a,h)anthracene	0.9600000	0.5185400	0.5185400	0.01	-45.98	100.00	AVRG
Benzo(g,h,i)perylene	1.2240000	0.8441400	0.8441400	0.01	-31.03	100.00	AVRG
1-Methylnaphthalene	0.3970000	0.5238800	0.5238800	0.01	31.96	100.00	AVRG
2-Methylnaphthalene-d10	0.3010000	0.3136100	0.3136100	0.01	4.19	100.00	AVRG
Fluorene-d10	0.9120000	0.8838900	0.8838900	0.01	-3.08	100.00	AVRG
Pyrene-d10	1.1470000	0.9651400	0.9651400	0.01	-15.86	100.00	AVRG

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 28-MAR-2005 11:25
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15038-1
Client ID: WG15038-Blank
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	20	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	20	0.6
208-96-8	Acenaphthylene	U	0.5	1.0	20	20	0.5
83-32-9	Acenaphthene	U	0.7	1.0	20	20	0.7
86-73-7	Fluorene	U	0.6	1.0	20	20	0.6
85-01-8	Phenanthrene	U	1	1.0	20	20	1
120-12-7	Anthracene	U	0.8	1.0	20	20	0.8
206-44-0	Fluoranthene	U	2	1.0	20	20	2
129-00-0	Pyrene	U	2	1.0	20	20	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	20	1
218-01-9	Chrysene	U	1	1.0	20	20	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	20	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	20	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	20	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	20	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	20	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	20	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	20	10
7297-45-2	2-Methylnaphthalene-d10		85%				
81103-79-9	Fluorene-d10		83%				
1718-52-1	Pyrene-d10		76%				

KATAHDIN ANALYTICAL SERVICES
LAB CONTROL SAMPLE

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/11/05
Analysis Date: 03/28/05
Report Date: 03/29/2005
Matrix: SOIL

Lab ID: WG15038-2
Client ID: WG15038-LCS
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15038
Units: ug/Kg

COMPOUND	LCS SPIKE	SAMPLE CONC.	LCS CONC.	%REC.	QC. LIMITS
Naphthalene	67	NA	44	67	30-150
2-Methylnaphthalene	67	NA	70	104	30-150
Acenaphthylene	67	NA	47	71	30-150
Acenaphthene	67	NA	54	81	30-150
Fluorene	67	NA	52	78	30-150
Phenanthrene	67	NA	60	90	30-150
Anthracene	67	NA	49	74	30-150
Fluoranthene	67	NA	65	97	30-150
Pyrene	67	NA	48	72	30-150
Benzo(a)anthracene	67	NA	70	105	30-150
Chrysene	67	NA	51	77	30-150
Benzo(b)fluoranthene	67	NA	67	100	30-150
Benzo(k)fluoranthene	67	NA	52	77	30-150
Benzo(a)pyrene	67	NA	56	84	30-150
Indeno(1,2,3-cd)pyrene	67	NA	43	65	30-150
Dibenzo(a,h)anthracene	67	NA	42	62	30-150
Benzo(g,h,i)perylene	67	NA	42	63	30-150

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): K8944 Date Analyzed: 03/28/05

Instrument ID: GCMS-K Time Analyzed: 1036

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		17278	9.82	71625	12.68	39320	16.81
UPPER LIMIT		34556	10.32	143250	13.18	78640	17.31
LOWER LIMIT		8639	9.32	35813	12.18	19660	16.31
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 WG15038-BLANK	WG15038-1	17819	9.82	71845	12.65	38731	16.80
02 WG15038-LCS	WG15038-2	21471	9.83	96480	12.65	44014	16.80
03 PEN43SB2202	WV0951-9	18698	9.83	75223	12.66	40829	16.81
04 PEN43SB2301	WV0951-10	19015	9.83	85345	12.66	48929	16.80
05							
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IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): K8944 Date Analyzed: 03/28/05

Instrument ID: GCMS-K Time Analyzed: 1036

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		58295	20.36	35175	26.69	13467	29.87
UPPER LIMIT		116590	20.86	70350	27.19	26934	30.37
LOWER LIMIT		29148	19.86	17588	26.19	6734	29.37
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 WG15038-BLANK	WG15038-1	69119	20.34	41096	26.69	18657	29.87
02 WG15038-LCS	WG15038-2	73387	20.34	46474	26.68	22384	29.87
03 PEN43SB2202	WV0951-9	67742	20.34	42328	26.69	18481	29.88
04 PEN43SB2301	WV0951-10	76314	20.34	45666	26.69	20993	29.87
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16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: UD939 DFTPP Injection Date: 03/21/05

Instrument ID: GCMS-U DFTPP Injection Time: 1027

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	43.4
68	Less than 2.0% of mass 69	0.4 (0.8)1
69	Less than 100.0% of mass 198	51.0
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	59.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	21.8
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	14.1 (85.6)2
442	40.0 - 100.0% of mass 198	86.3
443	17.0 - 23.0% of mass 442	16.5 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00U0321	U0468	03/21/05	1152
02		SSTD5.00U0321	U0469	03/21/05	1237
03		SSTD3.00U0321	U0470	03/21/05	1323
04		SSTD2.00U0321	U0471	03/21/05	1409
05		SSTD0.50U0321	U0472	03/21/05	1456
06		SSTD0.20U0321	U0473	03/21/05	1543
07					
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FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-U Calibration Date(s): 03/21/05 03/21/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1152 1543

LAB FILE ID: RF0.2: U0473 RF0.5: U0472 RF1: U0468
RF2: U0471 RF3: U0470 RF5: U0469

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF3	RF5	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Naphthalene	0.699	0.736	0.706	0.704	0.636	0.691	AVRG		0.69535072		4.740	15.000
2-Methylnaphthalene	3457	10301	29418	48383	87220	153390	LINR	0.16495608	2.32362463		0.99374	0.99000
1-Methylnaphthalene	0.524	0.490	0.480	0.447	0.404	0.435	AVRG		0.46321135		9.257	15.000
Acenaphthylene	0.776	0.882	0.988	0.988	0.988	1.182	AVRG		0.96727124		13.947	15.000
Acenaphthene	0.748	0.794	0.826	0.876	0.808	0.888	AVRG		0.82328997		6.376	15.000
Fluorene	0.756	0.902	0.907	0.901	0.868	1.026	AVRG		0.89344281		9.704	15.000
Phenanthrene	0.580	0.632	0.612	0.636	0.641	0.819	AVRG		0.65347518		12.850	15.000
Anthracene	0.641	0.677	0.675	0.723	0.732	0.862	AVRG		0.71857827		10.840	15.000
Fluoranthene	3406	9306	28478	40373	77519	141260	2ORDR	2.357e-003	2.10947738	-0.1574019	0.99977	0.99000
Pyrene	1.429	1.260	1.039	1.419	1.113	1.281	AVRG		1.25683474		12.564	15.000
Benzo(a)anthracene	634	2617	10251	11432	30987	64932	2ORDR	4.508e-002	3.40336959	-0.4516082	0.99970	0.99000
Chrysene	4674	12428	28914	36671	76818	124260	LINR	-8.03e-002	1.08431523		0.99518	0.99000
Benzo(b)fluoranthene	577	2213	7117	7734	23300	42466	2ORDR	5.048e-002	1.94788787	-0.1272343	0.99934	0.99000
Benzo(k)fluoranthene	1.839	1.790	1.683	2.083	1.963	2.177	AVRG		1.92254958		9.705	15.000
Benzo(a)pyrene	0.962	1.046	0.835	0.970	0.962	1.100	AVRG		0.97882254		9.190	15.000
Indeno(1,2,3-cd)pyrene	0.852	0.754	0.632	0.756	0.751	0.968	AVRG		0.78549294		14.439	15.000
Dibenzo(a,h)anthracene	0.751	0.724	0.623	0.675	0.544	0.715	AVRG		0.67209930		11.486	15.000
Benzo(g,h,i)perylene	1902	5432	13311	14618	36980	66830	2ORDR	-9.73e-002	1.15987041	-3.7e-002	0.99503	0.99000
2-Methylnaphthalene-d10	0.280	0.338	0.310	0.315	0.289	0.318	AVRG		0.30840243		6.850	15.000
Fluorene-d10	0.767	0.881	0.875	0.920	0.862	0.983	AVRG		0.88150714		8.062	15.000
Pyrene-d10	1.115	0.954	0.768	1.094	0.870	0.997	AVRG		0.96618874		13.732	15.000

Average %RSD test result.

Calculate Average %RSD: 12.42383003
Maximum Average %RSD: 30.00000000

Note: Passes Average %RSD Test.

FORM VI SV

FORM 2

SOIL SEMIVOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Level:(low/med) LOW

	CLIENT SAMPLE ID	LAB SAMPLE ID	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	WG15034-BLANK	WG15034-1RA	101	105	120						0
02	PEN43SB2002	WV0951-5	77	79	91						0
03	PEN43SB2101	WV0951-6	86	87	87						0
04	PEN43SB2102	WV0951-7	78	83	86						0
05	PEN43SB2502	WV0951-3	102	104	100						0
06	PEN43SB2001	WV0951-4	91	93	95						0
07	PEN43SB2201	WV0951-8	72	72	87						0
08	PEN43SB2501	WV0951-1	80	90	91						0
09	PEN43SB2501D	WV0951-2	84	92	101						0
10											
11											
12											
13											
14											
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25											
26											
27											
28											

		QC LIMITS
S1	= 2-Methylnaphthalene-d1	(30-150)
S2	= Fluorene-d10	(30-150)
S3	= Pyrene-d10	(30-150)

Column to be used to flag recovery values
J Values outside of contract required QC limits
D Surrogate diluted out

FORM II SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: UD940 DFTPP Injection Date: 03/22/05

Instrument ID: GCMS-U DFTPP Injection Time: 0910

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.6
68	Less than 2.0% of mass 69	0.9 (1.7)1
69	Less than 100.0% of mass 198	50.4
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	40.0 - 60.0% of mass 198	58.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	21.8
365	1.0 - 100.0% of mass 198	2.1
441	0.0 - 100.0% of mass 443	13.9 (.84.0)2
442	40.0 - 100.0% of mass 198	86.8
443	17.0 - 23.0% of mass 442	16.5 (19.1)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00U0322	U0484	03/22/05	0934
02	WG15034-BLANK	WG15034-1RA	U0496	03/22/05	1840
03	PEN43SB2002	WV0951-5	U0497	03/22/05	1923
04	PEN43SB2101	WV0951-6	U0498	03/22/05	2007
05	PEN43SB2102	WV0951-7	U0499	03/22/05	2051
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FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-U Calibration Date: 03/22/05 Time: 0934

Lab File ID: U0484 Init. Calib. Date(s): 03/21/05 03/21/05

Init. Calib. Times: 1152 1543

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6950000	0.7701600	0.7701600	0.01	10.81	100.00	AVRG
2-Methylnaphthalene	1.0729000	1.0000000	0.4049400	0.01	7.29	100.00	LINR
Acenaphthylene	0.9670000	1.0268000	1.0268000	0.01	6.18	100.00	AVRG
Acenaphthene	0.8230000	0.9397900	0.9397900	0.01	14.19	20.00	AVRG
Fluorene	0.8930000	0.9974500	0.9974500	0.01	11.70	100.00	AVRG
Phenanthrene	0.6530000	0.6305800	0.6305800	0.01	-3.43	100.00	AVRG
Anthracene	0.7180000	0.7008300	0.7008300	0.01	-2.39	100.00	AVRG
Fluoranthene	1.1371000	1.0000000	0.5682900	0.01	13.71	20.00	2RDR
Pyrene	1.2570000	1.0338000	1.0338000	0.01	-17.76	100.00	AVRG
Benzo(a)anthracene	1.1636000	1.0000000	0.3518200	0.01	16.36	100.00	2RDR
Chrysene	0.9843300	1.0000000	0.9670000	0.01	-1.57	100.00	LINR
Benzo(b)fluoranthene	1.0370000	1.0000000	0.5350200	0.01	3.70	100.00	2RDR
Benzo(k)fluoranthene	1.9220000	1.6971000	1.6971000	0.01	-11.70	100.00	AVRG
Benzo(a)pyrene	0.9790000	0.9040200	0.9040200	0.01	-7.66	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.7860000	0.6793500	0.6793500	0.01	-13.57	100.00	AVRG
Dibenzo(a,h)anthracene	0.6720000	0.6612400	0.6612400	0.01	-1.60	100.00	AVRG
Benzo(g,h,i)perylene	0.9304000	1.0000000	0.9016400	0.01	-6.96	100.00	2RDR
1-Methylnaphthalene	0.4630000	0.4782000	0.4782000	0.01	3.28	100.00	AVRG
2-Methylnaphthalene-d10	0.3080000	0.3434700	0.3434700	0.01	11.52	100.00	AVRG
Fluorene-d10	0.8810000	0.9377900	0.9377900	0.01	6.45	100.00	AVRG
Pyrene-d10	0.9660000	0.7665200	0.7665200	0.01	-20.65	100.00	AVRG

FORM VII PEST

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client:
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date:
Received Date:
Extraction Date: 03/10/05
Analysis Date: 22-MAR-2005 18:40
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 100

Lab ID: WG15034-1RA
Client ID: WG15034-Blank
SDG: CTO355-1
Extracted by: JP
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG15034
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	U	0.9	1.0	20	20	0.9
91-57-6	2-Methylnaphthalene	U	0.6	1.0	20	20	0.6
208-96-8	Acenaphthylene	U	0.5	1.0	20	20	0.5
83-32-9	Acenaphthene	U	0.7	1.0	20	20	0.7
86-73-7	Fluorene	U	0.6	1.0	20	20	0.6
85-01-8	Phenanthrene	U	1	1.0	20	20	1
120-12-7	Anthracene	U	0.8	1.0	20	20	0.8
206-44-0	Fluoranthene	U	2	1.0	20	20	2
129-00-0	Pyrene	U	2	1.0	20	20	2
56-55-3	Benzo(a)anthracene	U	1	1.0	20	20	1
218-01-9	Chrysene	U	1	1.0	20	20	1
205-99-2	Benzo(b)fluoranthene	U	2	1.0	20	20	2
207-08-9	Benzo(k)fluoranthene	U	1	1.0	20	20	1
50-32-8	Benzo(a)pyrene	U	0.8	1.0	20	20	0.8
193-39-5	Indeno(1,2,3-cd)pyrene	U	2	1.0	20	20	2
53-70-3	Dibenzo(a,h)anthracene	U	2	1.0	20	20	2
191-24-2	Benzo(g,h,i)perylene	U	2	1.0	20	20	2
90-12-0	1-Methylnaphthalene	U	10	1.0	20	20	10
7297-45-2	2-Methylnaphthalene-d10		101%				
81103-79-9	Fluorene-d10		105%				
1718-52-1	Pyrene-d10		120%				

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): U0484 Date Analyzed: 03/22/05

Instrument ID: GCMS-U Time Analyzed: 0934

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD		16738	8.77	74910	11.61	35671	15.74
UPPER LIMIT		33476	9.27	149820	12.11	71342	16.24
LOWER LIMIT		8369	8.27	37455	11.11	17836	15.24
	CLIENT SAMPLE ID	LAB SAMPLE ID					
01	WG15034-BLANK	WG15034-1RA	21125	8.75	81694	11.61	36188	15.75
02	PEN43SB2002	WV0951-5	17201	8.75	80286	11.62	37419	15.75
03	PEN43SB2101	WV0951-6	17252	8.75	80193	11.62	38972	15.75
04	PEN43SB2102	WV0951-7	15467	8.75	69910	11.62	31397	15.75
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): U0484 Date Analyzed: 03/22/05

Instrument ID: GCMS-U Time Analyzed: 0934

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	50667	19.24	34404	25.56	16789	28.75
UPPER LIMIT	101334	19.74	68808	26.06	33578	29.25
LOWER LIMIT	25334	18.74	17202	25.06	8395	28.25

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	WG15034-BLANK	WG15034-1RA	55472	19.24	32643	25.58	16376	28.76
02	PEN43SB2002	WV0951-5	52363	19.27	36039	25.58	18063	28.76
03	PEN43SB2101	WV0951-6	60943	19.24	43280	25.57	23254	28.74
04	PEN43SB2102	WV0951-7	44994	19.27	32921	25.58	17746	28.76
05								
06								
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08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID: UD941 DFTPP Injection Date: 03/23/05

Instrument ID: GCMS-U DFTPP Injection Time: 0749

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	42.4
68	Less than 2.0% of mass 69	0.8 (1.7)1
69	Less than 100.0% of mass 198	49.4
70	Less than 2.0% of mass 69	0.1 (0.2)1
127	40.0 - 60.0% of mass 198	57.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.2
365	1.0 - 100.0% of mass 198	2.2
441	0.0 - 100.0% of mass 443	15.2 (82.0)2
442	40.0 - 100.0% of mass 198	96.5
443	17.0 - 23.0% of mass 442	18.6 (19.2)3

1-Value is % mass 69 2-Value is % mass 443
3-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD1.00U0323	U0500	03/23/05	0809
02	PEN43SB2502	WV0951-3	U0501	03/23/05	0852
03	PEN43SB2001	WV0951-4	U0502	03/23/05	0935
04	PEN43SB2201	WV0951-8	U0504	03/23/05	1102
05	PEN43SB2501	WV0951-1	U0505	03/23/05	1145
06	PEN43SB2501D	WV0951-2	U0506	03/23/05	1228
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-U Calibration Date: 03/23/05 Time: 0809

Lab File ID: U0500 Init. Calib. Date(s): 03/21/05 03/21/05

Init. Calib. Times: 1152 1543

GC Column: DB5-MS ID: 0.25 (mm)

COMPOUND	RRF or AMOUNT	RRF1.0000 or AMOUNT	CCAL RRF1.0000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Naphthalene	0.6950000	0.7438100	0.7438100	0.01	7.02	100.00	AVRG
2-Methylnaphthalene	1.0016000	1.0000000	0.3742400	0.01	0.16	100.00	LINR
1-Methylnaphthalene	0.4630000	0.4637700	0.4637700	0.01	0.17	100.00	AVRG
Acenaphthylene	0.9670000	0.9933400	0.9933400	0.01	2.72	100.00	AVRG
Acenaphthene	0.8230000	0.9341200	0.9341200	0.01	13.50	20.00	AVRG
Fluorene	0.8930000	0.9606400	0.9606400	0.01	7.57	100.00	AVRG
Phenanthrene	0.6530000	0.6234600	0.6234600	0.01	-4.52	100.00	AVRG
Anthracene	0.7180000	0.7487200	0.7487200	0.01	4.28	100.00	AVRG
Fluoranthene	1.1319000	1.0000000	0.5655100	0.01	13.19	20.00	2RDR
Pyrene	1.2570000	1.0163000	1.0163000	0.01	-19.15	100.00	AVRG
Benzo(a)anthracene	1.3001000	1.0000000	0.3976400	0.01	30.01	100.00	2RDR
Chrysene	1.1007000	1.0000000	1.0743000	0.01	10.07	100.00	LINR
Benzo(b)fluoranthene	0.9929500	1.0000000	0.5102800	0.01	-0.70	100.00	2RDR
Benzo(k)fluoranthene	1.9220000	1.9324000	1.9324000	0.01	0.54	100.00	AVRG
Benzo(a)pyrene	0.9790000	1.0329000	1.0329000	0.01	5.50	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.7860000	0.7786700	0.7786700	0.01	-0.93	100.00	AVRG
Dibenzo(a,h)anthracene	0.6720000	0.7612900	0.7612900	0.01	13.29	100.00	AVRG
Benzo(g,h,i)perylene	1.0429000	1.0000000	1.0066000	0.01	4.29	100.00	2RDR
2-Methylnaphthalene-d10	0.3080000	0.3334000	0.3334000	0.01	8.25	100.00	AVRG
Fluorene-d10	0.8810000	0.9366200	0.9366200	0.01	6.31	100.00	AVRG
Pyrene-d10	0.9660000	0.7749900	0.7749900	0.01	-19.77	100.00	AVRG

FORM VII PEST

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): U0500 Date Analyzed: 03/23/05

Instrument ID: GCMS-U Time Analyzed: 0809

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	15396	8.78	69076	11.63	32217	15.75
UPPER LIMIT	30792	9.28	138152	12.13	64434	16.25
LOWER LIMIT	7698	8.28	34538	11.13	16109	15.25

	CLIENT SAMPLE ID	LAB SAMPLE ID						
01	PEN43SB2502	WV0951-3	19591	8.75	88971	11.61	41727	15.74
02	PEN43SB2001	WV0951-4	16888	8.75	77030	11.61	35332	15.75
03	PEN43SB2201	WV0951-8	18281	8.75	85744	11.61	42790	15.74
04	PEN43SB2501	WV0951-1	17557	8.75	81734	11.61	42681	15.74
05	PEN43SB2501D	WV0951-2	17655	8.75	83810	11.60	43754	15.74
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

IS1 (DCB) = 1,4-Dichlorobenzene-D4
IS2 (NPT) = Naphthalene-D8
IS3 (ANT) = Acenaphthene-D10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-1

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project: CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Lab File ID (Standard): U0500 Date Analyzed: 03/23/05

Instrument ID: GCMS-U Time Analyzed: 0809

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD		44151	19.24	31254	25.56	15190	28.75
UPPER LIMIT		88302	19.74	62508	26.06	30380	29.25
LOWER LIMIT		22076	18.74	15627	25.06	7595	28.25
CLIENT SAMPLE ID	LAB SAMPLE ID						
01 PEN43SB2502	WV0951-3	63543	19.24	46174	25.57	25491	28.75
02 PEN43SB2001	WV0951-4	51097	19.27	35219	25.58	17099	28.76
03 PEN43SB2201	WV0951-8	64543	19.24	45298	25.57	21968	28.75
04 PEN43SB2501	WV0951-1	64864	19.24	46224	25.54	25092	28.71
05 PEN43SB2501D	WV0951-2	70499	19.21	43999	25.52	23800	28.71
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-D10
IS5 (CRY) = Chrysene-D12
IS6 (PRY) = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV-2

~~VOLATILE~~ SVOA ORGANIC COMPOUNDS IN WATER
CALCULATION VERIFICATION

Program:	SOUTHDIV	**Sample No.:**	PEN43SB0601
Method:	8270C	**Sample Matrix:**	Soil
Site Name:	NAS Pensacola		
		Analyte Name:	Fluoranthene
Site Location:			
		Spl Delivery Grp:	3551
Project No.	N4821		
		Laboratory:	Katahdin

Equation:

$$Concentration\,(\mu g / \cancel{L}\ Kg) = \frac{(A_x)(I_s)(Df)}{(A_{is})(RRF)(V_0)}$$

where:

Ax = Area of characteristic ion (EICP) for compound to be measured.
Ais = Area of characteristic ion (EICP) for the specific internal standard (See Tables 3 and 4).
Is = Amount of internal standard added in nanograms (ng).
Vo = Weight of sample in grams (g).
RRF = Relative response factor from ambient temperature purge of calibration standard.
Df = Dilution Factor
= Ratio of number of milliliters (mL) of water purged (i.e., Vo above) to number of mL of the original water sample used for purging.
For example, if 2.0 mL of sample is diluted to 5 mL with reagent water and purged, Df = 5 mL/2.0 m L = 2.5. If no dilution is performed, Df = 1.
%S = Percent solids as a whole number ie (88.2 for 88.2%)

Sample Data:

A_x =	88669
I_s =	800
Df =	1
A_{is} =	46935
RRF =	0.637
V_0 =	30
$\%S$ =	92

Green = inputs
Blue = outputs
Pink = error

	Concentration	Units
Lab Result:	86	ug/kg
TtNUS Result:	85.96396941	ug/kg

Comments:

Calculations by: Bernard F Spada III **Date:** 27-Apr-05
Reviewed by: **Date:**

KATAHDIN ANALYTICAL SERVICES
Report of Analytical Results

Client: Tetra Tech NUS, Inc
Project: CTO 355 NAS PENSACOLA
PO No:
Sample Date: 03/03/05
Received Date: 03/04/05
Extraction Date: 03/09/05
Analysis Date: 18-MAR-2005 11:54
Report Date: 03/29/2005
Matrix: SOIL
% Solids: 92.0

Lab ID: WV0922-1
Client ID: PEN43SB0601
SDG: CTO355-1
Extracted by: MC
Extraction Method: SW846 3550
Analyst: JCG
Analysis Method: SW846 M8270C
Lab Prep Batch: WG14979
Units: ug/Kg

CAS#	Compound	Flags	Results	DF	PQL	Adj.PQL	Adj.MDL
91-20-3	Naphthalene	I	2	1.0	20	22	1.0
91-57-6	2-Methylnaphthalene	I	1	1.0	20	22	0.6
208-96-8	Acenaphthylene	U	0.6	1.0	20	22	0.6
83-32-9	Acenaphthene	U	0.8	1.0	20	22	0.8
86-73-7	Fluorene	U	0.7	1.0	20	22	0.7
85-01-8	Phenanthrene		38	1.0	20	22	2
120-12-7	Anthracene	I	8	1.0	20	22	0.9
206-44-0	Fluoranthene		86	1.0	20	22	2
129-00-0	Pyrene		74	1.0	20	22	2
56-55-3	Benzo(a)anthracene		56	1.0	20	22	1
218-01-9	Chrysene		50	1.0	20	22	1
205-99-2	Benzo(b)fluoranthene		57	1.0	20	22	2
207-08-9	Benzo(k)fluoranthene		24	1.0	20	22	1
50-32-8	Benzo(a)pyrene		47	1.0	20	22	0.8
193-39-5	Indeno(1,2,3-cd)pyrene		30	1.0	20	22	2
53-70-3	Dibenzo(a,h)anthracene	I	15	1.0	20	22	2
191-24-2	Benzo(g,h,i)perylene		40	1.0	20	22	2
90-12-0	1-Methylnaphthalene	U	11	1.0	20	22	11
7297-45-2	2-Methylnaphthalene-d10		92%				
81103-79-9	Fluorene-d10		80%				
1718-52-1	Pyrene-d10		90%				

Data File: \\Target_server\GG\chem\gcms-k.i\K031805.b\K8860.D
Report Date: 29-Mar-2005 11:08

Katahdin Analytical Services

Data file : \\Target_server\GG\chem\gcms-k.i\K031805.b\K8860.D
Lab Smp Id: WV0922-1 Client Smp ID: PEN43SB0601
Inj Date : 18-MAR-2005 11:54 MS Autotune Date: 01-MAR-2004 10:18
Operator : JCG Inst ID: gcms-k.i
Smp Info : WV0922-1
Misc Info : SW846 M8270C
Comment :
Method : \\Target_server\GG\chem\gcms-k.i\K031805.b\ksim023.m
Meth Date : 18-Mar-2005 14:42 cgomez Quant Type: ISTD
Cal Date : 17-MAR-2005 20:15 Cal File: K8849.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: tetrat355001.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Vo)* 1000 * (100/(100 - M)) * CpndVari

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Volume of final extract (L)
Vo	0.03000	Sample Weight
M	7.990	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kg)
* 1 1,4-Dichlorobenzene-D4	152	9.842	9.834	(1.000)	28181	0.80000	(M)
* 2 Naphthalene-D8	136	12.663	12.652	(1.000)	96136	0.80000	
3 Naphthalene	128	12.702	12.691	(1.003)	3714	0.04509	1.63(aQ)
$ 4 2-Methylnaphthalene-d10	150	14.255	14.255	(1.126)	66718	1.84176	66.7
5 2-Methylnaphthalene	142	14.336	14.336	(1.132)	1403	0.02837	1.03(a)
* 8 Acenaphthene-D10	164	16.798	16.785	(1.000)	51541	0.80000	(Q)
$ 10 Fluorene-d10	176	18.040	18.040	(1.074)	94059	1.60033	58.0
* 14 Phenanthrene-D10	188	20.337	20.337	(1.000)	46935	0.80000	
15 Phenanthrene	178	20.391	20.391	(1.003)	38259	1.05720	38.3
16 Anthracene	178	20.498	20.499	(1.008)	11489	0.22439	8.13(a)
18 Fluoranthene	202	23.233	23.232	(1.142)	88669	2.37249	86.0
$ 19 Pyrene-d10	212	23.719	23.731	(0.889)	71467	1.80351	65.3
20 Pyrene	202	23.759	23.758	(0.890)	96319	2.03317	73.6
21 Benzo(a)anthracene	228	26.653	26.677	(0.999)	27045	1.55813	56.4
* 22 Chrysene-D12	240	26.688	26.700	(1.000)	27635	0.80000	
23 Chrysene	228	26.746	26.758	(1.002)	58367	1.36754	49.5(M)
25 Benzo(b)fluoranthene	252	29.084	29.085	(0.974)	26438	1.57771	57.2(M)
26 Benzo(k)fluoranthene	252	29.131	29.143	(0.975)	33016	0.67553	24.5(M)
27 Benzo(a)pyrene	252	29.756	29.768	(0.996)	37028	1.29568	46.9
* 28 Perylene-D12	264	29.871	29.895	(1.000)	19668	0.80000	
29 Indeno(1,2,3-cd)pyrene	276	31.923	31.961	(1.069)	24853	0.81807	29.6
30 Dibenzo(a,h)anthracene	278	31.954	32.007	(1.070)	9801	0.41505	15.0(aQM)

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: KATAHDIN ANALYTICAL SERVICES Lab Code: KAS

Project CTO 355 NAS PENSACOLA SDG No.: CTO355-1

Instrument ID: GCMS-K Calibration Date(s): 03/17/05 03/17/05

Column: DB5-MS ID: 0.25 (mm) Calibration Time(s): 1607 2015

LAB FILE ID: RF0.2: K8849 RF0.5: K8848 RF1: K8844
RF2: K8847 RF3: K8846 RF5: K8845

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF3	RF5	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2	MAX %RSD OR R^2	
Naphthalene	0.784	0.746	0.672	0.662	0.654	0.594	AVRG		0.68545520	9.999	15.000	
2-Methylnaphthalene	0.439	0.431	0.412	0.369	0.466	0.351	AVRG		0.41154927	10.628	15.000	
Acenaphthylene	1.329	1.318	1.337	1.285	1.038	1.222	AVRG		1.25488766	9.100	15.000	
Acenaphthene	0.818	0.806	0.815	0.888	0.621	0.802	AVRG		0.79176438	11.294	15.000	
Fluorene	0.866	0.863	0.946	0.856	0.688	0.872	AVRG		0.84846492	10.068	15.000	
Phenanthrene	0.595	0.595	0.654	0.614	0.620	0.623	AVRG		0.61683770	3.520	15.000	
Anthracene	0.942	0.850	0.891	0.832	0.849	0.872	AVRG		0.87270874	4.555	15.000	
Fluoranthene	0.652	0.625	0.659	0.550	0.677	0.660	AVRG		0.63703182	7.203	15.000	
Pyrene	1.620	1.329	1.404	1.377	1.222	1.277	AVRG		1.37141792	10.106	15.000	
Benzo(a)anthracene	1728	6522	18582	27060	53461	99751	LINR	0.18810650	1.79793739	0.99246	0.99000	
Chrysene	1.458	1.210	1.241	1.195	1.145	1.165	AVRG		1.23554729	9.231	15.000	
Benzo(b)fluoranthene	1520	4187	13844	19725	45987	76636	LINR	0.11729370	1.37987365	0.99682	0.99000	
Benzo(k)fluoranthene	2.143	2.097	2.035	2.016	1.814	1.822	AVRG		1.98795698	6.992	15.000	
Benzo(a)pyrene	1.226	1.118	1.231	1.152	1.118	1.129	AVRG		1.16241804	4.521	15.000	
Indeno(1,2,3-cd)pyrene	1.286	1.196	1.295	1.169	1.225	1.244	AVRG		1.23571521	4.008	15.000	
Dibenzo(a,h)anthracene	1.090	0.911	0.891	0.977	0.942	0.952	AVRG		0.96050835	7.341	15.000	
Benzo(g,h,i)perylene	1.314	1.197	1.253	1.181	1.195	1.205	AVRG		1.22422990	4.134	15.000	
1-Methylnaphthalene	0.496	0.414	0.384	0.337	0.424	0.328	AVRG		0.39724361	15.697	15.000	<-
2-Methylnaphthalene-d10	0.352	0.305	0.295	0.274	0.334	0.248	AVRG		0.30144854	12.581	15.000	
Fluorene-d10	0.942	0.857	1.035	0.956	0.753	0.931	AVRG		0.91227850	10.596	15.000	
Pyrene-d10	1.293	1.159	1.144	1.181	1.011	1.095	AVRG		1.14713989	8.157	15.000	

Average %RSD test result.

Calculate Average %RSD: 9.960339546
Maximum Average %RSD: 30.00000000

Note: Passes Average %RSD Test.

FORM VI SV

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**G. WALKER**	**DATE:**	**MAY 27, 2005**
FROM:	**ETHAN G. LEE**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – TAL METALS**
NAS PENSACOLA – CTO 355
SAMPLE DELIVERY GROUP (SDG) – 3555

SAMPLES: 14/AQUEOUS/

PEN43GW02S02	PEN43GW05D01	PEN43GW05S02
PEN43GW05S02D	PEN43GW06D01	PEN43GW06S01
PEN43GW09S01	PEN43GW10S01	PEN43GW11S01
PEN43GW12S01	PEN43GW13S01	PEN43MW07S01
PEN43MW08S01	PEN43RB0324	

Overview

The sample set for NAS Pensacola, CTO 355, SDG 3555, consists of thirteen (13) aqueous environmental samples and one (1) aqueous rinse blank. One (1) field duplicate pair (PEN43GW05S02D / PEN43GW05S02) is included in this SDG.

All samples were analyzed for target analyte list (TAL) metals. The samples were collected by Tetra Tech NUS on March 24, 2005 and analyzed by Katahdin Analytical Services. Metals analyses except mercury and thallium were conducted using SW-846 method 6010B. Mercury analyses were conducted using SW-846 method 7470A. Thallium analyses were conducted using SW-846 method 6020.

Metals analyses except mercury and thallium were conducted using Inductively Coupled Plasma (ICP) methodologies. Mercury analyses were conducted using Cold Vapor Atomic Absorption (CVAA) methodology. Thallium analyses were conducted using ICP Mass Spectrometry (ICP-MS) methodology.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Recoveries
  • Laboratory Method/Preparation Blank Analyses
* • ICP Interference Analyses
* • Matrix Spike Analyses
* • Laboratory Duplicate Precision
* • Laboratory Control Sample Analyses
* • ICP Serial Dilution Analyses
* • Field Duplicate Precision
* • Detection Limits
* • Analyte Quantitation

* - All quality control criteria were met for this parameter.

Laboratory Blank Analyses

The following contaminants were detected in the laboratory method/preparation blanks at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
Aluminum	154.05 ug/L	770.25 ug/L
Arsenic	3.6 ug/L	18 ug/L
Calcium	72.15 ug/L	360.75 ug/L
Iron	29.09 ug/L	145.45 ug/L
Magnesium	72.31 ug/L	361.55 ug/L
Sodium[1]	215.41 ug/L	1077 ug/L
Thallium[1]	1.956 ug/L	9.78 ug/L
Zinc[1]	6.37 ug/L	31.85 ug/L

[1] Maximum concentration present in preparation blank from batch WVC28ICW2.

An action level of 5X the maximum concentration was used to evaluate the sample data for laboratory blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results below the action level for aluminum, arsenic, iron, thallium, and zinc were qualified as nondetected (U) as a result of laboratory blank contamination. The remaining analytes were not qualified for laboratory blank contamination because the results were either above the action level or they were nondetects.

Notes

Sample PEN43GW02S01 on the chain of custody (COC) did not match the bottle labels, which read PEN43GW02S02. The ID on the bottle labels were used per B. Olson.

Dilutions were performed for thallium in all samples as part of the ICP-MS methodology.

The continuing calibration verification (CCV) standard run on 4/1/05 at 19:59 had a %R >110% for antimony. No qualification action was required because no samples that were analyzed for antimony were associated with this standard.

The contract required detection limit (CRDL) standard run on 3/29/05 at 12:47 had a %R <70% for selenium. No qualification action was required because no samples were associated with this standard.

The CRDL standard run on 4/1/05 at 12:33 had a %R >130% for selenium. No qualification action was required because no samples were associated with this standard.

The matrix spike (MS) had a %R <75% for calcium. No qualification action was required because the initial sample concentration was >4X the spike added.

Executive Summary

Laboratory Performance: Several analytes were present in the laboratory method/preparation blanks.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", July 2002 and the NFESC document entitled "Navy IRCDQM" (September 1999).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Tetra Tech NUS
Ethan G. Lee
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: M

nsample	PEN43GW02S02
samp_date	3/24/2005
lab_id	WV1298-012
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
ALUMINUM	440	U	A
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	29		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	9910		
CHROMIUM	1.6		
COBALT	4.3	U	
COPPER	2.52	U	
IRON	192		
LEAD	2.07	U	
MAGNESIUM	651		
MANGANESE	1.5		
MERCURY	0.02		
NICKEL	11.6	U	
POTASSIUM	1330		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	20100		
THALLIUM	0.25	U	
VANADIUM	5.07	U	
ZINC	12.7	U	A

nsample	PEN43GW05D01
samp_date	3/24/2005
lab_id	WV1298-003
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
ALUMINUM	40.9	U	A
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	17.1		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	6020		
CHROMIUM	1.6		
COBALT	4.3	U	
COPPER	2.52	U	
IRON	1650		
LEAD	2.07	U	
MAGNESIUM	2380		
MANGANESE	28.7		
MERCURY	0.02	U	
NICKEL	11.6	U	
POTASSIUM	1200		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	11600		
THALLIUM	0.43	U	A
VANADIUM	5.07	U	
ZINC	9.1	U	A

nsample	PEN43GW05S02
samp_date	3/24/2005
lab_id	WV1298-004
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
ALUMINUM	20.5	U	
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	55.4		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	25800		
CHROMIUM	2.8		
COBALT	4.3	U	
COPPER	2.52	U	
IRON	8	U	A
LEAD	2.07	U	
MAGNESIUM	1540		
MANGANESE	4.6		
MERCURY	0.02	U	
NICKEL	11.6	U	
POTASSIUM	1100		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	32000		
THALLIUM	0.35	U	A
VANADIUM	5.07	U	
ZINC	36.8		

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: M

nsample	PEN43GW05S02D	nsample	PEN43GW06D01	nsample	PEN43GW06S01
samp_date	3/24/2005	samp_date	3/24/2005	samp_date	3/24/2005
lab_id	WV1298-005	lab_id	WV1298-007	lab_id	WV1298-009
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:	PEN43GW05S02	DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
ALUMINUM	20.5	U	
ANTIMONY	3.54	U	
ARSENIC	4	U	A
BARIUM	55.6		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	25500		
CHROMIUM	3.6		
COBALT	4.3	U	
COPPER	2.52	U	
IRON	11.3	U	A
LEAD	2.07	U	
MAGNESIUM	1530		
MANGANESE	4.6		
MERCURY	0.02	U	
NICKEL	18.2		
POTASSIUM	1080		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	32600		
THALLIUM	0.25	U	
VANADIUM	5.07	U	
ZINC	33.5		

Parameter	Result	Val Qual	Qual Code
ALUMINUM	72.5	U	A
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	31.9		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	4350		
CHROMIUM	3.3		
COBALT	4.3	U	
COPPER	2.52	U	
IRON	1540		
LEAD	2.07	U	
MAGNESIUM	2720		
MANGANESE	24.8		
MERCURY	0.02	U	
NICKEL	11.6	U	
POTASSIUM	1120		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	11200		
THALLIUM	0.25	U	
VANADIUM	5.07	U	
ZINC	14.1	U	A

Parameter	Result	Val Qual	Qual Code
ALUMINUM	40.8	U	A
ANTIMONY	3.54	U	
ARSENIC	2.9	U	A
BARIUM	17		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	15200		
CHROMIUM	2.5		
COBALT	4.3	U	
COPPER	2.52	U	
IRON	4000		
LEAD	2.07	U	
MAGNESIUM	1900		
MANGANESE	204		
MERCURY	0.02	U	
NICKEL	11.6	U	
POTASSIUM	1900		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	9260		
THALLIUM	0.25	U	
VANADIUM	5.07	U	
ZINC	7.6	U	A

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: M

nsample	PEN43GW09S01	nsample	PEN43GW10S01	nsample	PEN43GW11S01
samp_date	3/24/2005	samp_date	3/24/2005	samp_date	3/24/2005
lab_id	WV1298-011	lab_id	WV1298-010	lab_id	WV1298-006
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
ALUMINUM	451	U	A
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	29.7		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	18100		
CHROMIUM	4.5		
COBALT	4.3	U	
COPPER	6		
IRON	2470		
LEAD	2.07	U	
MAGNESIUM	1840		
MANGANESE	15.3		
MERCURY	0.02	U	
NICKEL	14.8		
POTASSIUM	1450		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	6610		
THALLIUM	0.25	U	
VANADIUM	5.07	U	
ZINC	52.8		

Parameter	Result	Val Qual	Qual Code
ALUMINUM	375	U	A
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	18.9		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	20800		
CHROMIUM	2.7		
COBALT	4.3	U	
COPPER	2.52	U	
IRON	2280		
LEAD	2.07	U	
MAGNESIUM	3730		
MANGANESE	12.6		
MERCURY	0.02		
NICKEL	11.6		
POTASSIUM	3300		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	12400		
THALLIUM	0.25	U	
VANADIUM	5.07	U	
ZINC	7.3	U	A

Parameter	Result	Val Qual	Qual Code
ALUMINUM	76.5	U	A
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	40.7		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	24800		
CHROMIUM	2.2		
COBALT	4.3	U	
COPPER	8.1		
IRON	866		
LEAD	4		
MAGNESIUM	2620		
MANGANESE	23.7		
MERCURY	0.02	U	
NICKEL	11.6	U	
POTASSIUM	1430		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	9150		
THALLIUM	0.25	U	
VANADIUM	5.07	U	
ZINC	30	U	A

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: M

nsample	PEN43GW12S01	nsample	PEN43GW13S01	nsample	PEN43MW07S01
samp_date	3/24/2005	samp_date	3/24/2005	samp_date	3/24/2005
lab_id	WV1298-008	lab_id	WV1298-013	lab_id	WV1298-015
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
ALUMINUM	109	U	A
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	75.2		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	56800		
CHROMIUM	1.5		
COBALT	4.3	U	
COPPER	2.52	U	
IRON	31.3	U	A
LEAD	2.07	U	
MAGNESIUM	6580		
MANGANESE	1.5		
MERCURY	0.02		
NICKEL	11.6	U	
POTASSIUM	3620		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	31800		
THALLIUM	0.25	U	
VANADIUM	5.07	U	
ZINC	74		

Parameter	Result	Val Qual	Qual Code
ALUMINUM	152	U	A
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	32.7		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	24200		
CHROMIUM	1.4		
COBALT	4.3	U	
COPPER	10.1		
IRON	125	U	A
LEAD	29.9		
MAGNESIUM	2290		
MANGANESE	7.5		
MERCURY	0.05		
NICKEL	11.6	U	
POTASSIUM	1350		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	20500		
THALLIUM	0.25	U	
VANADIUM	5.07	U	
ZINC	117		

Parameter	Result	Val Qual	Qual Code
ALUMINUM	156	U	A
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	32.6		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	16400		
CHROMIUM	1.8		
COBALT	4.3	U	
COPPER	2.52	U	
IRON	1490		
LEAD	2.07	U	
MAGNESIUM	3600		
MANGANESE	54.8		
MERCURY	0.02		
NICKEL	11.6	U	
POTASSIUM	2350		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	28000		
THALLIUM	3.5	U	A
VANADIUM	5.07	U	
ZINC	18	U	A

PROJ_NO: 4821

SDG: 3555 MEDIA: WATER DATA FRACTION: M

nsample	PEN43MW08S01	nsample	PEN43RB0324
samp_date	3/24/2005	samp_date	3/24/2005
lab_id	WV1298-014	lab_id	WV1298-002
qc_type	NM	qc_type	NM
units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
ALUMINUM	355	U	A
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	30.9		
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	23900		
CHROMIUM	2.4		
COBALT	4.3	U	
COPPER	2.52	U	
IRON	238		
LEAD	2.07	U	
MAGNESIUM	3820		
MANGANESE	29.2		
MERCURY	0.02		
NICKEL	14.3		
POTASSIUM	3170		
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	21400		
THALLIUM	0.25	U	
VANADIUM	5.07	U	
ZINC	8.7	U	A

Parameter	Result	Val Qual	Qual Code
ALUMINUM	20.5	U	
ANTIMONY	3.54	U	
ARSENIC	2.81	U	
BARIUM	0.5	U	
BERYLLIUM	0.4	U	
CADMIUM	2.29	U	
CALCIUM	15.9	U	
CHROMIUM	1.7		
COBALT	4.3	U	
COPPER	2.52	U	
IRON	7.73	U	
LEAD	2.07	U	
MAGNESIUM	33.7	U	
MANGANESE	0.91	U	
MERCURY	0.02		
NICKEL	11.8		
POTASSIUM	621	U	
SELENIUM	4.08	U	
SILVER	3.93	U	
SODIUM	229		
THALLIUM	0.68		
VANADIUM	5.07	U	
ZINC	7.6		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43GW02S02

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-012

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	440			P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	29.0			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	9910			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	1.6	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-89-6	IRON, TOTAL	192			P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	651			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	1.5	I		P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	I		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	11.60	U		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	1330			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	20100			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.25	U		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	12.7	I		P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43GW05D01

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-003

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	40.9	I		P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	17.1			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	6020			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	1.6	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-89-6	IRON, TOTAL	1650			P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	2380			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	28.7			P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	U		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	11.60	U		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	1200			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	11600			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.43	I		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	9.1	I		P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43GW05S02

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-004

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	20.50	U		P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	55.4			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	25800			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	2.8	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-89-6	IRON, TOTAL	8.0	I		P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	1540			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	4.6	I		P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	U		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	11.60	U		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	1100			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	32000			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.35	I		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	36.8			P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43GW05S02D

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-005

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	20.50	U		P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	4.0	I		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	55.6			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	25500			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	3.6	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-89-6	IRON, TOTAL	11.3	I		P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	1530			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	4.6	I		P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	U		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	18.2	I		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	1080			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	32600			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.25	U		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	33.5			P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43GW06D01

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-007

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	72.5	I		P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	31.9			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	4350			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	3.3	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-89-6	IRON, TOTAL	1540			P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	2720			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	24.8			P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	U		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	11.60	U		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	1120			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	11200			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.25	U		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	14.1	I		P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43GW06S01

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-009

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	40.8	I		P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.9	I		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	17.0			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	15200			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	2.5	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-89-6	IRON, TOTAL	4000			P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	1900			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	204			P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	U		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	11.60	U		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	1900			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	9260			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.25	U		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	7.6	I		P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43GW09S01

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-011

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	451			P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	29.7			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	18100			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	4.5	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	6.0	I		P	1	25	2.52
7439-89-6	IRON, TOTAL	2470			P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	1840			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	15.3			P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	U		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	14.8	I		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	1450			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	6610			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.25	U		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	52.8			P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43GW10S01

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-010

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	375			P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	18.9			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	20800			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	2.7	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-89-6	IRON, TOTAL	2280			P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	3730			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	12.6			P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	I		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	11.6	I		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	3300			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	12400			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.25	U		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	7.3	I		P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43GW11S01

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-006

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	76.5	I		P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	40.7			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	24800			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	2.2	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	8.1	I		P	1	25	2.52
7439-89-6	IRON, TOTAL	866			P	1	100	7.73
7439-92-1	LEAD, TOTAL	4.0	I		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	2620			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	23.7			P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	U		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	11.60	U		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	1430			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	9150			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.25	U		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	30.0			P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43GW12S01

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-008

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	109	I		P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	75.2			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	56800			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	1.5	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-89-6	IRON, TOTAL	31.3	I		P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	6580			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	1.5	I		P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	I		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	11.60	U		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	3620			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	31800			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.25	U		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	74.0			P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43GW13S01

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-013

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	152	I		P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	32.7			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	24200			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	1.4	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	10.1	I		P	1	25	2.52
7439-89-6	IRON, TOTAL	125			P	1	100	7.73
7439-92-1	LEAD, TOTAL	29.9			P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	2290			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	7.5			P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.05	I		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	11.60	U		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	1350			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	20500			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.25	U		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	117			P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43MW07S01

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-015

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	156	I		P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	32.6			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	16400			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	1.8	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-89-6	IRON, TOTAL	1490			P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	3600			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	54.8			P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	I		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	11.60	U		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	2350			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	28000			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	3.5	I		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	18.0	I		P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43MW08S01

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-014

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	355			P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	30.9			P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	23900			P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	2.4	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-89-6	IRON, TOTAL	238			P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	3820			P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	29.2			P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	I		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	14.3	I		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	3170			P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	21400			P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.25	U		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	8.7	I		P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

FORM I - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** PEN43RB0324

Matrix: WATER **SDG Name:** CTO355-5

Percent Solids: 0.00 **Lab Sample ID:** WV1298-002

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	Adjusted PQL	Adjusted IDL
7429-90-5	ALUMINUM, TOTAL	20.50	U		P	1	300	20.50
7440-36-0	ANTIMONY, TOTAL	3.54	U		P	1	8.0	3.54
7440-38-2	ARSENIC, TOTAL	2.81	U		P	1	8.0	2.81
7440-39-3	BARIUM, TOTAL	0.50	U		P	1	5.0	0.50
7440-41-7	BERYLLIUM, TOTAL	0.40	U		P	1	5.0	0.40
7440-43-9	CADMIUM, TOTAL	2.29	U		P	1	10	2.29
7440-70-2	CALCIUM, TOTAL	15.90	U		P	1	50	15.90
7440-47-3	CHROMIUM, TOTAL	1.7	I		P	1	15	1.00
7440-48-4	COBALT, TOTAL	4.30	U		P	1	30	4.30
7440-50-8	COPPER, TOTAL	2.52	U		P	1	25	2.52
7439-89-6	IRON, TOTAL	7.73	U		P	1	100	7.73
7439-92-1	LEAD, TOTAL	2.07	U		P	1	5.0	2.07
7439-95-4	MAGNESIUM, TOTAL	33.70	U		P	1	50	33.70
7439-96-5	MANGANESE, TOTAL	0.91	U		P	1	5.0	0.91
7439-97-6	MERCURY, TOTAL	0.02	I		CV	1	0.20	0.02
7440-02-0	NICKEL, TOTAL	11.8	I		P	1	40	11.60
7440-09-7	POTASSIUM, TOTAL	621.00	U		P	1	1000	621.00
7782-49-2	SELENIUM, TOTAL	4.08	U		P	1	10	4.08
7440-22-4	SILVER, TOTAL	3.93	U		P	1	15	3.93
7440-23-5	SODIUM, TOTAL	229	I		P	1	1000	32.10
7440-28-0	THALLIUM, TOTAL	0.68	I		MS	5	15	0.25
7440-62-2	VANADIUM, TOTAL	5.07	U		P	1	25	5.07
7440-66-6	ZINC, TOTAL	7.6	I		P	1	25	1.42

Color Before: N/A Clarity Before: N/A

Color After: N/A Clarity After: N/A

Comments:

APPENDIX C

SUPPORT DOCUMENTATION

HOLDTIME

SDG 3555

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
	UG/L	PEN43GW12S01	WV1298-008	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW02S02	WV1298-012	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43RB0324	WV1298-002	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43MW08S01	WV1298-014	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW13S01	WV1298-013	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW11S01	WV1298-006	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW10S01	WV1298-010	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW09S01	WV1298-011	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW06S01	WV1298-009	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW06D01	WV1298-007	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW05S02D	WV1298-005	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW05S02	WV1298-004	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43GW05D01	WV1298-003	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
	UG/L	PEN43MW07S01	WV1298-015	NM	3/24/2005	3/28/2005	3/31/2005	4	3	7
HG	UG/L	PEN43GW10S01	WV1298-010	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	PEN43GW11S01	WV1298-006	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43RB0324	WV1298-002	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43MW08S01	WV1298-014	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43MW07S01	WV1298-015	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW13S01	WV1298-013	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW05D01	WV1298-003	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW12S01	WV1298-008	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW09S01	WV1298-011	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW02S02	WV1298-012	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW05S02	WV1298-004	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW05S02D	WV1298-005	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
HG	UG/L	PEN43GW06D01	WV1298-007	NM	3/24/2005	4/1/2005	3/30/2005	8	-2	6
HG	UG/L	PEN43GW06S01	WV1298-009	NM	3/24/2005	3/29/2005	3/30/2005	5	1	6
M	UG/L	PEN43GW05D01	WV1298-003	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW09S01	WV1298-011	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
M	UG/L	PEN43GW06D01	WV1298-007	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW09S01	WV1298-011	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW06S01	WV1298-009	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	PEN43GW10S01	WV1298-010	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW06S01	WV1298-009	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW09S01	WV1298-011	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW06D01	WV1298-007	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW05S02D	WV1298-005	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW05S02D	WV1298-005	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW05S02	WV1298-004	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW02S02	WV1298-012	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
M	UG/L	PEN43GW02S02	WV1298-012	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW10S01	WV1298-010	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW05D01	WV1298-003	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW05S02	WV1298-004	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43MW08S01	WV1298-014	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW02S02	WV1298-012	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43RB0324	WV1298-002	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW10S01	WV1298-010	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
M	UG/L	PEN43RB0324	WV1298-002	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43MW08S01	WV1298-014	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	PEN43MW07S01	WV1298-015	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
M	UG/L	PEN43MW07S01	WV1298-015	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW12S01	WV1298-008	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW11S01	WV1298-006	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43MW08S01	WV1298-014	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
M	UG/L	PEN43GW11S01	WV1298-006	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43MW07S01	WV1298-015	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW12S01	WV1298-008	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW13S01	WV1298-013	NM	3/24/2005	3/28/2005	3/29/2005	4	1	5
M	UG/L	PEN43GW13S01	WV1298-013	NM	3/24/2005	3/28/2005	4/1/2005	4	4	8
M	UG/L	PEN43GW13S01	WV1298-013	NM	3/24/2005	3/28/2005	4/4/2005	4	7	11
EDB	%	PEN43GW12S01	WV1298-8	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW05S02D	WV1298-5	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43RB0324	WV1298-2	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43MW08S01	WV1298-14	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43MW07S01	WV1298-15	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW13S01	WV1298-13	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43TB0324	WV1298-1	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EDB	%	PEN43GW10S01	WV1298-10	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW09S01	WV1298-11	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW06D01	WV1298-7	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW05S02	WV1298-4	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW05D01	WV1298-3	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW11S01	WV1298-6	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW02S02	WV1298-12	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	%	PEN43GW06S01	WV1298-9	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW02S02	WV1298-12	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW09S01	WV1298-11	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW06S01	WV1298-9	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW06D01	WV1298-7	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW05S02D	WV1298-5	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW05D01	WV1298-3	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW13S01	WV1298-13	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW05S02	WV1298-4	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW12S01	WV1298-8	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43MW07S01	WV1298-15	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6

WV1298

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2614 | PAGE ____ OF _____

PROJECT NO: N4821	FACILITY: PEW 43 R1	PROJECT MANAGER G. Walker	PHONE NUMBER 850 385 9899	LABORATORY NAME AND CONTACT: Katahdin Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Bill Olson	PHONE NUMBER 850 385 9899	ADDRESS 340 County Rd #5
		CARRIER/WAYBILL NUMBER Fedex 8512 8418 9351		CITY, STATE Westbrook me

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P
PRESERVATIVE USED: HCL HCL HNO3

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: 8260B 8260B TCL VOC	504.1 EDB	6010B TAL metals	COMMENTS
3/24	0730	PEW43TB0324	QA	—	—	QA	G	3	← 3	—		
	0740	PEW43RB0324	QA	—	—	QA	G	6	3 2	1 ✓		
	0939	PEW43GW05D01	mw5D	45	50	GW	G	6	3 2	1 ✓		
	1005	PEW43GW05S02	mw5S	10	20	GW	G	6	3 2	1 ✓		
	1005	PEW43GW05S02D	mw5S	10	20	GW	G	6	3 2	1 ✓		
	1050	PEW43GW11S01	mw11S	15	25	GW	G	6	3 2	1 ✓		
	1132	PEW43GW06D01	mw6D	45	50	GW	G	6	3 2	1 ✓		
	1205	PEW43GW12S01	mw12S	15	25	GW	G	6	3 2	1 ✓		
	1250	PEW43GW06S01	mw6S	15	25	GW	G	6	3 2	1 ✓		
	1310	PEW43GW10S01	mw10S	15	25	GW	G	6	3 2	1 ✓		
	1410	PEW43GW09S01	mw09S	15	25	GW	G	6	3 2	1 ✓		
	1435	PEW43GW02S02	mw02S	15	25	GW	G	6	3 2	1 ✓		
	1537	PEW43GW13S01	MW13S	15	25	GW	G	6	3 2	1 ✓		

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	3/24/05	1745	1. RECEIVED BY	3/25/05	0945
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

9000000

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2609 | PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
N 4821	PEN 43 RI	G. Walker	850 385 9899	Katahdin Andrea Colby
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]		B. H Olson	850 385 9899	340 Co Rd #5
		CARRIER/WAYBILL NUMBER		CITY, STATE
		FEDEX 8512 8418 9351		Westbrook ME

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P
PRESERVATIVE USED: HCL HCL HNO3

DATE YEAR 2005	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TLL VOC	504.1 EDB	6010B metals						COMMENTS
3/24	1510	PEN43MW08S01	MW08	15	25	GW	G	6	3	2	1						
	1510	PEN43MW08SMS	MW08	15	25	GW	G	6	3	2	1						
	1510	PEN43MW08SMSD	MW08	15	25	GW	G	6	3	2	1						
	1630	PEN43MW07S01	MW07S	15	25	GW	G	6	3	2	1						

1. RELINQUISHED BY [signature]	DATE 3/24/05	TIME 1745	1. RECEIVED BY [signature]	DATE 3/25/05	TIME 0845
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

000007

KATAHDIN ANALYTICAL SERVICES, INC.
SAMPLE RECEIPT CONDITION REPORT
Tel. (207) 874-2400
Fax (207) 775-4029

LAB (WORK ORDER) # WV 1298

PAGE: 1 OF 1

COOLER: 1 OF 1

CLIENT: Tetra Tech

PROJECT:

COC#
SDG#
DATE / TIME RECEIVED: 3/25/05 0845
DELIVERED BY: FedEx
RECEIVED BY:
LIMS ENTRY BY:
LIMS REVIEW BY / PM: RC

	YES	NO	EXCEPTIONS	COMMENTS	RESOLUTION
1. CUSTODY SEALS PRESENT / INTACT?	☑	☐	☐		
2. CHAIN OF CUSTODY PRESENT IN THIS COOLER?	☑	☐	☐		
3. CHAIN OF CUSTODY SIGNED BY CLIENT?	☑	☐	☐		
4. CHAIN OF CUSTODY MATCHES SAMPLES?	☐	☒ *	☐		
5. TEMPERATURE BLANKS PRESENT?	☐	☒	☐	TEMP BLANK TEMP (°C)=	
6. SAMPLES RECEIVED AT 4°C +/-2? ICE / ICE PACKS PRESENT Y or N?	☑	☐	☐	COOLER TEMP (°C)= 2.7 NA (RECORD COOLER TEMP ONLY IF TEMP BLANK IS NOT PRESENT)	
7. VOLATILES FREE OF HEADSPACE?	☑	☐	☐		
8. TRIP BLANK PRESENT IN THIS COOLER	☑	☐	☐		
9. PROPER SAMPLE CONTAINERS AND VOLUME?	☑	☐	☐		
10. SAMPLES WITHIN HOLD TIME UPON RECEIPT?	☑	☐	☐		
11. SAMPLES PROPERLY PRESERVED[1]?	☑	☐	☐		
12. CORRECTIVE ACTION REPORT FILED?	☐	☑	N/A		

13. ANALYTICAL PROGRAMS (CIRCLE ONE) COMMERCIAL CLP HAZWRAP (NFESC) ACOE AFCEE OTHER (STATE OF ORIGIN):

LOG - IN NOTES[1]: * - sample "PEN436W02S01" on COC doesn't match label on sample containers "PEN436W02S02".
— Use 02 on 10 per Bill Olsen 3/25/05.
Run 8260 + 504 on Trip Blank per Bill Olsen 3/25/05.

[1] Use this space (and additional sheets if necessary) to document samples that are received broken or compromised, C-O-C discrepancies, radiation checks, residual chlorine check, results of pH check if required. If samples required pH adjustment, record volume and type of preservative added.

000005

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EDB	UG/L	PEN43MW08S01	WV1298-14	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43RB0324	WV1298-2	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43TB0324	WV1298-1	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW11S01	WV1298-6	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
EDB	UG/L	PEN43GW10S01	WV1298-10	NM	3/24/2005	3/30/2005	3/30/2005	6	0	6
OV	%	PEN43GW06D01	WV1298-7	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW02S02	WV1298-12	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	%	PEN43GW05D01	WV1298-3	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW05S02D	WV1298-5	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW06S01	WV1298-9	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW09S01	WV1298-11	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	%	PEN43GW10S01	WV1298-10	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	%	PEN43GW12S01	WV1298-8	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW13S01	WV1298-13	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	%	PEN43MW07S01	WV1298-15	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	%	PEN43MW08S01	WV1298-14	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43RB0324	WV1298-2	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43TB0324	WV1298-1	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	%	PEN43GW11S01	WV1298-6	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	%	PEN43GW05S02	WV1298-4	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW05S02	WV1298-4	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43RB0324	WV1298-2	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43MW08S01	WV1298-14	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43MW07S01	WV1298-15	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	UG/L	PEN43GW13S01	WV1298-13	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	UG/L	PEN43GW12S01	WV1298-8	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW11S01	WV1298-6	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW10S01	WV1298-10	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	UG/L	PEN43GW09S01	WV1298-11	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	UG/L	PEN43GW06S01	WV1298-9	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW05S02D	WV1298-5	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW05D01	WV1298-3	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43TB0324	WV1298-1	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4
OV	UG/L	PEN43GW02S02	WV1298-12	NM	3/24/2005	3/29/2005	3/29/2005	5	0	5
OV	UG/L	PEN43GW06D01	WV1298-7	NM	3/24/2005	3/28/2005	3/28/2005	4	0	4

SDG NARRATIVE
KATAHDIN ANALYTICAL SERVICES
TETRA TECH NUS
CASE CTO 355 NAS PENSACOLA
SDG: CTO355-5

Sample Receipt

The following samples were received on March 25, 2005 and were logged in under Katahdin Analytical Services work order number WV1298 for a hardcopy due date of April 20, 2005.

KATAHDIN Sample No.	TTNUS Sample Identification
WV1298-1	PEN43TB0324
WV1298-2	PEN43RB0324
WV1298-3	PEN43GW05D01
WV1298-4	PEN43GW05S02
WV1298-5	PEN43GW05S02D
WV1298-6	PEN43GW11S01
WV1298-7	PEN43GW06D01
WV1298-8	PEN43GW12S01
WV1298-9	PEN43GW06S01
WV1298-10	PEN43GW10S01
WV1298-11	PEN43GW09S01
WV1298-12	PEN43GW02S02
WV1298-13	PEN43GW13S01
WV1298-14	PEN43MW08S01
WV1298-15	PEN43MW07S01

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Andrea J. Colby**. This narrative is an integral part of the Report of Analysis.

Organics Laboratory

The samples of SDG CTO355-5 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, and III 1996, Office of Solid Waste and Emergency Response,

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U.S. EPA, for the specific methods listed below or on the Report of Analysis. Sample WV1298-14 was used for a matrix spike (MS) and matrix spike duplicate sample (MSD), as per client's request. Some manual integrations may have been performed due to split peaks and/or corrected baselines. All have been flagged with a "M" (software-generated) on the pertinent quantitation reports.

8260B Analysis

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The acceptance limits for the MS/MSD are for a short list of the spiked compounds. Katahdin standard operating procedure is not to take corrective action until greater than ten percent of the spiked analytes (with the exception of the common laboratory contaminants acetone and methylene chloride) in the LCS are outside of the QC limits.

504 Analysis

The opening and closing CV's (files 3VC1270, 3VC2270, 3VC1276, 3VC2276, 3VC1378, 3VC2278) had high responses for the surrogate TCX on both channels, which resulted in %D's that were outside of the method acceptance limit. Since a high response would indicate a high bias and the surrogate recoveries of all of the associated QC samples were within the acceptance limits, the samples were not reanalyzed.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of SDG CTO355-5 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Aqueous Waste", SW-846, November 1986, Third Edition.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP) and Inductively-Coupled Plasma Mass Spectrometric Analysis (ICP-MS)

The aqueous-matrix samples of SDG CTO355-5 were digested for ICP and ICP-MS analysis on 03/28/05 (QC Batch VC28ICW2) in accordance with USEPA Method 3010A. Katahdin Sample No. WV1298-14 was prepared with duplicate matrix-spiked aliquots.

ICP analyses of SDG CTO355-5 sample digestates were performed using a Thermo Jarrell Ash (TJA) Trace ICP spectrometer and a TJA ICAP 61E ICP spectrometer in accordance with USEPA Method 6010B. ICP-MS analyses of SDG CTO355-5 sample digestates for thallium were performed using an Agilent 7500 ICP-MS spectrometer in accordance with USEPA Method 6020. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following comments or exceptions:

Some of the results for analytical run QC samples (ICV, ICB, CCV, CCB, ICSA, and ICSAB) included in the accompanying data package may have exceeded acceptance limits for some elements. Please note that all client samples and batch QC samples associated with out-of-control results for run QC samples were subsequently reanalyzed for the analytes in question.

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Analysis of Mercury by Cold Vapor Atomic Absorption (CVAA)

The aqueous-matrix samples of SDG CTO355-5 were digested for mercury analysis on 03/29/05 (QC Batch VC29HGW0) in accordance with USEPA Method 7470A. Katahdin Sample No. WV1298-14 was prepared with duplicate matrix-spiked aliquots.

Mercury analyses of SDG CTO355-5 sample digestates were performed using a Cetac M6100 automated mercury analyzer. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The recoveries of all analytes in the matrix-spiked aliquots of Katahdin Sample No. WV1298-14 are within the laboratory's acceptance limits (75% - 125% recovery of the added element, if the native concentration is less than four times the amount added).

The matrix-spike duplicate analysis of Katahdin Sample No. WV1298-14 is within the laboratory's acceptance limit (<20% relative difference between duplicate matrix-spiked aliquots) for all analytes.

The serial dilution analysis of Katahdin Sample No. WV1298-14 is within the laboratory's acceptance limit (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the IDL) for all analytes.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Operations Manager or the Quality Assurance Officer as verified by the following signature.

Leslie Dimond
041405

Leslie Dimond
Quality Assurance Officer

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: CTO355-5 **SOW No.** SW846

Client Field ID	Lab Sample ID
PEN43GW02S02	WV1298-012
PEN43GW05D01	WV1298-003
PEN43GW05S02	WV1298-004
PEN43GW05S02D	WV1298-005
PEN43GW06D01	WV1298-007
PEN43GW06S01	WV1298-009
PEN43GW09S01	WV1298-011
PEN43GW10S01	WV1298-010
PEN43GW11S01	WV1298-006
PEN43GW12S01	WV1298-008
PEN43GW13S01	WV1298-013
PEN43MW07S01	WV1298-015
PEN43MW08S01	WV1298-014
PEN43MW08S01	WV1298-014P
PEN43MW08S01	WV1298-014S
PEN43RB0324	WV1298-002

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Edward A. Morgan Name: Edward A. Morgan

Date: April 13, 2005 Title: Senior Chemist

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
J	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
J	Spiked sample recovery not within control limits.
J	Duplicate sample analysis not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected in the sample at a level greater than the instrument detection limit.
I	The analyte was detected in the sample at a concentration greater than the instrument detection limit, but less than the laboratory's Practical Quantitation Level.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICV

File: AVC29A Mar 29, 2005 12:26

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19107.69	95.5
ANTIMONY	600.0	569.60	94.9
ARSENIC	600.0	624.95	104.2
CALCIUM	20000.0	20564.54	102.8
CHROMIUM	500.0	495.20	99.0
IRON	20000.0	20445.90	102.2
LEAD	550.0	560.28	101.9
MAGNESIUM	20000.0	21133.80	105.7
SELENIUM	550.0	537.10	97.7

SAMPLE: CCV

File: AVC29A Mar 29, 2005 13:08

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49394.36	98.8
ANTIMONY	1000.0	1018.35	101.8
ARSENIC	1000.0	1031.73	103.2
CALCIUM	50000.0	51410.48	102.8
CHROMIUM	1000.0	1010.54	101.1
IRON	20000.0	20412.08	102.1
LEAD	1000.0	1024.68	102.5
MAGNESIUM	50000.0	51892.89	103.8
SELENIUM	1000.0	1017.17	101.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 14:35

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49350.44	98.7
ANTIMONY	1000.0	1039.44	103.9
ARSENIC	1000.0	1053.48	105.3
CALCIUM	50000.0	51568.38	103.1
CHROMIUM	1000.0	1025.84	102.6
IRON	20000.0	20497.03	102.5
LEAD	1000.0	1034.44	103.4
MAGNESIUM	50000.0	51927.07	103.9
SELENIUM	1000.0	1030.22	103.0

SAMPLE: CCV

File: AVC29A Mar 29, 2005 14:58

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49032.66	98.1
ANTIMONY	1000.0	1020.27	102.0
ARSENIC	1000.0	1032.99	103.3
CALCIUM	50000.0	50323.05	100.6
CHROMIUM	1000.0	1003.85	100.4
IRON	20000.0	20058.16	100.3
LEAD	1000.0	1008.07	100.8
MAGNESIUM	50000.0	50645.76	101.3
SELENIUM	1000.0	1002.29	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 16:26

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50127.84	100.3
ANTIMONY	1000.0	1048.10	104.8
ARSENIC	1000.0	1065.33	106.5
CALCIUM	50000.0	51749.40	103.5
CHROMIUM	1000.0	1039.39	103.9
IRON	20000.0	20605.65	103.0
LEAD	1000.0	1031.14	103.1
MAGNESIUM	50000.0	51887.26	103.8
SELENIUM	1000.0	1030.58	103.1

SAMPLE: CCV

File: AVC29A Mar 29, 2005 17:51

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49582.00	99.2
ANTIMONY	1000.0	1047.32	104.7
ARSENIC	1000.0	1067.78	106.8
CALCIUM	50000.0	51343.10	102.7
CHROMIUM	1000.0	1037.38	103.7
IRON	20000.0	20532.77	102.7
LEAD	1000.0	1031.31	103.1
MAGNESIUM	50000.0	51435.95	102.9
SELENIUM	1000.0	1028.21	102.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 19:15

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49530.15	99.1
ANTIMONY	1000.0	1059.63	106.0
ARSENIC	1000.0	1089.26	108.9
CALCIUM	50000.0	51539.16	103.1
CHROMIUM	1000.0	1045.67	104.6
IRON	20000.0	20636.52	103.2
LEAD	1000.0	1042.34	104.2
MAGNESIUM	50000.0	51664.58	103.3
SELENIUM	1000.0	1048.33	104.8

SAMPLE: CCV

File: AVC29A Mar 29, 2005 20:40

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49662.82	99.3
ANTIMONY	1000.0	1060.13	106.0
ARSENIC	1000.0	1087.99	108.8
CALCIUM	50000.0	51625.40	103.3
CHROMIUM	1000.0	1045.77	104.6
IRON	20000.0	20607.18	103.0
LEAD	1000.0	1039.44	103.9
MAGNESIUM	50000.0	51659.52	103.3
SELENIUM	1000.0	1038.86	103.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: AVC29A Mar 29, 2005 22:04

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50498.02	101.0
ANTIMONY	1000.0	1078.33	107.8
ARSENIC	1000.0	1092.69	109.3
CALCIUM	50000.0	52570.93	105.1
CHROMIUM	1000.0	1067.30	106.7
IRON	20000.0	21035.96	105.2
LEAD	1000.0	1057.34	105.7
MAGNESIUM	50000.0	52575.08	105.2
SELENIUM	1000.0	1056.69	105.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICV

File: AVD01A Apr 01, 2005 12:12

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	18453.53	92.3
ANTIMONY	600.0	586.93	97.8
ARSENIC	600.0	594.58	99.1
CALCIUM	20000.0	20112.93	100.6
CHROMIUM	500.0	486.64	97.3
IRON	20000.0	19771.91	98.9
LEAD	550.0	531.38	96.6
MAGNESIUM	20000.0	20675.61	103.4
SELENIUM	550.0	536.57	97.6

SAMPLE: CCV

File: AVD01A Apr 01, 2005 12:54

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48421.53	96.8
ANTIMONY	1000.0	1082.56	108.3
ARSENIC	1000.0	1023.45	102.3
CALCIUM	50000.0	50858.46	101.7
CHROMIUM	1000.0	1015.83	101.6
IRON	20000.0	19979.99	99.9
LEAD	1000.0	1002.26	100.2
MAGNESIUM	50000.0	51207.23	102.4
SELENIUM	1000.0	1036.76	103.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: AVD01A Apr 01, 2005 14:19

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48888.35	97.8
ANTIMONY	1000.0	1095.04	109.5
ARSENIC	1000.0	1038.93	103.9
CALCIUM	50000.0	50821.11	101.6
CHROMIUM	1000.0	1029.00	102.9
IRON	20000.0	19989.11	99.9
LEAD	1000.0	1004.03	100.4
MAGNESIUM	50000.0	50921.83	101.8
SELENIUM	1000.0	1043.94	104.4

SAMPLE: CCV

File: AVD01A Apr 01, 2005 15:45

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48649.21	97.3
ANTIMONY	1000.0	1085.74	108.6
ARSENIC	1000.0	1040.32	104.0
CALCIUM	50000.0	50491.03	101.0
CHROMIUM	1000.0	1028.41	102.8
IRON	20000.0	19886.03	99.4
LEAD	1000.0	995.38	99.5
MAGNESIUM	50000.0	50535.09	101.1
SELENIUM	1000.0	1035.34	103.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: AVD01A Apr 01, 2005 17:10

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48586.17	97.2
ANTIMONY	1000.0	1100.12	110.0
ARSENIC	1000.0	1053.10	105.3
CALCIUM	50000.0	50502.94	101.0
CHROMIUM	1000.0	1035.66	103.6
IRON	20000.0	19910.32	99.6
LEAD	1000.0	1002.76	100.3
MAGNESIUM	50000.0	50507.38	101.0
SELENIUM	1000.0	1043.73	104.4

SAMPLE: CCV

File: AVD01A Apr 01, 2005 18:34

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48433.73	96.9
ANTIMONY	1000.0	1100.88	110.1
ARSENIC	1000.0	1045.75	104.6
CALCIUM	50000.0	50492.01	101.0
CHROMIUM	1000.0	1030.56	103.1
IRON	20000.0	19835.30	99.2
LEAD	1000.0	1005.32	100.5
MAGNESIUM	50000.0	50495.91	101.0
SELENIUM	1000.0	1046.58	104.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: AVD01A Apr 01, 2005 19:59

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49501.01	99.0
ANTIMONY	1000.0	1113.55	111.4
ARSENIC	1000.0	1060.58	106.1
CALCIUM	50000.0	51465.45	102.9
CHROMIUM	1000.0	1052.70	105.3
IRON	20000.0	20208.40	101.0
LEAD	1000.0	1015.38	101.5
MAGNESIUM	50000.0	51358.19	102.7
SELENIUM	1000.0	1052.86	105.3

SAMPLE: CCV

File: AVD01A Apr 01, 2005 21:23

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48657.60	97.3
ANTIMONY	1000.0	1100.04	110.0
ARSENIC	1000.0	1057.33	105.7
CALCIUM	50000.0	50304.49	100.6
CHROMIUM	1000.0	1036.97	103.7
IRON	20000.0	19879.46	99.4
LEAD	1000.0	997.62	99.8
MAGNESIUM	50000.0	50181.70	100.4
SELENIUM	1000.0	1043.66	104.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICV

File: AVD04A Apr 04, 2005 12:55

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	18403.32	92.0
ANTIMONY	600.0	587.65	97.9
CALCIUM	20000.0	20042.02	100.2
IRON	20000.0	19798.95	99.0
MAGNESIUM	20000.0	20660.35	103.3

SAMPLE: CCV

File: AVD04A Apr 04, 2005 13:38

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47690.70	95.4
ANTIMONY	1000.0	1042.57	104.3
CALCIUM	50000.0	49723.87	99.4
IRON	20000.0	19678.60	98.4
MAGNESIUM	50000.0	50075.39	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: AVD04A Apr 04, 2005 14:49

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47316.83	94.6
ANTIMONY	1000.0	1037.81	103.8
CALCIUM	50000.0	49533.03	99.1
IRON	20000.0	19535.13	97.7
MAGNESIUM	50000.0	49577.52	99.2

SAMPLE: CCV

File: AVD04A Apr 04, 2005 16:13

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	46204.63	92.4
ANTIMONY	1000.0	941.73	94.2
CALCIUM	50000.0	48082.63	96.2
IRON	20000.0	18921.28	94.6
MAGNESIUM	50000.0	47729.62	95.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: AVD04A Apr 04, 2005 17:37

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	48256.05	96.5
ANTIMONY	1000.0	996.60	99.7
CALCIUM	50000.0	49340.22	98.7
IRON	20000.0	19575.20	97.9
MAGNESIUM	50000.0	48596.64	97.2

SAMPLE: CCV

File: AVD04A Apr 04, 2005 19:02

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	47889.12	95.8
ANTIMONY	1000.0	998.01	99.8
CALCIUM	50000.0	48927.20	97.9
IRON	20000.0	19445.57	97.2
MAGNESIUM	50000.0	47991.50	96.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICV

File: BVC28A Mar 28, 2005 13:29

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19774.97	98.9
BARIUM	500.0	500.89	100.2
BERYLLIUM	500.0	483.97	96.8
CADMIUM	1250.0	1230.41	98.4
CALCIUM	20000.0	19512.29	97.6
COBALT	500.0	516.17	103.2
COPPER	500.0	476.57	95.3
IRON	20000.0	20337.30	101.7
MAGNESIUM	20000.0	19459.55	97.3
MANGANESE	500.0	496.09	99.2
NICKEL	1000.0	1023.25	102.3
POTASSIUM	20000.0	19561.19	97.8
SILVER	200.0	197.75	98.9
SODIUM	20000.0	20095.14	100.5
VANADIUM	500.0	510.98	102.2
ZINC	1000.0	968.50	96.9

SAMPLE: CCV

File: BVC28A Mar 28, 2005 14:03

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49920.08	99.8
BARIUM	1000.0	1008.53	100.9
BERYLLIUM	1000.0	1019.08	101.9
CADMIUM	1000.0	1000.69	100.1
CALCIUM	50000.0	49782.82	99.6
COBALT	1000.0	1004.70	100.5
COPPER	1000.0	971.53	97.2
IRON	20000.0	20325.79	101.6
MAGNESIUM	50000.0	49745.14	99.5
MANGANESE	1000.0	1004.16	100.4
NICKEL	1000.0	1017.70	101.8
POTASSIUM	50000.0	49511.09	99.0
SILVER	250.0	248.78	99.5
SODIUM	50000.0	50617.38	101.2
VANADIUM	1000.0	1013.30	101.3
ZINC	1000.0	1007.16	100.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: BVC28A Mar 28, 2005 14:43

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49970.51	99.9
BARIUM	1000.0	1006.76	100.7
BERYLLIUM	1000.0	1014.91	101.5
CADMIUM	1000.0	997.46	99.7
CALCIUM	50000.0	49538.16	99.1
COBALT	1000.0	1001.85	100.2
COPPER	1000.0	975.26	97.5
IRON	20000.0	20213.67	101.1
MAGNESIUM	50000.0	49684.63	99.4
MANGANESE	1000.0	1000.03	100.0
NICKEL	1000.0	1017.19	101.7
POTASSIUM	50000.0	49982.07	100.0
SILVER	250.0	251.77	100.7
SODIUM	50000.0	50691.16	101.4
VANADIUM	1000.0	1010.66	101.1
ZINC	1000.0	1007.70	100.8

SAMPLE: CCV

File: BVC28A Mar 28, 2005 15:29

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50078.65	100.2
BARIUM	1000.0	1016.26	101.6
BERYLLIUM	1000.0	1012.29	101.2
CADMIUM	1000.0	999.32	99.9
CALCIUM	50000.0	49511.24	99.0
COBALT	1000.0	997.79	99.8
COPPER	1000.0	976.13	97.6
IRON	20000.0	20188.38	100.9
MAGNESIUM	50000.0	49736.77	99.5
MANGANESE	1000.0	998.40	99.8
NICKEL	1000.0	1011.25	101.1
POTASSIUM	50000.0	50353.35	100.7
SILVER	250.0	250.01	100.0
SODIUM	50000.0	51840.49	103.7
VANADIUM	1000.0	1010.82	101.1
ZINC	1000.0	1006.23	100.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: BVC28A Mar 28, 2005 16:45

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	50181.31	100.4
BARIUM	1000.0	1011.81	101.2
BERYLLIUM	1000.0	1026.77	102.7
CADMIUM	1000.0	1016.83	101.7
CALCIUM	50000.0	50531.05	101.1
COBALT	1000.0	1014.78	101.5
COPPER	1000.0	975.91	97.6
IRON	20000.0	20497.97	102.5
MAGNESIUM	50000.0	50220.14	100.4
MANGANESE	1000.0	1010.78	101.1
NICKEL	1000.0	1036.70	103.7
POTASSIUM	50000.0	49655.31	99.3
SILVER	250.0	252.93	101.2
SODIUM	50000.0	50722.58	101.4
VANADIUM	1000.0	1018.81	101.9
ZINC	1000.0	1015.06	101.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICV

File: BVC29A Mar 29, 2005 13:28

Analyte	True	Found	%R (1)
ALUMINUM	20000.0	19708.90	98.5
BARIUM	500.0	500.03	100.0
BERYLLIUM	500.0	486.99	97.4
CADMIUM	1250.0	1229.63	98.4
CALCIUM	20000.0	19707.35	98.5
COBALT	500.0	515.10	103.0
COPPER	500.0	475.03	95.0
IRON	20000.0	20332.33	101.7
MAGNESIUM	20000.0	19498.19	97.5
MANGANESE	500.0	498.36	99.7
NICKEL	1000.0	1027.62	102.8
POTASSIUM	20000.0	19489.28	97.4
SILVER	200.0	194.58	97.3
SODIUM	20000.0	20086.14	100.4
VANADIUM	500.0	509.26	101.9
ZINC	1000.0	970.08	97.0

SAMPLE: CCV

File: BVC29A Mar 29, 2005 14:02

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49560.88	99.1
BARIUM	1000.0	1010.40	101.0
BERYLLIUM	1000.0	1026.33	102.6
CADMIUM	1000.0	993.83	99.4
CALCIUM	50000.0	50154.91	100.3
COBALT	1000.0	1015.18	101.5
COPPER	1000.0	967.39	96.7
IRON	20000.0	20257.66	101.3
MAGNESIUM	50000.0	49689.17	99.4
MANGANESE	1000.0	1010.88	101.1
NICKEL	1000.0	1023.09	102.3
POTASSIUM	50000.0	49828.61	99.7
SILVER	250.0	250.27	100.1
SODIUM	50000.0	50290.01	100.6
VANADIUM	1000.0	1013.62	101.4
ZINC	1000.0	1011.83	101.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: BVC29A Mar 29, 2005 14:55

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49580.44	99.2
BARIUM	1000.0	1010.61	101.1
BERYLLIUM	1000.0	1019.97	102.0
CADMIUM	1000.0	986.05	98.6
CALCIUM	50000.0	49158.79	98.3
COBALT	1000.0	992.96	99.3
COPPER	1000.0	981.40	98.1
IRON	20000.0	19977.76	99.9
MAGNESIUM	50000.0	49370.69	98.7
MANGANESE	1000.0	1000.71	100.1
NICKEL	1000.0	1023.46	102.3
POTASSIUM	50000.0	49721.32	99.4
SILVER	250.0	247.37	98.9
SODIUM	50000.0	51457.09	102.9
VANADIUM	1000.0	1004.77	100.5
ZINC	1000.0	1005.36	100.5

SAMPLE: CCV

File: BVC29A Mar 29, 2005 15:28

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49383.59	98.8
BARIUM	1000.0	1007.83	100.8
BERYLLIUM	1000.0	1020.05	102.0
CADMIUM	1000.0	981.14	98.1
CALCIUM	50000.0	49358.92	98.7
COBALT	1000.0	995.31	99.5
COPPER	1000.0	966.90	96.7
IRON	20000.0	19951.40	99.8
MAGNESIUM	50000.0	49202.67	98.4
MANGANESE	1000.0	1003.05	100.3
NICKEL	1000.0	1011.50	101.2
POTASSIUM	50000.0	48830.39	97.7
SILVER	250.0	247.17	98.9
SODIUM	50000.0	50761.82	101.5
VANADIUM	1000.0	1004.42	100.4
ZINC	1000.0	1004.17	100.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: BVC29A Mar 29, 2005 16:36

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49966.68	99.9
BARIUM	1000.0	1015.88	101.6
BERYLLIUM	1000.0	1023.25	102.3
CADMIUM	1000.0	996.89	99.7
CALCIUM	50000.0	49562.93	99.1
COBALT	1000.0	998.23	99.8
COPPER	1000.0	976.06	97.6
IRON	20000.0	20075.89	100.4
MAGNESIUM	50000.0	49695.25	99.4
MANGANESE	1000.0	1010.62	101.1
NICKEL	1000.0	1010.86	101.1
POTASSIUM	50000.0	49796.52	99.6
SILVER	250.0	248.68	99.5
SODIUM	50000.0	52047.41	104.1
VANADIUM	1000.0	1005.72	100.6
ZINC	1000.0	1013.41	101.3

SAMPLE: CCV

File: BVC29A Mar 29, 2005 17:44

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49444.61	98.9
BARIUM	1000.0	1005.19	100.5
BERYLLIUM	1000.0	1019.67	102.0
CADMIUM	1000.0	987.02	98.7
CALCIUM	50000.0	49394.22	98.8
COBALT	1000.0	983.61	98.4
COPPER	1000.0	965.35	96.5
IRON	20000.0	19813.23	99.1
MAGNESIUM	50000.0	49248.68	98.5
MANGANESE	1000.0	1008.40	100.8
NICKEL	1000.0	1004.87	100.5
POTASSIUM	50000.0	48679.97	97.4
SILVER	250.0	246.45	98.6
SODIUM	50000.0	52217.99	104.4
VANADIUM	1000.0	1001.92	100.2
ZINC	1000.0	1003.20	100.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: BVC29A Mar 29, 2005 18:12

Analyte	True	Found	%R (1)
ALUMINUM	50000.0	49453.30	98.9
BARIUM	1000.0	1003.06	100.3
BERYLLIUM	1000.0	1018.18	101.8
CADMIUM	1000.0	982.02	98.2
CALCIUM	50000.0	48993.19	98.0
COBALT	1000.0	980.74	98.1
COPPER	1000.0	966.10	96.6
IRON	20000.0	19873.14	99.4
MAGNESIUM	50000.0	49338.70	98.7
MANGANESE	1000.0	1003.43	100.3
NICKEL	1000.0	1014.20	101.4
POTASSIUM	50000.0	48982.51	98.0
SILVER	250.0	247.12	98.8
SODIUM	50000.0	52249.59	104.5
VANADIUM	1000.0	999.50	100.0
ZINC	1000.0	1005.21	100.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICV

File: FVC31C Mar 31, 2005 17:43

Analyte	True	Found	%R (1)
ALUMINUM	400.0	411.80	103.0
CALCIUM	4000.0	4084.00	102.1
IRON	4000.0	4078.00	102.0
MAGNESIUM	4000.0	3966.00	99.2
MOLYBDENUM	40.0	38.03	95.1
POTASSIUM	4000.0	4077.00	101.9
SODIUM	4000.0	3939.00	98.5
THALLIUM	20.0	18.73	93.7

SAMPLE: CCV

File: FVC31C Mar 31, 2005 18:53

Analyte	True	Found	%R (1)
ALUMINUM	500.0	505.80	101.2
CALCIUM	5000.0	5065.00	101.3
IRON	5000.0	4850.00	97.0
MAGNESIUM	5000.0	5004.00	100.1
MOLYBDENUM	25.0	26.54	106.2
POTASSIUM	5000.0	5096.00	101.9
SODIUM	5000.0	4978.00	99.6
THALLIUM	25.0	24.54	98.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: FVC31C Mar 31, 2005 19:08

Analyte	True	Found	%R (1)
ALUMINUM	500.0	507.20	101.4
CALCIUM	5000.0	5107.00	102.1
IRON	5000.0	4877.00	97.5
MAGNESIUM	5000.0	5097.00	101.9
MOLYBDENUM	25.0	25.10	100.4
POTASSIUM	5000.0	5145.00	102.9
SODIUM	5000.0	5079.00	101.6
THALLIUM	25.0	24.66	98.6

SAMPLE: CCV

File: FVC31C Mar 31, 2005 20:41

Analyte	True	Found	%R (1)
ALUMINUM	500.0	485.70	97.1
CALCIUM	5000.0	5037.00	100.7
IRON	5000.0	4864.00	97.3
MAGNESIUM	5000.0	4894.00	97.9
MOLYBDENUM	25.0	24.26	97.0
POTASSIUM	5000.0	4996.00	99.9
SODIUM	5000.0	4951.00	99.0
THALLIUM	25.0	24.71	98.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: FVC31C Mar 31, 2005 22:14

Analyte	True	Found	%R (1)
ALUMINUM	500.0	497.50	99.5
CALCIUM	5000.0	5049.00	101.0
IRON	5000.0	4924.00	98.5
MAGNESIUM	5000.0	4996.00	99.9
MOLYBDENUM	25.0	24.18	96.7
POTASSIUM	5000.0	5105.00	102.1
SODIUM	5000.0	5060.00	101.2
THALLIUM	25.0	24.42	97.7

SAMPLE: CCV

File: FVC31C Mar 31, 2005 23:39

Analyte	True	Found	%R (1)
ALUMINUM	500.0	546.20	109.2
CALCIUM	5000.0	5226.00	104.5
IRON	5000.0	4844.00	96.9
MAGNESIUM	5000.0	5260.00	105.2
MOLYBDENUM	25.0	31.84	~~127.4~~
POTASSIUM	5000.0	5285.00	105.7
SODIUM	5000.0	5241.00	104.8
THALLIUM	25.0	25.73	102.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICV

File: HVC30A Mar 30, 2005 9:49

Analyte	True	Found	%R (1)
MERCURY	6.0	6.14	102.3

SAMPLE: CCV

File: HVC30A Mar 30, 2005 10:14

Analyte	True	Found	%R (1)
MERCURY	5.0	5.27	105.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: HVC30A Mar 30, 2005 10:57

Analyte	True	Found	%R (1)
MERCURY	5.0	4.38	87.6

SAMPLE: CCV

File: HVC30A Mar 30, 2005 11:08

Analyte	True	Found	%R (1)
MERCURY	5.0	4.21	84.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICV

File: HVD02B Apr 02, 2005 12:20

Analyte	True	Found	%R (1)
MERCURY	6.0	6.14	102.3

SAMPLE: CCV

File: HVD02B Apr 02, 2005 12:46

Analyte	True	Found	%R (1)
MERCURY	5.0	5.24	104.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCV

File: HVD02B Apr 02, 2005 13:11

Analyte	True	Found	%R (1)
MERCURY	5.0	5.31	106.2

SAMPLE: CCV

File: HVD02B Apr 02, 2005 13:26

Analyte	True	Found	%R (1)
MERCURY	5.0	5.27	105.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CRI

File: AVC29A Mar 29, 2005 12:47

Analyte	TRUE	FOUND	% R
ANTIMONY	120.0	115.11	95.9
ARSENIC	20.0	18.65	93.2
CHROMIUM	20.0	19.49	97.4
LEAD	6.0	6.92	115.3
SELENIUM	10.0	4.37	43.7 *

SAMPLE: CRI

File: AVC29A Mar 29, 2005 17:30

Analyte	TRUE	FOUND	% R
ANTIMONY	120.0	115.05	95.9
ARSENIC	20.0	21.33	106.7
CHROMIUM	20.0	19.19	96.0
LEAD	6.0	7.14	119.0
SELENIUM	10.0	9.63	96.3

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CRI

File: AVD01A Apr 01, 2005 12:33

Analyte	TRUE	FOUND	% R
ANTIMONY	120.0	122.55	102.1
ARSENIC	20.0	22.83	114.1
CHROMIUM	20.0	19.79	98.9
LEAD	6.0	5.72	95.3
SELENIUM	10.0	16.01	160.1 *

SAMPLE: CRI

File: AVD01A Apr 01, 2005 16:49

Analyte	TRUE	FOUND	% R
ANTIMONY	120.0	125.41	104.5
ARSENIC	20.0	22.15	110.8
CHROMIUM	20.0	20.60	103.0
LEAD	6.0	6.51	108.5
SELENIUM	10.0	9.41	94.1

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWVC28ICW2

Matrix: WATER **SDG Name:** CTO355-5

QC Batch ID: VC28ICW2

Concentration Units : ug/L

Analyte	RESULT	C
ALUMINUM	20.500	U
ANTIMONY	3.540	U
ARSENIC	2.810	U
BARIUM	0.500	U
BERYLLIUM	0.400	U
CADMIUM	2.290	U
CALCIUM	15.900	U
CHROMIUM	1.000	U
COBALT	4.300	U
COPPER	2.520	U
IRON	7.730	U
LEAD	2.070	U
MAGNESIUM	33.700	U
MANGANESE	0.910	U
NICKEL	11.600	U
POTASSIUM	621.000	U
SELENIUM	4.080	U
SILVER	3.930	U
SODIUM	215.410	I
THALLIUM	1.956	I
VANADIUM	5.070	U
ZINC	6.370	I

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWVC29HGW0

Matrix: WATER **SDG Name:** CTO355-5

QC Batch ID: VC29HGW0

Concentration Units : ug/L

Analyte	RESULT	C
MERCURY	0.020	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICB

File: AVC29A Mar 29, 2005 12:33

Analyte	Result	C
ALUMINUM	14.60	U
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	7.24	U
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.60	I
SELENIUM	4.08	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 13:15

Analyte	Result	C
ALUMINUM	14.60	U
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-9.10	I
CHROMIUM	-3.34	I
IRON	-39.10	I
LEAD	2.07	U
MAGNESIUM	-22.14	I
SELENIUM	4.08	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 14:42

Analyte	Result	C
ALUMINUM	54.58	I
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-15.12	I
CHROMIUM	-1.09	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCB

File: AVC29A Mar 29, 2005 15:05

Analyte	Result	C
ALUMINUM	44.85	I
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-10.50	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.89	I
SELENIUM	4.08	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 16:33

Analyte	Result	C
ALUMINUM	57.73	I
ANTIMONY	3.54	U
ARSENIC	-3.16	I
CALCIUM	-12.59	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	9.73	I
SELENIUM	4.08	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 17:58

Analyte	Result	C
ALUMINUM	64.38	I
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-20.41	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCB

File: AVC29A Mar 29, 2005 19:22

Analyte	Result	C
ALUMINUM	87.47	I
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-24.59	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 20:47

Analyte	Result	C
ALUMINUM	81.84	I
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-21.02	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

SAMPLE: CCB

File: AVC29A Mar 29, 2005 22:11

Analyte	Result	C
ALUMINUM	82.82	I
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-22.76	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICB

File: AVD01A Apr 01, 2005 12:19

Analyte	Result	C
ALUMINUM	14.60	U
ANTIMONY	3.54	U
ARSENIC	3.33	I
CALCIUM	7.24	U
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

SAMPLE: CCB

File: AVD01A Apr 01, 2005 13:01

Analyte	Result	C
ALUMINUM	26.12	I
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-11.06	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

SAMPLE: CCB

File: AVD01A Apr 01, 2005 14:26

Analyte	Result	C
ALUMINUM	53.00	I
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-17.06	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCB

File: AVD01A Apr 01, 2005 15:52

Analyte	Result	C
ALUMINUM	70.31	I
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-21.51	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

SAMPLE: CCB

File: AVD01A Apr 01, 2005 17:17

Analyte	Result	C
ALUMINUM	60.22	I
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-25.06	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

SAMPLE: CCB

File: AVD01A Apr 01, 2005 18:41

Analyte	Result	C
ALUMINUM	71.38	I
ANTIMONY	3.54	U
ARSENIC	2.81	U
CALCIUM	-27.78	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCB

File: AVD01A Apr 01, 2005 20:06

Analyte	Result	C
ALUMINUM	68.76	I
ANTIMONY	3.54	U
ARSENIC	3.60	I
CALCIUM	-26.03	I
CHROMIUM	-1.13	I
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	7.99	U
SELENIUM	4.08	U

SAMPLE: CCB

File: AVD01A Apr 01, 2005 21:30

Analyte	Result	C
ALUMINUM	74.18	I
ANTIMONY	3.54	U
ARSENIC	3.35	I
CALCIUM	-29.28	I
CHROMIUM	1.00	U
IRON	21.40	U
LEAD	2.07	U
MAGNESIUM	8.79	I
SELENIUM	4.08	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICB

File: AVD04A Apr 04, 2005 13:02

Analyte	Result	C
ALUMINUM	14.60	U
ANTIMONY	3.54	U
CALCIUM	7.24	U
IRON	21.40	U
MAGNESIUM	12.71	I

SAMPLE: CCB

File: AVD04A Apr 04, 2005 13:45

Analyte	Result	C
ALUMINUM	29.74	I
ANTIMONY	3.54	U
CALCIUM	-11.80	I
IRON	21.40	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVD04A Apr 04, 2005 14:56

Analyte	Result	C
ALUMINUM	47.31	I
ANTIMONY	3.54	U
CALCIUM	-17.54	I
IRON	21.40	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCB

File: AVD04A Apr 04, 2005 16:20

Analyte	Result	C
ALUMINUM	86.15	I
ANTIMONY	3.54	U
CALCIUM	-25.74	I
IRON	21.40	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVD04A Apr 04, 2005 17:44

Analyte	Result	C
ALUMINUM	123.11	I
ANTIMONY	3.54	U
CALCIUM	-30.83	I
IRON	21.40	U
MAGNESIUM	7.99	U

SAMPLE: CCB

File: AVD04A Apr 04, 2005 19:09

Analyte	Result	C
ALUMINUM	154.05	I
ANTIMONY	3.54	U
CALCIUM	-39.12	I
IRON	21.40	U
MAGNESIUM	7.99	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICB

File: BVC28A Mar 28, 2005 13:35

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	2.29	U
CALCIUM	15.90	U
COBALT	4.30	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	33.70	U
MANGANESE	0.91	U
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 14:09

Analyte	Result	C
ALUMINUM	55.95	I
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	2.29	U
CALCIUM	53.97	
COBALT	4.30	U
COPPER	2.52	U
IRON	29.09	I
MAGNESIUM	59.56	
MANGANESE	0.91	U
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 14:48

Analyte	Result	C
ALUMINUM	33.07	I
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	2.29	U
CALCIUM	20.34	I
COBALT	4.30	U
COPPER	2.52	U
IRON	16.83	I
MAGNESIUM	36.09	I
MANGANESE	0.91	U
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCB

File: BVC28A Mar 28, 2005 15:35

Analyte	Result	C
ALUMINUM	22.28	I
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	2.29	U
CALCIUM	15.90	U
COBALT	4.30	U
COPPER	2.52	U
IRON	12.65	I
MAGNESIUM	34.94	I
MANGANESE	0.91	U
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

SAMPLE: CCB

File: BVC28A Mar 28, 2005 16:51

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	-3.11	I
CALCIUM	15.90	U
COBALT	4.30	U
COPPER	2.52	U
IRON	12.43	I
MAGNESIUM	33.70	U
MANGANESE	-0.98	I
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICB

File: BVC29A Mar 29, 2005 13:34

Analyte	Result	C
ALUMINUM	-27.97	I
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	2.29	U
CALCIUM	15.90	U
COBALT	4.30	U
COPPER	2.52	U
IRON	-23.75	I
MAGNESIUM	33.70	U
MANGANESE	0.91	U
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

SAMPLE: CCB

File: BVC29A Mar 29, 2005 14:08

Analyte	Result	C
ALUMINUM	32.38	I
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	2.29	U
CALCIUM	70.25	
COBALT	4.30	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	72.31	
MANGANESE	0.91	U
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

SAMPLE: CCB

File: BVC29A Mar 29, 2005 15:00

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	2.29	U
CALCIUM	15.90	U
COBALT	4.30	U
COPPER	2.52	U
IRON	-24.62	I
MAGNESIUM	33.70	U
MANGANESE	0.91	U
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCB

File: BVC29A Mar 29, 2005 15:34

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	2.29	U
CALCIUM	15.90	U
COBALT	4.30	U
COPPER	2.52	U
IRON	-19.18	I
MAGNESIUM	33.70	U
MANGANESE	0.91	U
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

SAMPLE: CCB

File: BVC29A Mar 29, 2005 16:42

Analyte	Result	C
ALUMINUM	20.50	U
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	2.29	U
CALCIUM	17.32	I
COBALT	4.30	U
COPPER	2.52	U
IRON	-19.11	I
MAGNESIUM	33.70	U
MANGANESE	0.91	U
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

SAMPLE: CCB

File: BVC29A Mar 29, 2005 17:49

Analyte	Result	C
ALUMINUM	-40.70	I
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	2.29	U
CALCIUM	15.90	U
COBALT	4.30	U
COPPER	2.52	U
IRON	-25.70	I
MAGNESIUM	33.70	U
MANGANESE	0.91	U
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCB

File: BVC29A Mar 29, 2005 18:17

Analyte	Result	C
ALUMINUM	23.93	I
BARIUM	0.50	U
BERYLLIUM	0.40	U
CADMIUM	2.29	U
CALCIUM	72.15	
COBALT	4.30	U
COPPER	2.52	U
IRON	7.73	U
MAGNESIUM	68.46	
MANGANESE	0.91	U
NICKEL	11.60	U
POTASSIUM	621.00	U
SILVER	3.93	U
SODIUM	32.10	U
VANADIUM	5.07	U
ZINC	1.42	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICB

File: FVC31C Mar 31, 2005 17:51

Analyte	Result	C
ALUMINUM	0.57	U
CALCIUM	2.75	U
IRON	3.10	U
MAGNESIUM	2.02	U
MOLYBDENUM	0.16	I
POTASSIUM	9.00	I
SODIUM	4.29	U
THALLIUM	0.05	I

SAMPLE: CCB

File: FVC31C Mar 31, 2005 19:01

Analyte	Result	C
ALUMINUM	2.65	I
CALCIUM	4.00	I
IRON	3.10	U
MAGNESIUM	3.56	I
MOLYBDENUM	1.65	I
POTASSIUM	25.00	I
SODIUM	8.00	I
THALLIUM	0.15	I

SAMPLE: CCB

File: FVC31C Mar 31, 2005 19:16

Analyte	Result	C
ALUMINUM	1.72	I
CALCIUM	2.75	U
IRON	3.10	U
MAGNESIUM	2.72	I
MOLYBDENUM	0.82	I
POTASSIUM	22.00	I
SODIUM	5.00	I
THALLIUM	0.15	I

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCB

File: FVC31C Mar 31, 2005 20:49

Analyte	Result	C
ALUMINUM	0.73	I
CALCIUM	2.75	U
IRON	3.10	U
MAGNESIUM	2.02	U
MOLYBDENUM	0.11	I
POTASSIUM	17.00	I
SODIUM	5.00	I
THALLIUM	0.17	I

SAMPLE: CCB

File: FVC31C Mar 31, 2005 22:22

Analyte	Result	C
ALUMINUM	1.06	I
CALCIUM	2.75	U
IRON	3.10	U
MAGNESIUM	2.17	I
MOLYBDENUM	0.04	U
POTASSIUM	15.00	I
SODIUM	4.29	U
THALLIUM	0.14	I

SAMPLE: CCB

File: FVC31C Mar 31, 2005 23:47

Analyte	Result	C
ALUMINUM	6.70	I
CALCIUM	8.00	I
IRON	4.98	I
MAGNESIUM	8.20	I
MOLYBDENUM	2.51	I
POTASSIUM	35.00	I
SODIUM	18.00	I
THALLIUM	0.18	I

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICB

File: HVC30A Mar 30, 2005 9:51

Analyte	Result	C
MERCURY	0.02	U

SAMPLE: CCB

File: HVC30A Mar 30, 2005 10:16

Analyte	Result	C
MERCURY	0.02	U

SAMPLE: CCB

File: HVC30A Mar 30, 2005 10:59

Analyte	Result	C
MERCURY	0.02	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCB

File: HVC30A Mar 30, 2005 11:10

Analyte	Result	C
MERCURY	0.02	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: ICB

File: HVD02B Apr 02, 2005 12:22

Analyte	Result	C
MERCURY	-0.04	I

SAMPLE: CCB

File: HVD02B Apr 02, 2005 12:48

Analyte	Result	C
MERCURY	-0.04	I

SAMPLE: CCB

File: HVD02B Apr 02, 2005 13:13

Analyte	Result	C
MERCURY	-0.04	I

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Concentration Units: ug/L

SAMPLE: CCB

File: HVD02B Apr 02, 2005 13:28

Analyte	Result	C
MERCURY	-0.04	I

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43MW08S01S

Matrix: WATER | **SDG Name:** CTO355-5

Percent Solids: 0.00 | **Lab Sample ID:** WV1298-014S

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	% R	Q	Control Limits (%R) Low	High	M
ALUMINUM, TOTAL	2309.3600		355.3500		2000	97.7		75	125	P
ANTIMONY, TOTAL	505.1900		0.0300	U	500	101.0		75	125	P
ARSENIC, TOTAL	544.1800		1.6300	U	500	108.8		75	125	P
BARIUM, TOTAL	2017.0800		30.9000		2000	99.3		75	125	P
BERYLLIUM, TOTAL	48.8600		-0.3800	U	50	97.7		75	125	P
CADMIUM, TOTAL	252.3000		0.1600	U	250	100.9		75	125	P
CALCIUM, TOTAL	25474.5900		23860.5500		2500	64.6	OK	75	125	P
CHROMIUM, TOTAL	206.2400		2.4000	I	200	101.9		75	125	P
COBALT, TOTAL	507.8800		0.6400	U	500	101.6		75	125	P
COPPER, TOTAL	239.0300		-2.1000	U	250	95.6		75	125	P
IRON, TOTAL	1247.2100		237.6000		1000	101.0		75	125	P
LEAD, TOTAL	506.4400		-2.7400	U	500	101.3		75	125	P
MAGNESIUM, TOTAL	8628.8000		3815.8700		5000	96.3		75	125	P
MANGANESE, TOTAL	514.1500		29.2300		500	97.0		75	125	P
MERCURY, TOTAL	1.1940		0.0210	I	1	117.3		75	125	CV
NICKEL, TOTAL	521.9100		14.3200	I	500	101.5		75	125	P
POTASSIUM, TOTAL	12921.4400		3168.7000		10000	97.5		75	125	P
SELENIUM, TOTAL	523.2400		2.8100	U	500	104.6		75	125	P
SILVER, TOTAL	50.6800		2.2800	U	50	101.4		75	125	P
SODIUM, TOTAL	28111.0100		21415.9500		7500	89.3		75	125	P
THALLIUM, TOTAL	465.8000		0.2335	U	500	93.2		75	125	MS
VANADIUM, TOTAL	509.8700		0.0500	U	500	102.0		75	125	P
ZINC, TOTAL	499.1400		8.7200	I	500	98.1		75	125	P

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services | **Client Field ID:** PEN43MW08S01S

Matrix: WATER | **SDG Name:** CTO355-5

Percent Solids: 0.00 | **Lab Sample ID:** WV1298-014P

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	% R	Q	Control Limits (%R) Low	High	M
ALUMINUM, TOTAL	2354.8400		355.3500		2000	100.0		75	125	P
ANTIMONY, TOTAL	505.7500		0.0300	U	500	101.2		75	125	P
ARSENIC, TOTAL	551.7500		1.6300	U	500	110.3		75	125	P
BARIUM, TOTAL	2082.7100		30.9000		2000	102.6		75	125	P
BERYLLIUM, TOTAL	49.1400		-0.3800	U	50	98.3		75	125	P
CADMIUM, TOTAL	254.3000		0.1600	U	250	101.7		75	125	P
CALCIUM, TOTAL	25962.1800		23860.5500		2500	84.1		75	125	P
CHROMIUM, TOTAL	211.0800		2.4000	I	200	104.3		75	125	P
COBALT, TOTAL	512.1200		0.6400	U	500	102.4		75	125	P
COPPER, TOTAL	243.8900		-2.1000	U	250	97.6		75	125	P
IRON, TOTAL	1274.0400		237.6000		1000	103.6		75	125	P
LEAD, TOTAL	515.4400		-2.7400	U	500	103.1		75	125	P
MAGNESIUM, TOTAL	8782.2100		3815.8700		5000	99.3		75	125	P
MANGANESE, TOTAL	529.0800		29.2300		500	100.0		75	125	P
MERCURY, TOTAL	1.2050		0.0210	I	1	118.4		75	125	CV
NICKEL, TOTAL	528.0400		14.3200	I	500	102.7		75	125	P
POTASSIUM, TOTAL	13154.3800		3168.7000		10000	99.9		75	125	P
SELENIUM, TOTAL	524.0500		2.8100	U	500	104.8		75	125	P
SILVER, TOTAL	53.5500		2.2800	U	50	107.1		75	125	P
SODIUM, TOTAL	29061.2600		21415.9500		7500	101.9		75	125	P
THALLIUM, TOTAL	486.2000		0.2335	U	500	97.2		75	125	MS
VANADIUM, TOTAL	521.7000		0.0500	U	500	104.3		75	125	P
ZINC, TOTAL	506.9700		8.7200	I	500	99.7		75	125	P

Comments:

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** A

Instrument Name: TJA TRACE ICP **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ANTIMONY	8.0	3.54	P
ARSENIC	8.0	2.81	P
CHROMIUM	15	1.00	P
LEAD	5.0	2.07	P
SELENIUM	10	4.08	P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** B

Instrument Name: TJA 61 ICP **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
ALUMINUM	300	20.50	P
BARIUM	5.0	0.50	P
BERYLLIUM	5.0	0.40	P
CADMIUM	10	2.29	P
CALCIUM	50	15.90	P
COBALT	30	4.30	P
COPPER	25	2.52	P
IRON	100	7.73	P
MAGNESIUM	50	33.70	P
MANGANESE	5.0	0.91	P
NICKEL	40	11.60	P
POTASSIUM	1000	621.00	P
SILVER	15	3.93	P
SODIUM	1000	32.10	P
VANADIUM	25	5.07	P
ZINC	25	1.42	P

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** F

Instrument Name: AGILENT 7500 ICP-MS **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
THALLIUM	15	0.05	MS

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 3/1/05

Concentration Units: ug/L

Analyte	CRDL	IDL	M
MERCURY	0.20	0.02	CV

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** A

Instrument Name: TJA TRACE ICP **Date:** 11/2/04

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	15.00	500000	P
ANTIMONY	15.00	20000	P
ARSENIC	15.00	20000	P
BARIUM	15.00	20000	P
BERYLLIUM	15.00	20000	P
CADMIUM	15.00	20000	P
CALCIUM	15.00	500000	P
CHROMIUM	15.00	20000	P
COBALT	15.00	20000	P
COPPER	15.00	10000	P
IRON	15.00	200000	P
LEAD	15.00	20000	P
MAGNESIUM	15.00	500000	P
MANGANESE	15.00	20000	P
MOLYBDENUM	15.00	20000	P
NICKEL	15.00	20000	P
POTASSIUM	15.00	30000	P
SELENIUM	15.00	20000	P
SILVER	15.00	2500	P
SODIUM	15.00	200000	P
THALLIUM	15.00	20000	P
VANADIUM	15.00	20000	P
ZINC	15.00	10000	P

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** B

Instrument Name: TJA 61 ICP **Date:** 10/27/04

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	8.00	500000	P
ANTIMONY	8.00	20000	P
ARSENIC	8.00	20000	P
BARIUM	8.00	20000	P
BERYLLIUM	8.00	20000	P
CADMIUM	8.00	20000	P
CALCIUM	8.00	500000	P
CHROMIUM	8.00	20000	P
COBALT	8.00	20000	P
COPPER	8.00	20000	P
IRON	8.00	200000	P
LEAD	8.00	20000	P
MAGNESIUM	8.00	500000	P
MANGANESE	8.00	20000	P
NICKEL	8.00	10000	P
POTASSIUM	8.00	500000	P
SELENIUM	8.00	10000	P
SILVER	8.00	1000	P
SODIUM	8.00	500000	P
VANADIUM	8.00	20000	P
ZINC	8.00	20000	P

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** F

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/17/03

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	0.01	50000	MS
ANTIMONY	0.10	1000	MS
ARSENIC	0.30	500	MS
BARIUM	0.10	1000	MS
BERYLLIUM	0.30	1000	MS
CADMIUM	0.10	250	MS
CALCIUM	0.03	100000	MS
CHROMIUM	0.10	1000	MS
COBALT	0.10	1000	MS
COPPER	0.10	500	MS
IRON	0.03	100000	MS
LEAD	0.10	1000	MS
MAGNESIUM	0.05	100000	MS
MANGANESE	0.10	1000	MS
MOLYBDENUM	0.10	1000	MS
NICKEL	0.10	500	MS
POTASSIUM	0.01	100000	MS
SELENIUM	0.30	250	MS
SILVER	0.10	100	MS
SODIUM	0.01	100000	MS
THALLIUM	0.10	100	MS
VANADIUM	0.10	1000	MS
ZINC	0.10	250	MS

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** VC28ICW2

Matrix: WATER **SDG Name:** CTO355-5

Method: P **Prep Date:** 03/28/2005

Client ID	Lab Sample ID	Initial (L)	Final (L)
LCSWVC28ICW2	LCSWVC28ICW2	0.05	0.05
PBWVC28ICW2	PBWVC28ICW2	0.05	0.05
PEN43RB0324	WV1298-002	0.05	0.05
PEN43GW05D01	WV1298-003	0.05	0.05
PEN43GW05S02	WV1298-004	0.05	0.05
PEN43GW05S02D	WV1298-005	0.05	0.05
PEN43GW11S01	WV1298-006	0.05	0.05
PEN43GW06D01	WV1298-007	0.05	0.05
PEN43GW12S01	WV1298-008	0.05	0.05
PEN43GW06S01	WV1298-009	0.05	0.05
PEN43GW10S01	WV1298-010	0.05	0.05
PEN43GW09S01	WV1298-011	0.05	0.05
PEN43GW02S02	WV1298-012	0.05	0.05
PEN43GW13S01	WV1298-013	0.05	0.05
PEN43MW08S01	WV1298-014	0.05	0.05
PEN43MW08S01P	WV1298-014P	0.05	0.05
PEN43MW08S01S	WV1298-014S	0.05	0.05
PEN43MW07S01	WV1298-015	0.05	0.05

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** VC29HGW0

Matrix: WATER **SDG Name:** CTO355-5

Method: CV **Prep Date:** 03/29/2005

Client ID	Lab Sample ID	Initial (L)	Final (L)
LCSWVC29HGW0	LCSWVC29HGW0	0.025	0.025
PBWVC29HGW0	PBWVC29HGW0	0.025	0.025
PEN43RB0324	WV1298-002	0.025	0.025
PEN43GW05D01	WV1298-003	0.025	0.025
PEN43GW05S02	WV1298-004	0.025	0.025
PEN43GW05S02D	WV1298-005	0.025	0.025
PEN43GW11S01	WV1298-006	0.025	0.025
PEN43GW06D01	WV1298-007	0.025	0.025
PEN43GW12S01	WV1298-008	0.025	0.025
PEN43GW06S01	WV1298-009	0.025	0.025
PEN43GW10S01	WV1298-010	0.025	0.025
PEN43GW09S01	WV1298-011	0.025	0.025
PEN43GW02S02	WV1298-012	0.025	0.025
PEN43GW13S01	WV1298-013	0.025	0.025
PEN43MW08S01	WV1298-014	0.025	0.025
PEN43MW08S01P	WV1298-014P	0.025	0.025
PEN43MW08S01S	WV1298-014S	0.025	0.025
PEN43MW07S01	WV1298-015	0.025	0.025

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: TJA TRACE ICP **File Name:** AVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	11:40	Al Sb As	Ca Cr	Fe Pb Mg	Se
S1		1	11:47	Al Sb As	Ca Cr	Fe Pb Mg	Se
AL IEC		1	11:57	Al Sb As	Ca Cr	Fe Pb Mg	Se
FE IEC		1	12:04	Al Sb As	Ca Cr	Fe Pb Mg	Se
MN IEC		1	12:11	Al Sb As	Ca Cr	Fe Pb Mg	Se
IEC		1	12:18	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICV		1	12:26	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICB		1	12:33	Al Sb As	Ca Cr	Fe Pb Mg	Se
PQL		1	12:40	Al Sb As	Ca Cr	Fe Pb Mg	Se
CRI		1	12:47	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICSA		1	12:54	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICSAB		1	13:01	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCV		1	13:08	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	13:15	Al Sb As	Ca Cr	Fe Pb Mg	Se
ZZZZZZ		1	13:22				
ZZZZZZ		1	13:30				
ZZZZZZ		1	13:37				
ZZZZZZ		1	13:46				
ZZZZZZ		1	13:53				
ZZZZZZ		1	14:00				
ZZZZZZ		1	14:07				
ZZZZZZ		2	14:14				
ZZZZZZ		10	14:21				
ZZZZZZ		1	14:28				
CCV		1	14:35	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	14:42	Al Sb As	Ca Cr	Fe Pb Mg	Se
ZZZZZZ		2	14:51				
CCV		1	14:58	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	15:05	Al Sb As	Ca Cr	Fe Pb Mg	Se
ZZZZZZ		5	15:12				
ZZZZZZ		1	15:19				
ZZZZZZ		1	15:30				
ZZZZZZ		1	15:37				
ZZZZZZ		1	15:44				
ZZZZZZ		1	15:51				
ZZZZZZ		1	15:58				
ZZZZZZ		1	16:05				
ZZZZZZ		1	16:12				
ZZZZZZ		1	16:19				
CCV		1	16:26	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	16:33	Al Sb As	Ca Cr	Fe Pb Mg	Se
ZZZZZZ		1	16:41				
ZZZZZZ		2	16:48				
ZZZZZZ		5	16:55				
ZZZZZZ		10	17:02				
ZZZZZZ		25	17:09				
ZZZZZZ		2	17:16				
ZZZZZZ		2	17:23				
CRI		1	17:30	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICSA		1	17:37	Al Sb As	Ca Cr	Fe Pb Mg	Se

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: TJA TRACE ICP **File Name:** AVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
ICSAB		1	17:44	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCV		1	17:51	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	17:58	Al Sb As	Ca Cr	Fe Pb Mg	Se
ZZZZZZ		1	18:05				
ZZZZZZ		1	18:12				
ZZZZZZ		2	18:19				
ZZZZZZ		10	18:26				
ZZZZZZ		2	18:33				
ZZZZZZ		20	18:40				
ZZZZZZ		1	18:47				
ZZZZZZ		1	18:54				
ZZZZZZ		1	19:01				
ZZZZZZ		1	19:08				
CCV		1	19:15	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	19:22	Al Sb As	Ca Cr	Fe Pb Mg	Se
PBWVC28ICW2		1	19:29	Sb As	Cr	Pb	Se
LCSWVC28ICW2		1	19:36	Sb As	Cr	Pb	Se
ZZZZZZ		1	19:44				
ZZZZZZ		1	19:51				
ZZZZZZ		1	19:58				
ZZZZZZ		1	20:05				
ZZZZZZ		1	20:12				
ZZZZZZ		1	20:19				
ZZZZZZ		1	20:26				
ZZZZZZ		3	20:33				
CCV		1	20:40	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	20:47	Al Sb As	Ca Cr	Fe Pb Mg	Se
ZZZZZZ		1	20:54				
ZZZZZZ		1	21:01				
ZZZZZZ		1	21:08				
ZZZZZZ		1	21:15				
ZZZZZZ		1	21:22				
ZZZZZZ		1	21:29				
ZZZZZZ		1	21:36				
CRI		1	21:43	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICSA		1	21:50	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICSAB		1	21:57	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCV		1	22:04	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	22:11	Al Sb As	Ca Cr	Fe Pb Mg	Se

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: TJA TRACE ICP **File Name:** AVD01A

Date: 4/1/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	11:22	Al Sb As	Ca Cr	Fe Pb Mg	Se
S1		1	11:29	Al Sb As	Ca Cr	Fe Pb Mg	Se
AL IEC		1	11:40	Al Sb As	Ca Cr	Fe Pb Mg	Se
FE IEC		1	11:49	Al Sb As	Ca Cr	Fe Pb Mg	Se
MN IEC		1	11:56	Al Sb As	Ca Cr	Fe Pb Mg	Se
IEC		1	12:03	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICV		1	12:12	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICB		1	12:19	Al Sb As	Ca Cr	Fe Pb Mg	Se
PQL		1	12:26	Al Sb As	Ca Cr	Fe Pb Mg	Se
CRI		1	12:33	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICSA		1	12:40	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICSAB		1	12:47	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCV		1	12:54	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	13:01	Al Sb As	Ca Cr	Fe Pb Mg	Se
ZZZZZZ		5	13:08				
ZZZZZZ		1	13:15				
ZZZZZZ		1	13:22				
ZZZZZZ		1	13:29				
ZZZZZZ		1	13:37				
ZZZZZZ		1	13:44				
ZZZZZZ		1	13:51				
ZZZZZZ		1	13:58				
ZZZZZZ		1	14:05				
ZZZZZZ		1	14:12				
CCV		1	14:19	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	14:26	Al Sb As	Ca Cr	Fe Pb Mg	Se
ZZZZZZ		5	14:35				
ZZZZZZ		1	14:42				
ZZZZZZ		1	14:49				
ZZZZZZ		1	14:56				
ZZZZZZ		1	15:03				
ZZZZZZ		1	15:10				
ZZZZZZ		1	15:17				
ZZZZZZ		1	15:24				
ZZZZZZ		1	15:31				
ZZZZZZ		1	15:38				
CCV		1	15:45	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	15:52	Al Sb As	Ca Cr	Fe Pb Mg	Se
ZZZZZZ		5	15:59				
ZZZZZZ		1	16:06				
ZZZZZZ		1	16:13				
ZZZZZZ		1	16:20				
ZZZZZZ		1	16:27				
ZZZZZZ		1	16:34				
ZZZZZZ		1	16:42				
CRI		1	16:49	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICSA		1	16:56	Al Sb As	Ca Cr	Fe Pb Mg	Se
ICSAB		1	17:03	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCV		1	17:10	Al Sb As	Ca Cr	Fe Pb Mg	Se
CCB		1	17:17	Al Sb As	Ca Cr	Fe Pb Mg	Se

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: TJA TRACE ICP **File Name:** AVD01A

Date: 4/1/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements								
ZZZZZZ		1	17:24									
ZZZZZZ		1	17:31									
WV1298-002	PEN43RB0324	1	17:38	Sb	As		Cr		Pb		Se	
WV1298-003	PEN43GW05D01	1	17:45	Sb	As		Cr		Pb		Se	
WV1298-004	PEN43GW05S02	1	17:52	Sb	As		Cr		Pb		Se	
WV1298-005	PEN43GW05S02D	1	17:59	Sb	As		Cr		Pb		Se	
WV1298-006	PEN43GW11S01	1	18:06	Sb	As		Cr		Pb		Se	
WV1298-007	PEN43GW06D01	1	18:13	Sb	As		Cr		Pb		Se	
WV1298-008	PEN43GW12S01	1	18:20	Sb	As		Cr		Pb		Se	
WV1298-009	PEN43GW06S01	1	18:27	Sb	As		Cr		Pb		Se	
CCV		1	18:34	Al Sb	As	Ca	Cr	Fe	Pb	Mg	Se	
CCB		1	18:41	Al Sb	As	Ca	Cr	Fe	Pb	Mg	Se	
WV1298-010	PEN43GW10S01	1	18:48		As		Cr		Pb		Se	
WV1298-011	PEN43GW09S01	1	18:55		As		Cr		Pb		Se	
WV1298-012	PEN43GW02S02	1	19:02		As		Cr		Pb		Se	
WV1298-013	PEN43GW13S01	1	19:09		As		Cr		Pb		Se	
WV1298-014	PEN43MW08S01	1	19:16		As		Cr		Pb		Se	
WV1298-014L	PEN43MW08S01L	5	19:24		As		Cr		Pb		Se	
WV1298-014P	PEN43MW08S01P	1	19:31		As		Cr		Pb		Se	
WV1298-014S	PEN43MW08S01S	1	19:38		As		Cr		Pb		Se	
WV1298-015	PEN43MW07S01	1	19:45		As		Cr		Pb		Se	
ZZZZZZ		1	19:52									
CCV		1	19:59	Al Sb	As	Ca	Cr	Fe	Pb	Mg	Se	
CCB		1	20:06	Al Sb	As	Ca	Cr	Fe	Pb	Mg	Se	
ZZZZZZ		1	20:13									
ZZZZZZ		1	20:20									
ZZZZZZ		1	20:27									
ZZZZZZ		1	20:34									
ZZZZZZ		1	20:41									
ZZZZZZ		1	20:48									
ZZZZZZ		1	20:55									
CRI		1	21:02	Al Sb	As	Ca	Cr	Fe	Pb	Mg	Se	
ICSA		1	21:09	Al Sb	As	Ca	Cr	Fe	Pb	Mg	Se	
ICSAB		1	21:16	Al Sb	As	Ca	Cr	Fe	Pb	Mg	Se	
CCV		1	21:23	Al Sb	As	Ca	Cr	Fe	Pb	Mg	Se	
CCB		1	21:30	Al Sb	As	Ca	Cr	Fe	Pb	Mg	Se	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: TJA TRACE ICP **File Name:** AVD04A

Date: 4/4/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements			
S0		1	12:10	Al Sb	Ca	Fe	Mg
S1		1	12:17	Al Sb	Ca	Fe	Mg
AL IEC		1	12:27	Al Sb	Ca	Fe	Mg
FE IEC		1	12:34	Al Sb	Ca	Fe	Mg
MN IEC		1	12:41	Al Sb	Ca	Fe	Mg
IEC		1	12:48	Al Sb	Ca	Fe	Mg
ICV		1	12:55	Al Sb	Ca	Fe	Mg
ICB		1	13:02	Al Sb	Ca	Fe	Mg
PQL		1	13:10	Al Sb	Ca	Fe	Mg
CRI		1	13:17	Al Sb	Ca	Fe	Mg
ICSA		1	13:24	Al Sb	Ca	Fe	Mg
ICSAB		1	13:31	Al Sb	Ca	Fe	Mg
CCV		1	13:38	Al Sb	Ca	Fe	Mg
CCB		1	13:45	Al Sb	Ca	Fe	Mg
ZZZZZZ		3	13:52				
ZZZZZZ		1	13:59				
ZZZZZZ		1	14:06				
ZZZZZZ		1	14:13				
ZZZZZZ		1	14:20				
CRI		1	14:27	Al Sb	Ca	Fe	Mg
ICSA		1	14:34	Al Sb	Ca	Fe	Mg
ICSAB		1	14:41	Al Sb	Ca	Fe	Mg
CCV		1	14:49	Al Sb	Ca	Fe	Mg
CCB		1	14:56	Al Sb	Ca	Fe	Mg
ZZZZZZ		1	15:03				
ZZZZZZ		1	15:10				
ZZZZZZ		1	15:17				
ZZZZZZ		1	15:24				
ZZZZZZ		1	15:31				
ZZZZZZ		1	15:38				
ZZZZZZ		1	15:45				
ZZZZZZ		1	15:52				
ZZZZZZ		5	15:59				
ZZZZZZ		1	16:06				
CCV		1	16:13	Al Sb	Ca	Fe	Mg
CCB		1	16:20	Al Sb	Ca	Fe	Mg
ZZZZZZ		1	16:27				
ZZZZZZ		1	16:34				
ZZZZZZ		1	16:41				
ZZZZZZ		1	16:48				
ZZZZZZ		1	16:55				
ZZZZZZ		1	17:02				
ZZZZZZ		1	17:09				
WV1298-010	PEN43GW10S01	1	17:16	Sb			
WV1298-011	PEN43GW09S01	1	17:23	Sb			
WV1298-012	PEN43GW02S02	1	17:30	Sb			
CCV		1	17:37	Al Sb	Ca	Fe	Mg
CCB		1	17:44	Al Sb	Ca	Fe	Mg
WV1298-013	PEN43GW13S01	1	17:51	Sb			
WV1298-014	PEN43MW08S01	1	17:58	Sb			

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: TJA TRACE ICP **File Name:** AVD04A

Date: 4/4/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements					
WV1298-014L	PEN43MW08S01L	5	18:05	Sb					
WV1298-014P	PEN43MW08S01P	1	18:12	Sb					
WV1298-014S	PEN43MW08S01S	1	18:20	Sb					
WV1298-015	PEN43MW07S01	1	18:27	Sb					
ZZZZZZ		3	18:34						
CRI		1	18:41	Al	Sb		Ca	Fe	Mg
ICSA		1	18:48	Al	Sb		Ca	Fe	Mg
ICSAB		1	18:55	Al	Sb		Ca	Fe	Mg
CCV		1	19:02	Al	Sb		Ca	Fe	Mg
CCB		1	19:09	Al	Sb		Ca	Fe	Mg

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: TJA 61 ICP **File Name:** BVC28A

Date: 3/28/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements											
S0		1	13:01	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
S1		1	13:07	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
AL IEC		1	13:12	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
FE IEC		1	13:21	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
ICV		1	13:29	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
ICB		1	13:35	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
PQL		1	13:40	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
CRI		1	13:46	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
ICSA		1	13:52	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
ICSAB		1	13:57	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
CCV		1	14:03	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
CCB		1	14:09	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
ZZZZZZ		1	14:14																
ZZZZZZ		1	14:20																
ZZZZZZ		1	14:26																
ZZZZZZ		1	14:31																
ZZZZZZ		1	14:37																
CCV		1	14:43	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
CCB		1	14:48	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
CCV		1	15:29	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
CCB		1	15:35	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
LCSWVC28ICW2		1	15:41	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
PBWVC28ICW2		1	15:46	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
ZZZZZZ		1	15:53																
ZZZZZZ		10	15:59																
ZZZZZZ		1	16:05																
ZZZZZZ		20	16:11																
ZZZZZZ		1	16:16																
CRI		1	16:28	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
ICSA		1	16:34	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
ICSAB		1	16:40	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
CCV		1	16:45	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn
CCB		1	16:51	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K	Ag	Na	V	Zn

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: TJA 61 ICP **File Name:** BVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements									
S0		1	13:00	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
S1		1	13:06	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
AL IEC		1	13:12	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
FE IEC		1	13:20	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
ICV		1	13:28	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
ICB		1	13:34	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
PQL		1	13:40	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
CRI		1	13:45	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
ICSA		1	13:51	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
ICSAB		1	13:57	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
CCV		1	14:02	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
CCB		1	14:08	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
ZZZZZZ		1	14:14										
ZZZZZZ		1	14:19										
ZZZZZZ		1	14:25										
ZZZZZZ		1	14:31										
ZZZZZZ		1	14:36										
ZZZZZZ		1	14:42										
ZZZZZZ		2	14:49										
CCV		1	14:55	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
CCB		1	15:00	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
ZZZZZZ		1	15:06										
ZZZZZZ		1	15:11										
ZZZZZZ		1	15:17										
ZZZZZZ		1	15:23										
CCV		1	15:28	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
CCB		1	15:34	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
ZZZZZZ		1	15:40										
ZZZZZZ		1	15:45										
ZZZZZZ		1	15:51										
WV1298-002	PEN43RB0324	1	15:57	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-003	PEN43GW05D01	1	16:02	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-004	PEN43GW05S02	1	16:08	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-005	PEN43GW05S02D	1	16:13	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-006	PEN43GW11S01	1	16:19	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-007	PEN43GW06D01	1	16:25	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-008	PEN43GW12S01	1	16:30	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
CCV		1	16:36	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
CCB		1	16:42	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-009	PEN43GW06S01	1	16:47	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-010	PEN43GW10S01	1	16:53	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-011	PEN43GW09S01	1	16:59	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-012	PEN43GW02S02	1	17:04	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-013	PEN43GW13S01	1	17:10	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-014	PEN43MW08S01	1	17:15	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-014L	PEN43MW08S01L	5	17:21	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-014P	PEN43MW08S01P	1	17:27	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-014S	PEN43MW08S01S	1	17:32	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
WV1298-015	PEN43MW07S01	1	17:38	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		
CCV		1	17:44	Al	Ba Be	Cd Ca	Co Cu Fe	Mg Mn	Ni K	Ag Na	V Zn		

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: TJA 61 ICP **File Name:** BVC29A

Date: 3/29/05 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements											
CCB		1	17:49	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K
CRI		1	17:55	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K
ICSA		1	18:00	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K
ICSAB		1	18:06	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K
CCV		1	18:12	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K
CCB		1	18:17	Al	Ba	Be	Cd	Ca	Co	Cu	Fe	Mg	Mn	Ni	K

Lab Sample ID	Ag	Na	V	Zn
CCB	Ag	Na	V	Zn
CRI	Ag	Na	V	Zn
ICSA	Ag	Na	V	Zn
ICSAB	Ag	Na	V	Zn
CCV	Ag	Na	V	Zn
CCB	Ag	Na	V	Zn

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: AGILENT 7500 ICP-MS **File Name:** FVC31C

Date: 3/31/05 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements						
Cal Blank		1	16:57	Al	Ca	Fe	Mg	Mo	K	Na	Tl
Cal Std 1		1	17:05	Al	Ca	Fe	Mg	Mo	K	Na	Tl
Cal Std 2		1	17:13	Al	Ca	Fe	Mg	Mo	K	Na	Tl
Cal Std 3		1	17:20	Al	Ca	Fe	Mg	Mo	K	Na	Tl
Cal Std 4		1	17:28	Al	Ca	Fe	Mg	Mo	K	Na	Tl
Blank		1	17:36	Al	Ca	Fe	Mg	Mo	K	Na	Tl
ICV		1	17:43	Al	Ca	Fe	Mg	Mo	K	Na	Tl
ICB		1	17:51	Al	Ca	Fe	Mg	Mo	K	Na	Tl
PQL		1	17:59	Al	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		1	18:07								
Blank		1	18:14	Al	Ca	Fe	Mg	Mo	K	Na	Tl
CRI		5	18:22	Al	Ca	Fe	Mg	Mo	K	Na	Tl
ICSA		1	18:30	Al	Ca	Fe	Mg	Mo	K	Na	Tl
ICSAB		1	18:37	Al	Ca	Fe	Mg	Mo	K	Na	Tl
Blank		1	18:45	Al	Ca	Fe	Mg	Mo	K	Na	Tl
CCV		1	18:53	Al	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	19:01	Al	Ca	Fe	Mg	Mo	K	Na	Tl
CCV		1	19:08	Al	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	19:16	Al	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		5	19:24								
ZZZZZZ		10	19:31								
ZZZZZZ		5	19:39								
ZZZZZZ		5	19:47								
ZZZZZZ		5	19:55								
ZZZZZZ		5	20:02								
LCSWVC28ICW2		10	20:10								Tl
PBWVC28ICW2		5	20:18								Tl
WV1298-002	PEN43RB0324	5	20:26								Tl
WV1298-003	PEN43GW05D01	5	20:33								Tl
CCV		1	20:41	Al	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	20:49	Al	Ca	Fe	Mg	Mo	K	Na	Tl
WV1298-004	PEN43GW05S02	5	20:57								Tl
WV1298-005	PEN43GW05S02D	5	21:04								Tl
WV1298-006	PEN43GW11S01	5	21:12								Tl
WV1298-007	PEN43GW06D01	5	21:20								Tl
WV1298-008	PEN43GW12S01	5	21:28								Tl
WV1298-009	PEN43GW06S01	5	21:35								Tl
WV1298-010	PEN43GW10S01	5	21:43								Tl
WV1298-011	PEN43GW09S01	5	21:51								Tl
WV1298-012	PEN43GW02S02	5	21:59								Tl
WV1298-013	PEN43GW13S01	5	22:06								Tl
CCV		1	22:14	Al	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	22:22	Al	Ca	Fe	Mg	Mo	K	Na	Tl
WV1298-014	PEN43MW08S01	5	22:30								Tl
WV1298-014L	PEN43MW08S01L	25	22:37								Tl
WV1298-014P	PEN43MW08S01P	5	22:45								Tl
WV1298-014S	PEN43MW08S01S	5	22:53								Tl
WV1298-015	PEN43MW07S01	5	23:01								Tl
ZZZZZZ		5	23:08								
CRI		5	23:16	Al	Ca	Fe	Mg	Mo	K	Na	Tl

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: AGILENT 7500 ICP-MS **File Name:** FVC31C

Date: 3/31/05 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements							
ICSA		1	23:24	Al	Ca	Fe	Mg	Mo	K	Na	Tl
ICSAB		1	23:32	Al	Ca	Fe	Mg	Mo	K	Na	Tl
CCV		1	23:39	Al	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	23:47	Al	Ca	Fe	Mg	Mo	K	Na	Tl

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** CTO355-5

Instrument ID: CETAC M6100 **File Name:** HVC30A

Date: 3/30/05 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
Calibration Blank		1	9:36	Hg
Standard #1 (0.2 p		1	9:38	Hg
Standard #2 (0.5 p		1	9:40	Hg
Standard #3 (1.0 p		1	9:43	Hg
Standard #4 (5.0 p		1	9:45	Hg
Standard #5 (10.0		1	9:47	Hg
ICV		1	9:49	HG
ICB		1	9:51	HG
CRA		1	9:53	HG
LCSWVC29HGW0		1	9:55	HG
PBWVC29HGW0		1	9:57	HG
ZZZZZZ		1	10:00	
ZZZZZZ		1	10:02	
ZZZZZZ		1	10:04	
WV1298-002	PEN43RB0324	1	10:06	HG
WV1298-003	PEN43GW05D01	1	10:08	HG
WV1298-004	PEN43GW05S02	1	10:10	HG
WV1298-005	PEN43GW05S02D	1	10:12	HG
CCV		1	10:14	HG
CCB		1	10:16	HG
WV1298-006	PEN43GW11S01	1	10:19	HG
WV1298-007	PEN43GW06D01	1	10:21	HG
WV1298-008	PEN43GW12S01	1	10:23	HG
WV1298-009	PEN43GW06S01	1	10:25	HG
WV1298-010	PEN43GW10S01	1	10:27	HG
WV1298-011	PEN43GW09S01	1	10:29	HG
WV1298-012	PEN43GW02S02	1	10:31	HG
WV1298-013	PEN43GW13S01	1	10:34	HG
WV1298-014	PEN43MW08S01	1	10:36	HG
WV1298-014S	PEN43MW08S01S	1	10:38	HG
ZZZZZZ		1	10:40	
ZZZZZZ		1	10:51	
CCV		1	10:57	HG
CCB		1	10:59	HG
WV1298-014P	PEN43MW08S01P	1	11:01	HG
WV1298-015	PEN43MW07S01	1	11:03	HG
ZZZZZZ		1	11:06	
CCV		1	11:08	HG
CCB		1	11:10	HG

NAS PENSACOLA
WATER DATA
3555

FRACTION	CHEMICAL	PEN43GW05S02	UNITS	PEN43GW05S02D	RPD	D
M	ARSENIC	ND	UG/L	4 I	NC	NC
M	BARIUM	55.4	UG/L	55.6	0.36	0.20
M	CALCIUM	25800	UG/L	25500	1.17	300.00
M	CHROMIUM	2.8 I	UG/L	3.6 I	25.00	0.80
M	IRON	8 I	UG/L	11.3 I	34.20	ok 3.30
M	MAGNESIUM	1540	UG/L	1530	0.65	10.00
M	MANGANESE	4.6 I	UG/L	4.6 I	0.00	0.00
M	NICKEL	ND	UG/L	18.2 I	NC	NC
M	POTASSIUM	1100	UG/L	1080	1.83	20.00
M	SODIUM	32000	UG/L	32600	1.86	600.00
M	THALLIUM	0.35 I	UG/L	ND	NC	NC
M	ZINC	36.8	UG/L	33.5	9.39	3.30

Current RPD Quality Control Limit: 30 %.
Shaded cells indicate RPDs that exceed the applicable quality control limit.
ND = Compound not detected.
NC = Statistic not calculated

Wednesday, May 04, 2005

Sample: PEN43GW 13501

Method: NONAK Sample Name: WV1298-013 Operator:
Run Time: 04/01/05 19:09:54
Comment:
Mode: CONC Corr. Factor: 1

0.02993 mg/L x 1000 = 29.9 ug/L

Elem	Al	As	Ba	Be	B	Cd	Ca
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.26309	.00180	.03076	-.00041	.02935	.00043	25.376
SDev	.00314	.00098	.00028	.00010	.00005	.00013	.168
%RSD	1.1934	54.751	.90622	24.101	.16093	29.393	.66052
#1	.26531	.00110	.03096	-.00048	.02932	.00034	25.494
#2	.26087	.00249	.03056	-.00034	.02939	.00052	25.257

Elem	Cr	Co	Cu	Fe	Mg	Mn	Mo
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.00136	-.00038	.00919	.15864	2.5975	.00780	.00148
SDev	.00022	.00039	.00059	.00875	.0098	.00004	.00158
%RSD	15.807	103.68	6.4155	5.5179	.37570	.56384	106.95
#1	.00152	-.00010	.00877	.16483	2.6044	.00783	.00036
#2	.00121	-.00066	.00961	.15245	2.5906	.00777	.00259

Elem	Ni	Ag	Sr	Tl	Sn	Ti	V
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Avge	.00576	.00015	.07837	-.00108	.00056	.00286	.00056
SDev	.00083	.00051	.00045	.00131	.00272	.00003	.00064
%RSD	14.451	333.77	.57171	121.36	485.99	1.2354	113.98
#1	.00517	-.00021	.07869	-.00015	-.00137	.00289	.00101
#2	.00635	.00051	.07805	-.00201	.00249	.00284	.00011

Elem	Zn	Pb	Se	Sb	2068/1	2068/2	2203/1
Units	mg/L	mg/L	mg/L	mg/L			
Avge	.12284	.02993	.00115	.00085	.00484	-.00115	.02837
SDev	.00089	.00072	.00231	.00112	.00002	.00169	.00075
%RSD	.72706	2.4176	201.55	132.10	.37467	146.74	2.6421
#1	.12347	.03044	.00278	.00164	.00483	.00004	.02784
#2	.12221	.02941	-.00049	.00006	.00486	-.00234	.02890

Elem	2203/2	1960/1	1960/2
Units			
Avge	.03071	.00258	.00043
SDev	.00146	.00394	.00543
%RSD	4.7512	152.43	1259.0
#1	.03174	-.00020	.00427
#2	.02967	.00537	-.00341

IntStd	1	2	3	4	5	6	7
Mode	*Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	360.063	--	--	--	--	--	--
Avge	33008	--	--	--	--	--	--
SDev	180.3122	--	--	--	--	--	--
%RSD	.5462600	--	--	--	--	--	--

APPENDIX E

SUPPORTING DOCUMENTS FOR HUMAN HEALTH RISK ASSESSMENT

APPENDIX D.1

USEPA HUMAN HEALTH RISK CHARACTERIZATION CALCULATIONS AND RESULTS

TABLE D-1

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - RESIDENTIAL EXPOSURES TO SURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	0.2	0.1	2.0E-06	NA	NA	NA
Arsenic	8	2.1	3.8E-06	Cardiovascular, Skin	22	0.36
Barium	546	NA	NA	Cardiovascular	5800	0.09
Copper	357	NA	NA	Gastrointestinal	3300	0.11
Lead	1080	NA	NA	NA	NA	NA
Vanadium	73.1	NA	NA	Hair Loss	550	0.13
		Total ILCR	6E-06		Total HI	0.7

1 - Table II Soil Cleanup Target Levels (FDEP, April 2005). Some noncarcinogenic SCTLs not presented in Table II were calculated as per the methodology presented in Technical Report: Development of Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, F.A.C., Final Report, February, 2005.

NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-2

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - TYPICAL INDUSTRIAL EXPOSURES TO SURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	0.2	0.7	2.9E-07	NA	NA	NA
Arsenic	8	12	6.7E-07	Cardiovascular, Skin	356	0.022
Barium	546	NA	NA	Cardiovascular	130000	0.0042
Copper	357	NA	NA	Gastrointestinal	89000	0.004
Lead	1080	NA	NA	NA	NA	NA
Vanadium	73.1	NA	NA	Hair Loss	10000	0.0073
		Total ILCR	1E-06		Total HI	0.04

1 - Table II Soil Cleanup Target Levels (FDEP, April 2005). Some noncarcinogenic SCTLs not presented in Table II were calculated as per the methodology presented in Technical Report: Development of Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, F.A.C., Final Report, February, 2005.

NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-3

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CONSTRUCTION WORKERS EXPOSED TO SURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	0.2	2	1.0E-07	NA	NA	NA
Arsenic	8	10.8	7.4E-07	Cardiovascular, Skin	83.3	0.10
Barium	546	NA	NA	Cardiovascular	1610	0.34
Copper	357	NA	NA	Gastrointestinal	12100	0.03
Lead	1080	NA	NA	NA	NA	NA
Vanadium	73.1	NA	NA	Hair Loss	302	0.24
		Total ILCR	8E-07		Total HI	0.7

1 - SCTLs were calculated as per the methodology presented in Appendix D.
NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-4

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - MAINTENANCE WORKERS EXPOSED TO SURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	0.2	2	1.0E-07	NA	NA	NA
Arsenic	8	22.7	3.5E-07	Cardiovascular, Skin	3660	0.0022
Barium	546	NA	NA	Cardiovascular	1030000	0.0005
Copper	357	NA	NA	Gastrointestinal	681000	0.0005
Lead	1080	NA	NA	NA	NA	NA
Vanadium	73.1	NA	NA	Hair Loss	17000	0.0043
		Total ILCR	5E-07		Total HI	0.008

1 - SCTLs were calculated as per the methodology presented in Appendix D.
NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-5

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT RECREATIONAL USERS EXPOSED TO SURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	0.2	2	1.0E-07	NA	NA	NA
Arsenic	8	13.1	6.1E-07	Cardiovascular, Skin	845	0.009
Barium	546	NA	NA	Cardiovascular	251000	0.002
Copper	357	NA	NA	Gastrointestinal	146000	0.002
Lead	1080	NA	NA	NA	NA	NA
Vanadium	73.1	NA	NA	Hair Loss	3650	0.02
		Total ILCR	7E-07		Total HI	0.034

1 - SCTLs were calculated as per the methodology presented in Appendix D.
NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-6

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT RECREATIONAL USERS EXPOSED TO SURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	0.2	2	1.0E-07	NA	NA	NA
Arsenic	8	11.8	6.8E-07	Cardiovascular, Skin	1520	0.005
Barium	546	NA	NA	Cardiovascular	387000	0.0014
Copper	357	NA	NA	Gastrointestinal	227000	0.002
Lead	1080	NA	NA	NA	NA	NA
Vanadium	73.1	NA	NA	Hair Loss	5680	0.013
		Total ILCR	8E-07		Total HI	0.021

1 - SCTLs were calculated as per the methodology presented in Appendix D.
NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-7

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - LIFELONG RECREATIONAL USERS EXPOSED TO SURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	0.2	0.83	2.4E-07			
Arsenic	8	6.2	1.3E-06			
Barium	546	NA	NA			
Copper	357	NA	NA			
Lead	1080	NA	NA			
Vanadium	73.1	NA	NA			
		Total ILCR	2E-06		Total HI	

1 - SCTLs were calcuated as per the methodology presented in Appendix D.
NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-8

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - RESIDENTIAL EXPOSURES TO SUBSURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	2	0.1	2.0E-05	NA	NA	NA
Arsenic	3	2.1	1.4E-06	Cardiovascular, Skin	22	0.09
Barium	195	NA	NA	Cardiovascular	5800	0.00
Copper	566	NA	NA	Gastrointestinal	3300	0.06
Lead	274	NA	NA	NA	NA	NA
Vanadium	27	NA	NA	Hair Loss	550	0.50
		Total ILCR	2E-05		Total HI	0.6

1 - Table II Soil Cleanup Target Levels (FDEP, April 2005). Some noncarcinogenic SCTLs not presented in Table II were calculated as per the methodology presented in Technical Report: Development of Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, F.A.C., Final Report, February, 2005.

NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-9

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - TYPICAL INDUSTRIAL EXPOSURES TO SUBSURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	2	0.7	2.9E-06	NA	NA	NA
Arsenic	3	12	2.5E-07	Cardiovascular, Skin	356	0.008
Barium	195	NA	NA	Cardiovascular	130000	0.0015
Copper	566	NA	NA	Gastrointestinal	89000	0.006
Lead	274	NA	NA	NA	NA	NA
Vanadium	27	NA	NA	Hair Loss	10000	0.0027
		Total ILCR	3E-06		Total HI	0.02

1 - Table II Soil Cleanup Target Levels (FDEP, April 2005). Some noncarcinogenic SCTLs not presented in Table II were calculated as per the methodology presented in Technical Report: Development of Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, F.A.C., Final Report, February, 2005.

NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-10

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CONSTRUCTION WORKERS EXPOSED TO SUBSURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	2	2	1.0E-06	NA	NA	NA
Arsenic	3	10.8	2.8E-07	Cardiovascular, Skin	83.3	0.04
Barium	195	NA	NA	Cardiovascular	1610	0.12
Copper	566	NA	NA	Gastrointestinal	12100	0.05
Lead	274	NA	NA	NA	NA	NA
Vanadium	27	NA	NA	Hair Loss	302	0.089
		Total ILCR	1E-06		Total HI	0.3

1 - SCTLs were calculated as per the methodology presented in Appendix D.
NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-11

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - MAINTENANCE WORKERS EXPOSED TO SUBSURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	2	2	1.0E-06	NA	NA	NA
Arsenic	3	22.7	1.3E-07	Cardiovascular, Skin	3660	0.0008
Barium	195	NA	NA	Cardiovascular	1030000	0.0002
Copper	566	NA	NA	Gastrointestinal	681000	0.0008
Lead	274	NA	NA	NA	NA	NA
Vanadium	27	NA	NA	Hair Loss	17000	0.002
		Total ILCR	1E-06		Total HI	0.003

1 - SCTLs were calculated as per the methodology presented in Appendix D.
NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-12

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADOLESCENT RECREATIONAL USERS EXPOSED TO SUBSURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	2	2	1.0E-06	NA	NA	NA
Arsenic	3	13.1	2.3E-07	Cardiovascular, Skin	845	0.004
Barium	195	NA	NA	Cardiovascular	251000	0.0008
Copper	566	NA	NA	Gastrointestinal	146000	0.004
Lead	274	NA	NA	NA	NA	NA
Vanadium	27	NA	NA	Hair Loss	3650	0.007
		Total ILCR	1E-06		Total HI	0.016

1 - SCTLs were calculated as per the methodology presented in Appendix D.
NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-13

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - ADULT RECREATIONAL USERS EXPOSED TO SUBSURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	2	2	1.0E-06	NA	NA	NA
Arsenic	3	11.8	2.5E-07	Cardiovascular, Skin	1520	0.002
Barium	195	NA	NA	Cardiovascular	387000	0.0005
Copper	566	NA	NA	Gastrointestinal	227000	0.002
Lead	274	NA	NA	NA	NA	NA
Vanadium	27	NA	NA	Hair Loss	5680	0.005
		Total ILCR	1E-06		Total HI	0.010

1 - SCTLs were calculated as per the methodology presented in Appendix D.
NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-14

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - LIFELONG RECREATIONAL USERS EXPOSED TO SUBSURFACE SOIL
SITE 43
NAVAL AIR STATION, PENSACOLA
PENSACOLA, FLORIDA

Chemical	Incremental Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Point Concentration (mg/kg)	SCTL[1] (mg/kg)	Estimated ILCR	Primary Target Organs	SCTL[1] (mg/kg)	Estimated HQ
Carcinogenic PAHs	2	0.83	2.4E-06			
Arsenic	3	6.2	4.8E-07			
Barium	195	NA	NA			
Copper	566	NA	NA			
Lead	274	NA	NA			
Vanadium	27	NA	NA			
		Total ILCR	3E-06		Total HI	

1 - SCTLs were calculated as per the methodology presented in Appendix D.
NA - Not applicable. There are no cancer slope factors (CSF) available for this chemical.

TABLE D-15

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
RESIDENTIAL EXPOSURE TO ONSITE GROUNDWATER - SHALLOW AQUIFER
SITE 43
NAVAL AIR STATION PENSACOLA, PENSACOLA, FLORIDA

Chemical	Estimated Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Concentration µg/L	PRG[1] µg/L	Estimated ILCR	Primary Target Organs	PRG[1] µg/L	Estimated HQ
Chloroform	3.5	0.17	2.1E-05	Liver	80	0.04
Iron	2400	NA	NA	Gastrointestinal	11000	0.22
Manganese	115	NA	NA	Neurological	880	0.13
		Total Carcinogenic Risk	2.1E-05		Total HI	0.4

Total Liver HI = 0.04

Total Gastrointestinal HI = 0.22

Total Neurological HI = 0.13

1 Tap Water Preliminary Remediation Goal (PRG) (USEPA Region 9, October 2004).

2 NA - Not applicable. The USEPA has not established a cancer slope factor (CSF) or noncarcinogenic reference dose (RfD) for this chemical.

TABLE D-16

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
RESIDENTIAL EXPOSURE TO ONSITE GROUNDWATER - DEEPER AQUIFER
SITE 43
NAVAL AIR STATION PENSACOLA, PENSACOLA, FLORIDA

Chemical	Estimated Lifetime Carcinogenic Risk (ILCR)			Estimated Non-Carcinogenic Hazard Quotient (HQ)		
	Exposure Concentration µg/L	PRG[1] µg/L	Estimated ILCR	Primary Target Organs	PRG[1] µg/L	Estimated HQ
Chloroform	N D	0.17		Liver	80	
Iron	1600	NA	NA	Gastrointestinal	11000	0.15
Manganese	27	NA	NA	Neurological	880	0.03
		Total Carcinogenic Risk			Total HI	0.2

Total Liver HI = NA

Total Gastrointestinal HI = 0.15

Total Neurological HI = 0.03

1 Tap Water Preliminary Remediation Goal (PRG) (USEPA Region 9, October 2004).

2 NA - Not applicable. The USEPA has not established a cancer slope factor (CSF) or noncarcinogenic reference dose (RfD) for this chemical.

APPENDIX D.2

FDEP UCL CALCULATOR RESULTS

FDEP UCL Calculator Version 0.97
2-METHYLNAPHTHALENE - SURFACE SOIL

7/28/05

Summary Statistics for	
Number of Samples	20
Number of Censored Data	13
Minimum	0.6
Maximum	9
Mean	2.2925
Median	0.6
Standard Deviation	2.916662
Variance	8.506914
Coefficient of Variation	1.272262
Skewness	1.560943

95% UCL (Assuming Normal Data)	
Student's-t	3.420215

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	3.608615
Modified-t	3.458155

95% Non-parametric UCL	
CLT	3.365345
Jackknife	NA
Standard Bootstrap	3.377193
Bootstrap-t	3.720962
Chebyshev (Mean, Std)	5.135376

Summary Statistics for ln()	
Minimum	-0.51083
Maximum	2.197225
Mean	0.203604
Standard Deviation	1.059841
Variance	1.123263

Goodness-of-Fit Results	
Distribution Recommended	Neither
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	2.149501
MLE Standard Deviation	3.096231
MLE Median	1.225813
MLE Coefficient of Variation	1.440442
MVUE Estimate of Mean	1.933345
MVUE Estimate of Std. Dev.	2.093918
MVUE Estimate of SE	0.776152
MVUE Coefficient of Variation	1.083054

UCL Assuming Lognormal Distribution	
95% H-UCL	4.188386
95% Chebyshev (MVUE) UCL	5.316515
99% Chebyshev (MVUE) UCL	9.655981

FDEP Recommended UCL to Use:
5.135376

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97

7/28/05

ACENAPHTHENE - SURFACE SOIL

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for	
Number of Samples	20
Number of Censored Data	15
Minimum	1.6
Maximum	3
Mean	1.69
Median	1.6
Standard Deviation	0.496196
Variance	
Coefficient of Variation	0.293607
Skewness	1.950309

95% UCL (Assuming Normal Data)	
Student's-t	NA

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	NA
Modified-t	NA

95% Non-parametric UCL	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

95% Bounding Method UCL	
Bounding (Max)	2.258203
Bounding (1/2 DL)	1.848423

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

Goodness-of-Fit Results	
Distribution Recommended	NA
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:
2.258203

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

ACENAPHTHYLENE - SURFACE SOIL

Note: Results reflect censored parameter estimations based on distributional assumptions.

Censor Estimated Statistics for

Number of Samples	20
Number of Censored Data	9
Minimum Non-censored	1
Maximum	11
Mean	2.012761
Median	1
Standard Deviation	4.546184
Variance	20.66779
Coefficient of Variation	2.258681
Skewness	1.268545
Fit	0.960034

95% UCL (Assuming Normal Data)

Student's-t	3.770524

95% UCL (Adjusted for Skewness)

Adjusted-CLT	3.913402
Modified-t	3.806145

95% Non-parametric UCL

CLT	3.684998
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	6.294395

Censor Estimated Statistics for ln()

Minimum	-0.51083
Maximum	2.397895
Mean	2.012761
Standard Deviation	4.546184
Variance	20.66779

Goodness-of-Fit Results

Distribution Recommended	Normal
Distribution Used	Normal

Estimates Assuming Lognormal Distribution

MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution

95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:

3.770524

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97

ANTHRACENE - SURFACE SOIL

7/28/05

Summary Statistics for	
Number of Samples	20
Number of Censored Data	3
Minimum	0.8
Maximum	17
Mean	4.775
Median	2
Standard Deviation	5.414685
Variance	29.31882
Coefficient of Variation	1.133965
Skewness	1.425367

95% UCL (Assuming Normal Data)	
Student's-t	6.868566

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	7.179098
Modified-t	6.932881

95% Non-parametric UCL	
CLT	6.766701
Jackknife	NA
Standard Bootstrap	6.845158
Bootstrap-t	7.765525
Chebyshev (Mean, Std)	10.0527

Summary Statistics for ln()	
Minimum	-0.22314
Maximum	2.833213
Mean	1.005397
Standard Deviation	1.060618
Variance	1.124911

Goodness-of-Fit Results	
Distribution Recommended	Neither
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	4.796334
MLE Standard Deviation	6.917276
MLE Median	2.732991
MLE Coefficient of Variation	1.4422
MVUE Estimate of Mean	4.573162
MVUE Estimate of Std. Dev.	5.635908
MVUE Estimate of SE	1.309771
MVUE Coefficient of Variation	1.232387

UCL Assuming Lognormal Distribution	
95% H-UCL	9.353007
95% Chebyshev (MVUE) UCL	10.28232
99% Chebyshev (MVUE) UCL	17.60526

FDEP Recommended UCL to Use:

10.0527

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97
cPAHS - SURFACE SOIL

7/28/05

Summary Statistics for	
Number of Samples	20
Number of Censored Data	0
Minimum	4.533
Maximum	288.07
Mean	77.5141
Median	41.253
Standard Deviation	90.4094
Variance	8173.859
Coefficient of Variation	1.166361
Skewness	1.622292

95% UCL (Assuming Normal Data)	
Student's-t	112.4705

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	118.6068
Modified-t	113.6928

95% Non-parametric UCL	
CLT	110.7697
Jackknife	NA
Standard Bootstrap	111.5555
Bootstrap-t	126.0678
Chebyshev (Mean, Std)	165.6363

Summary Statistics for ln()	
Minimum	1.511384
Maximum	5.663204
Mean	3.741358
Standard Deviation	1.157717
Variance	1.340308

Goodness-of-Fit Results	
Distribution Recommended	Lognormal
Distribution Used	Lognormal

Estimates Assuming Lognormal Distribution	
MLE Mean	82.39380
MLE Standard Deviation	138.3682
MLE Median	42.15518
MLE Coefficient of Variation	1.679351
MVUE Estimate of Mean	78.25732
MVUE Estimate of Std. Dev.	110.5136
MVUE Estimate of SE	23.21224
MVUE Coefficient of Variation	1.412182

UCL Assuming Lognormal Distribution	
95% H-UCL	177.5195
95% Chebyshev (MVUE) UCL	179.4371
99% Chebyshev (MVUE) UCL	309.2168

FDEP Recommended UCL to Use:
177.5195

PROUCL 2.1 179.4371

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97

BENZO(GHI)PERYLENE - SURFACE SOIL

7/28/05

Summary Statistics for	
Number of Samples	20
Number of Censored Data	1
Minimum	2
Maximum	110
Mean	25.125
Median	13.5
Standard Deviation	30.03326
Variance	901.9967
Coefficient of Variation	1.195354
Skewness	1.820753

95% UCL (Assuming Normal Data)	
Student's-t	36.73724

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	39.09415
Modified-t	37.19293

95% Non-parametric UCL	
CLT	36.17223
Jackknife	NA
Standard Bootstrap	36.13972
Bootstrap-t	40.61754
Chebyshev (Mean, Std)	54.39848

Summary Statistics for ln()	
Minimum	0.693147
Maximum	4.70048
Mean	2.61121
Standard Deviation	1.142537
Variance	1.305392

Goodness-of-Fit Results	
Distribution Recommended	Lognormal
Distribution Used	Lognormal

Estimates Assuming Lognormal Distribution	
MLE Mean	26.15148
MLE Standard Deviation	42.88471
MLE Median	13.61552
MLE Coefficient of Variation	1.639858
MVUE Estimate of Mean	24.82228
MVUE Estimate of Std. Dev.	34.20008
MVUE Estimate of SE	7.401742
MVUE Coefficient of Variation	1.377797

UCL Assuming Lognormal Distribution	
95% H-UCL	55.44342
95% Chebyshev (MVUE) UCL	57.08574
99% Chebyshev (MVUE) UCL	98.46888

FDEP Recommended UCL to Use:

55.44342

PROUCL 2.1 57.08574

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97
FLUORANTHENE - SURFACE SOIL

7/28/05

Summary Statistics for	
Number of Samples	20
Number of Censored Data	0
Minimum	5
Maximum	280
Mean	84.4
Median	51
Standard Deviation	89.30692
Variance	7975.726
Coefficient of Variation	1.058139
Skewness	1.448271

95% UCL (Assuming Normal Data)	
Student's-t	118.9302

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	124.1612
Modified-t	120.008

95% Non-parametric UCL	
CLT	117.25
Jackknife	NA
Standard Bootstrap	119.4118
Bootstrap-t	137.6028
Chebyshev (Mean, Std)	171.4476

Summary Statistics for ln()	
Minimum	1.609438
Maximum	5.634789
Mean	3.923321
Standard Deviation	1.072985
Variance	1.151296

Goodness-of-Fit Results	
Distribution Recommended	Lognormal
Distribution Used	Lognormal

Estimates Assuming Lognormal Distribution	
MLE Mean	89.92436
MLE Standard Deviation	132.2313
MLE Median	50.56809
MLE Coefficient of Variation	1.470472
MVUE Estimate of Mean	86.20941
MVUE Estimate of Std. Dev.	109.878
MVUE Estimate of SE	23.40436
MVUE Coefficient of Variation	1.274547

UCL Assuming Lognormal Distribution	
95% H-UCL	177.519
95% Chebyshev (MVUE) UCL	188.2267
99% Chebyshev (MVUE) UCL	319.0805

FDEP Recommended UCL to Use:
177.519

PROUCL 2.1 188.2267

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97

NAPHTHALENE - SURFACE SOIL

7/28/05

Summary Statistics for	
Number of Samples	20
Number of Censored Data	11
Minimum	0.9
Maximum	3
Mean	1.24
Median	1
Standard Deviation	0.64351
Variance	0.414105
Coefficient of Variation	0.51896
Skewness	2.426374

95% UCL (Assuming Normal Data)	
Student's-t	1.466611

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	1.560136
Modified-t	1.501822

95% Non-parametric UCL	
CLT	1.476704
Jackknife	NA
Standard Bootstrap	1.463058
Bootstrap-t	1.813449
Chebyshev (Mean, Std)	1.867231

Summary Statistics for ln()	
Minimum	-0.10536
Maximum	1.098612
Mean	0.133983
Standard Deviation	0.366888
Variance	0.134607

Goodness-of-Fit Results	
Distribution Recommended	Neither
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	1.222974
MLE Standard Deviation	0.464226
MLE Median	1.143373
MLE Coefficient of Variation	0.379587
MVUE Estimate of Mean	1.213434
MVUE Estimate of Std. Dev.	0.449108
MVUE Estimate of SE	0.149624
MVUE Coefficient of Variation	0.370113

UCL Assuming Lognormal Distribution	
95% H-UCL	1.439726
95% Chebyshev (MVUE) UCL	1.865629
99% Chebyshev (MVUE) UCL	2.702175

FDEP Recommended UCL to Use:

1.867231

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97

PHENANTHRENE - SURFACE SOIL

7/28/05

Summary Statistics for	
Number of Samples	20
Number of Censored Data	0
Minimum	2
Maximum	85
Mean	25.075
Median	12.5
Standard Deviation	25.56018
Variance	653.323
Coefficient of Variation	1.019349
Skewness	1.228306

95% UCL (Assuming Normal Data)	
Student's-t	34.95774

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	36.15448
Modified-t	35.21937

95% Non-parametric UCL	
CLT	34.47688
Jackknife	NA
Standard Bootstrap	34.93332
Bootstrap-t	36.86718
Chebyshev (Mean, Std)	49.98856

Summary Statistics for ln()	
Minimum	0.693147
Maximum	4.442651
Mean	2.720072
Standard Deviation	1.049586
Variance	1.101632

Goodness-of-Fit Results	
Distribution Recommended	Lognormal
Distribution Used	Lognormal

Estimates Assuming Lognormal Distribution	
MLE Mean	26.33472
MLE Standard Deviation	37.32729
MLE Median	15.18142
MLE Coefficient of Variation	1.417417
MVUE Estimate of Mean	25.30601
MVUE Estimate of Std. Dev.	31.32879
MVUE Estimate of SE	6.696449
MVUE Coefficient of Variation	1.237998

UCL Assuming Lognormal Distribution	
95% H-UCL	50.80029
95% Chebyshev (MVUE) UCL	54.49516
99% Chebyshev (MVUE) UCL	91.93501

FDEP Recommended UCL to Use:

50.80029

PROUCL 2.1 54.49516

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97

PYRENE - SURFACE SOIL

7/28/05

Summary Statistics for PYRENE	
Number of Samples	20
Number of Censored Data	0
Minimum	4
Maximum	190
Mean	56.4
Median	31
Standard Deviation	62.08178
Variance	3854.147
Coefficient of Variation	1.100741
Skewness	1.387668

95% UCL (Assuming Normal Data)	
Student's-t	80.40366

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	83.839
Modified-t	81.12157

95% Non-parametric UCL	
CLT	79.23574
Jackknife	NA
Standard Bootstrap	78.56691
Bootstrap-t	89.08254
Chebyshev (Mean, Std)	116.9112

Summary Statistics for ln(PYRENE)	
Minimum	1.386294
Maximum	5.247024
Mean	3.447836
Standard Deviation	1.147204
Variance	1.316077

Goodness-of-Fit Results	
Distribution Recommended	Lognormal
Distribution Used	Lognormal

Estimates Assuming Lognormal Distribution	
MLE Mean	60.69577
MLE Standard Deviation	100.2632
MLE Median	31.43229
MLE Coefficient of Variation	1.651897
MVUE Estimate of Mean	57.71951
MVUE Estimate of Std. Dev.	80.49792
MVUE Estimate of SE	16.93919
MVUE Coefficient of Variation	1.39464

UCL Assuming Lognormal Distribution	
95% H-UCL	129.3166
95% Chebyshev (MVUE) UCL	131.5558
99% Chebyshev (MVUE) UCL	226.2628

FDEP Recommended UCL to Use:

129.3166

PROUCL 2.1 131.5558

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

BIS(2-ETHYLHEXYL)PHTHALATE - SURFACE SOIL

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for	
Number of Samples	20
Number of Censored Data	17
Minimum	182
Maximum	870
Mean	195.475
Median	161
Standard Deviation	159.8497
Variance	
Coefficient of Variation	0.81775
Skewness	4.369537

95% UCL (Assuming Normal Data)	
Student's-t	NA

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	NA
Modified-t	NA

95% Non-parametric UCL	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

95% Bounding Method UCL	
Bounding (Max)	351.2773
Bounding (1/2 DL)	296.3054

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

Goodness-of-Fit Results	
Distribution Recommended	NA
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:
351.2773

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97

ARSENIC - SURFACE SOIL

7/28/05

Summary Statistics for	
Number of Samples	11
Number of Censored Data	1
Minimum	0.23
Maximum	8
Mean	3.702727
Median	3.5
Standard Deviation	2.656517
Variance	7.057082
Coefficient of Variation	0.717449
Skewness	0.459738

95% UCL (Assuming Normal Data)	
Student's-t	5.154454

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	5.138975
Modified-t	5.172959

95% Non-parametric UCL	
CLT	5.020323
Jackknife	NA
Standard Bootstrap	4.984761
Bootstrap-t	5.347094
Chebyshev (Mean, Std)	7.194155

Summary Statistics for ln()	
Minimum	-1.46968
Maximum	2.079442
Mean	0.95326
Standard Deviation	1.04278
Variance	1.087389

Goodness-of-Fit Results	
Distribution Recommended	Lognormal
Distribution Used	Lognormal

Estimates Assuming Lognormal Distribution	
MLE Mean	4.468063
MLE Standard Deviation	6.265682
MLE Median	2.594154
MLE Coefficient of Variation	1.402326
MVUE Estimate of Mean	4.148555
MVUE Estimate of Std. Dev.	4.669717
MVUE Estimate of SE	1.437065
MVUE Coefficient of Variation	1.125625

UCL Assuming Lognormal Distribution	
95% H-UCL	13.0372
95% Chebyshev (MVUE) UCL	10.41258
99% Chebyshev (MVUE) UCL	18.44721

FDEP Recommended UCL to Use:
8

PROUCL 2.1 8

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

BARIUM - SURFACE SOIL

Summary Statistics for	
Number of Samples	12
Number of Censored Data	0
Minimum	2.2
Maximum	726
Mean	204.7208
Median	43.5
Standard Deviation	271.0042
Variance	73443.3
Coefficient of Variation	1.323775
Skewness	1.245598

95% UCL (Assuming Normal Data)	
Student's-t	345.2168

95% UCL (Adjusted for Skewness)	
Adjusted CLT	363.4748
Modified-t	349.9052

95% Non-parametric UCL	
CLT	333.4128
Jackknife	NA
Standard Bootstrap	335.2741
Bootstrap-t	467.7939
Chebyshev (Mean, Std)	545.7349

Summary Statistics for ln()	
Minimum	0.788457
Maximum	6.58755
Mean	3.858537
Standard Deviation	2.129136
Variance	4.533221

Goodness-of-Fit Results	
Distribution Recommended	Lognormal
Distribution Used	Lognormal

Estimates Assuming Lognormal Distribution	
MLE Mean	457.2123
MLE Standard Deviation	4386.804
MLE Median	47.39597
MLE Coefficient of Variation	9.594676
MVUE Estimate of Mean	295.4803
MVUE Estimate of Std. Dev.	876.7157
MVUE Estimate of SE	195.0056
MVUE Coefficient of Variation	2.967087

UCL Assuming Lognormal Distribution	
95% H-UCL	15619.81
95% Chebyshev (MVUE) UCL	1145.49
99% Chebyshev (MVUE) UCL	2235.767

FDEP Recommended UCL to Use:
545.7349

PROUCL 2.1 726

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97

COPPER - SURFACE SOIL

7/28/05

Summary Statistics for	
Number of Samples	17
Number of Censored Data	0
Minimum	1.7
Maximum	889
Mean	113.8971
Median	8.2
Standard Deviation	229.9306
Variance	52868.06
Coefficient of Variation	2.018758
Skewness	2.77139

95% UCL (Assuming Normal Data)	
Student's-t	211.2586

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	245.6909
Modified-t	217.506

95% Non-parametric UCL	
CLT	205.6327
Jackknife	NA
Standard Bootstrap	203.295
Bootstrap-t	418.285
Chebyshev (Mean, Std)	356.9826

Summary Statistics for ln()	
Minimum	0.530628
Maximum	6.790097
Mean	2.97264
Standard Deviation	1.90722
Variance	3.637487

Goodness-of-Fit Results	
Distribution Recommended	Neither
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	120.4679
MLE Standard Deviation	732.7404
MLE Median	19.54344
MLE Coefficient of Variation	6.082453
MVUE Estimate of Mean	94.67421
MVUE Estimate of Std. Dev.	276.5605
MVUE Estimate of SE	51.95513
MVUE Coefficient of Variation	2.921181

UCL Assuming Lognormal Distribution	
95% H-UCL	960.41
95% Chebyshev (MVUE) UCL	321.1414
99% Chebyshev (MVUE) UCL	611.6226

FDEP Recommended UCL to Use:
356.9826

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

LEAD - SURFACE SOIL

Summary Statistics for	
Number of Samples	17
Number of Censored Data	0
Minimum	10.7
Maximum	7360
Mean	1076.756
Median	88
Standard Deviation	1941.552
Variance	3769625
Coefficient of Variation	1.80315
Skewness	2.517396

95% UCL (Assuming Normal Data)	
Student's-t	1898.885

95% UCL (Adjusted for Skewness)	
Adjusted CLT	2158.633
Modified-t	1946.803

95% Non-parametric UCL	
CLT	1851.379
Jackknife	NA
Standard Bootstrap	1851.234
Bootstrap-t	2937.167
Chebyshev (Mean, Std)	3129.39

Summary Statistics for ln()	
Minimum	2.370244
Maximum	8.903815
Mean	5.187236
Standard Deviation	2.150053
Variance	4.622726

Goodness-of-Fit Results	
Distribution Recommended	Lognormal
Distribution Used	Lognormal

Estimates Assuming Lognormal Distribution	
MLE Mean	1805.511
MLE Standard Deviation	18124.59
MLE Median	178.9732
MLE Coefficient of Variation	10.03848
MVUE Estimate of Mean	1281.279
MVUE Estimate of Std. Dev.	4629.961
MVUE Estimate of SE	791.5706
MVUE Coefficient of Variation	3.613545

UCL Assuming Lognormal Distribution	
95% H-UCL	24080.34
95% Chebyshev (MVUE) UCL	4731.657
99% Chebyshev (MVUE) UCL	9157.328

FDEP Recommended UCL to Use:
3129.39

PROUCL 2.1 7360

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

2-METHYLNAPHTHALENE - SUBSURFACE SOIL

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for 2-METHYL	
Number of Samples	40
Number of Censored Data	31
Minimum	1.2
Maximum	670
Mean	18.38
Median	1.2
Standard Deviation	105.6824
Variance	
Coefficient of Variation	5.749856
Skewness	6.322603

95% UCL (Assuming Normal Data)	
Student's-t	NA

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	NA
Modified-t	NA

95% Non-parametric UCL	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

95% Bounding Method UCL	
Bounding (Max)	91.21655
Bounding (1/2 DL)	90.80518

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

Goodness-of-Fit Results	
Distribution Recommended	NA
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:

91.21655

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

ACENAPHTHENE - SUBSURFACE SOIL

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for ACENAPH	
Number of Samples	40
Number of Censored Data	37
Minimum	1.6
Maximum	1800
Mean	46.4525
Median	1.4
Standard Deviation	284.3696
Variance	
Coefficient of Variation	6.121728
Skewness	6.324547

95% UCL (Assuming Normal Data)	
Student's-t	NA

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	NA
Modified-t	NA

95% Non-parametric UCL	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

95% Bounding Method UCL	
Bounding (Max)	242.4408
Bounding (1/2 DL)	241.8457

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

Goodness-of-Fit Results	
Distribution Recommended	NA
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:
242.4408

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97

ACENAPHTHYLENE - SUBSURFACE SOIL **7/28/05**

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for ACENAPHTHYLENE	
Number of Samples	40
Number of Censored Data	36
Minimum	2.5
Maximum	12
Mean	1.8375
Median	1.2
Standard Deviation	2.163768
Variance	
Coefficient of Variation	1.177561
Skewness	3.763005

95% UCL (Assuming Normal Data)	
Student's-t	NA

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	NA
Modified-t	NA

95% Non-parametric UCL	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

95% Bounding Method UCL	
Bounding (Max)	3.328774
Bounding (1/2 DL)	2.360276

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

Goodness-of-Fit Results	
Distribution Recommended	NA
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:

3.328774

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

ANTHRACENE - SUBSURFACE SOIL

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for ANTHRACENE	
Number of Samples	40
Number of Censored Data	32
Minimum	1.8
Maximum	8000
Mean	202.4
Median	1.6
Standard Deviation	1264.524
Variance	
Coefficient of Variation	6.247651
Skewness	6.324514

95% UCL (Assuming Normal Data)	
Student's-t	NA

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	NA
Modified-t	NA

95% Non-parametric UCL	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

95% Bounding Method UCL	
Bounding (Max)	1073.914
Bounding (1/2 DL)	1073.319

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

Goodness-of-Fit Results	
Distribution Recommended	NA
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:

1073.914

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97
cPAHS - SUBSURFACE SOIL

7/28/05

Summary Statistics for BAP EQUIVALENT	
Number of Samples	40
Number of Censored Data	25
Minimum	0.8
Maximum	14765.7
Mean	397.2618
Median	0.8
Standard Deviation	2332.063
Variance	5438517
Coefficient of Variation	5.870343
Skewness	6.308067

95% UCL (Assuming Normal Data)	
Student's-t	1018.528

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	1396.852
Modified-t	1079.823

95% Non-parametric UCL	
CLT	1003.825
Jackknife	NA
Standard Bootstrap	925.4874
Bootstrap-t	16204.64
Chebyshev (Mean, Std)	2004.562

Summary Statistics for ln(BAP EQUIVALENT	
Minimum	-0.22314
Maximum	9.600062
Mean	1.058306
Standard Deviation	2.246876
Variance	5.048451

Goodness-of-Fit Results	
Distribution Recommended	Neither
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	35.96446
MLE Standard Deviation	447.4373
MLE Median	2.881485
MLE Coefficient of Variation	12.4411
MVUE Estimate of Mean	23.37825
MVUE Estimate of Std. Dev.	85.46258
MVUE Estimate of SE	15.44841
MVUE Coefficient of Variation	3.655645

UCL Assuming Lognormal Distribution	
95% H-UCL	155.1433
95% Chebyshev (MVUE) UCL	90.71632
99% Chebyshev (MVUE) UCL	177.0884

FDEP Recommended UCL to Use:
2004.562

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

BENZO(GHI)PERYLENE - SUBSURFACE SOIL

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for BENZO(G,H,I)PERYL	
Number of Samples	40
Number of Censored Data	33
Minimum	7
Maximum	4600
Mean	126.9
Median	4
Standard Deviation	725.9579
Variance	
Coefficient of Variation	5.720709
Skewness	6.309306

95% UCL (Assuming Normal Data)	
Student's-t	NA

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	NA
Modified-t	NA

95% Non-parametric UCL	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

95% Bounding Method UCL	
Bounding (Max)	627.2321
Bounding (1/2 DL)	625.7798

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

Goodness-of-Fit Results	
Distribution Recommended	NA
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:
627.2321

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97
FLUORANTHENE - SUBSURFACE SOIL

7/28/05

Summary Statistics for FLUORANTHENE	
Number of Samples	40
Number of Censored Data	25
Minimum	2
Maximum	30000
Mean	769.1
Median	2
Standard Deviation	4740.614
Variance	22473419
Coefficient of Variation	6.163846
Skewness	6.323319

95% UCL (Assuming Normal Data)	
Student's-t	2032.01

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	2802.997
Modified-t	2156.911

95% Non-parametric UCL	
CLT	2002.121
Jackknife	NA
Standard Bootstrap	1817.175
Bootstrap-t	142690.6
Chebyshev (Mean, Std)	4036.418

Summary Statistics for ln(FLUORANTHENE)	
Minimum	0.693147
Maximum	10.30895
Mean	1.609196
Standard Deviation	1.962207
Variance	3.850257

Goodness-of-Fit Results	
Distribution Recommended	Neither
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	34.27184
MLE Standard Deviation	232.4559
MLE Median	4.998788
MLE Coefficient of Variation	6.782709
MVUE Estimate of Mean	25.64849
MVUE Estimate of Std. Dev.	74.54143
MVUE Estimate of SE	14.95433
MVUE Coefficient of Variation	2.906269

UCL Assuming Lognormal Distribution	
95% H-UCL	107.8002
95% Chebyshev (MVUE) UCL	90.83293
99% Chebyshev (MVUE) UCL	174.4426

FDEP Recommended UCL to Use:
4036.418

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

NAPHTHALENE - SUBSURFACE SOIL

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for NAPHTHALENE	
Number of Samples	40
Number of Censored Data	32
Minimum	2
Maximum	2400
Mean	61.815
Median	1.8
Standard Deviation	379.1792
Variance	
Coefficient of Variation	6.134098
Skewness	6.324543

95% UCL (Assuming Normal Data)	
Student's-t	NA

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	NA
Modified-t	NA

95% Non-parametric UCL	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

95% Bounding Method UCL	
Bounding (Max)	323.1463
Bounding (1/2 DL)	322.4847

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

Goodness-of-Fit Results	
Distribution Recommended	NA
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:
323.1463

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97

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PHENANTHRENE - SUBSURFACE SOIL

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for PHENANTHRENE	
Number of Samples	40
Number of Censored Data	28
Minimum	4
Maximum	28000
Mean	707.8
Median	4
Standard Deviation	4425.939
Variance	
Coefficient of Variation	6.253093
Skewness	6.324485

95% UCL (Assuming Normal Data)	
Student's-t	NA

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	NA
Modified-t	NA

95% Non-parametric UCL	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

95% Bounding Method UCL	
Bounding (Max)	3758.169
Bounding (1/2 DL)	3756.927

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

Goodness-of-Fit Results	
Distribution Recommended	NA
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:
3758.169

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

PYRENE - SUBSURFACE SOIL

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for PYRENE	
Number of Samples	40
Number of Censored Data	28
Minimum	4
Maximum	17000
Mean	441.1125
Median	4
Standard Deviation	2685.635
Variance	
Coefficient of Variation	6.088324
Skewness	6.322247

95% UCL (Assuming Normal Data)	
Student's-t	NA

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	NA
Modified-t	NA

95% Non-parametric UCL	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

95% Bounding Method UCL	
Bounding (Max)	2292.06
Bounding (1/2 DL)	2290.821

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

Goodness-of-Fit Results	
Distribution Recommended	NA
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:
2292.06

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

DI-N-BUTYL PHTHALATE - SUBSURFACE SOIL

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for DI-N-BUTYL PHTHAL	
Number of Samples	40
Number of Censored Data	36
Minimum	650
Maximum	1200
Mean	263.45
Median	180
Standard Deviation	262.9319
Variance	
Coefficient of Variation	0.998033
Skewness	3.087556

95% UCL (Assuming Normal Data)	
Student's-t	NA

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	NA
Modified-t	NA

95% Non-parametric UCL	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

95% Bounding Method UCL	
Bounding (Max)	444.6634
Bounding (1/2 DL)	381.7619

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

Goodness-of-Fit Results	
Distribution Recommended	NA
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

UCL Assuming Lognormal Distribution	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

FDEP Recommended UCL to Use:
444.6634

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

ARSENIC - SUBSURFACE SOIL

Summary Statistics for ARSENIC	
Number of Samples	40
Number of Censored Data	16
Minimum	0.17
Maximum	11.4
Mean	1.202187
Median	0.29
Standard Deviation	2.565856
Variance	6.583617
Coefficient of Variation	2.134323
Skewness	3.132961

95% UCL (Assuming Normal Data)	
Student's-t	1.885737

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	2.084329
Modified-t	1.919232

95% Non-parametric UCL	
CLT	1.86956
Jackknife	NA
Standard Bootstrap	1.838195
Bootstrap-t	2.890998
Chebyshev (Mean, Std)	2.970623

Summary Statistics for ln(ARSENIC)	
Minimum	-1.77196
Maximum	2.433613
Mean	-0.80517
Standard Deviation	1.11818
Variance	1.250327

Goodness-of-Fit Results	
Distribution Recommended	Neither
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	0.835262
MLE Standard Deviation	1.318414
MLE Median	0.44701
MLE Coefficient of Variation	1.578444
MVUE Estimate of Mean	0.802817
MVUE Estimate of Std. Dev.	1.104138
MVUE Estimate of SE	0.212052
MVUE Coefficient of Variation	1.375329

UCL Assuming Lognormal Distribution	
95% H-UCL	1.312376
95% Chebyshev (MVUE) UCL	1.727129
99% Chebyshev (MVUE) UCL	2.91271

FDEP Recommended UCL to Use:

2.970623

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97

BARIUM - SUBSURFACE SOIL

7/28/05

Summary Statistics for BARIUM	
Number of Samples	40
Number of Censored Data	1
Minimum	0.32
Maximum	939
Mean	68.075
Median	2.6
Standard Deviation	183.7042
Variance	33747.23
Coefficient of Variation	2.698556
Skewness	3.595258

95% UCL (Assuming Normal Data)	
Student's-t	117.0142

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	133.5015
Modified-t	119.7661

95% Non-parametric UCL	
CLT	115.856
Jackknife	NA
Standard Bootstrap	112.7063
Bootstrap-t	243.9641
Chebyshev (Mean, Std)	194.6873

Summary Statistics for ln(BARIUM)	
Minimum	-1.13943
Maximum	6.844815
Mean	1.809569
Standard Deviation	2.019187
Variance	4.077116

Goodness-of-Fit Results	
Distribution Recommended	Neither
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	46.90513
MLE Standard Deviation	357.1423
MLE Median	6.107814
MLE Coefficient of Variation	7.614141
MVUE Estimate of Mean	40.76739
MVUE Estimate of Std. Dev.	184.4447
MVUE Estimate of SE	18.58598
MVUE Coefficient of Variation	4.52432

UCL Assuming Lognormal Distribution	
95% H-UCL	156.6407
95% Chebyshev (MVUE) UCL	121.7818
99% Chebyshev (MVUE) UCL	225.6961

FDEP Recommended UCL to Use:

194.6873

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97
COPPER - SUBSURFACE SOIL

7/28/05

Summary Statistics for COPPER	
Number of Samples	40
Number of Censored Data	1
Minimum	0.22
Maximum	3380
Mean	169.8377
Median	1.15
Standard Deviation	574.2465
Variance	329759.1
Coefficient of Variation	3.381148
Skewness	4.890218

95% UCL (Assuming Normal Data)	
Student's-t	322.8183

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	394.2238
Modified-t	334.519

95% Non-parametric UCL	
CLT	319.1978
Jackknife	NA
Standard Bootstrap	302.4697
Bootstrap-t	784.7633
Chebyshev (Mean, Std)	565.619

Summary Statistics for ln(COPPER)	
Minimum	-1.51413
Maximum	8.125631
Mean	1.305698
Standard Deviation	2.596656
Variance	6.74262

Goodness-of-Fit Results	
Distribution Recommended	Neither
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	107.4482
MLE Standard Deviation	3126.685
MLE Median	3.690265
MLE Coefficient of Variation	29.09947
MVUE Estimate of Mean	78.65095
MVUE Estimate of Std. Dev.	737.4525
MVUE Estimate of SE	48.20363
MVUE Coefficient of Variation	9.37627

UCL Assuming Lognormal Distribution	
95% H-UCL	723.7839
95% Chebyshev (MVUE) UCL	288.7657
99% Chebyshev (MVUE) UCL	558.2723

FDEP Recommended UCL to Use:
565.619

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97
LEAD - SUBSURFACE SOIL

7/28/05

Summary Statistics for LEAD	
Number of Samples	40
Number of Censored Data	2
Minimum	0.24
Maximum	5500
Mean	273.8665
Median	1.8
Standard Deviation	928.1213
Variance	861409.2
Coefficient of Variation	3.388955
Skewness	4.942349

95% UCL (Assuming Normal Data)	
Student's-t	521.12

95% UCL (Adjusted for Skewness)	
Adjusted-CLT	637.8214
Modified-t	540.2329

95% Non-parametric UCL	
CLT	515.2684
Jackknife	NA
Standard Bootstrap	532.2678
Bootstrap-t	956.1835
Chebyshev (Mean, Std)	913.5448

Summary Statistics for ln(LEAD)	
Minimum	-1.42712
Maximum	8.612503
Mean	1.692114
Standard Deviation	2.675437
Variance	7.157966

Goodness-of-Fit Results	
Distribution Recommended	Neither
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	194.6293
MLE Standard Deviation	6972.228
MLE Median	5.43095
MLE Coefficient of Variation	35.82311
MVUE Estimate of Mean	137.006
MVUE Estimate of Std. Dev.	1393.43
MVUE Estimate of SE	87.25744
MVUE Coefficient of Variation	10.17058

UCL Assuming Lognormal Distribution	
95% H-UCL	1462.274
95% Chebyshev (MVUE) UCL	517.3525
99% Chebyshev (MVUE) UCL	1005.209

FDEP Recommended UCL to Use:
913.5448

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

FDEP UCL Calculator Version 0.97 **7/28/05**

VANADIUM - SUBSURFACE SOIL

Summary Statistics for VANADIUM	
Number of Samples	40
Number of Censored Data	1
Minimum	0.44
Maximum	156
Mean	9.4005
Median	2.3
Standard Deviation	25.49396
Variance	649.9418
Coefficient of Variation	2.711979
Skewness	5.206947

95% UCL (Assuming Normal Data)	
Student's-t	16.19214

95% UCL (Adjusted for Skewness)	
Adjusted CLT	19.57796
Modified-t	16.74525

95% Non-parametric UCL	
CLT	16.03141
Jackknife	NA
Standard Bootstrap	15.28638
Bootstrap-t	31.60831
Chebyshev (Mean, Std)	26.9714

Summary Statistics for ln(VANADIUM)	
Minimum	-0.82098
Maximum	5.049856
Mean	1.185205
Standard Deviation	1.144439
Variance	1.309741

Goodness-of-Fit Results	
Distribution Recommended	Neither
Distribution Used	Neither

Estimates Assuming Lognormal Distribution	
MLE Mean	6.297013
MLE Standard Deviation	10.35703
MLE Median	3.271357
MLE Coefficient of Variation	1.644753
MVUE Estimate of Mean	6.131848
MVUE Estimate of Std. Dev.	9.13928
MVUE Estimate of SE	1.352214
MVUE Coefficient of Variation	1.490461

UCL Assuming Lognormal Distribution	
95% H-UCL	10.0566
95% Chebyshev (MVUE) UCL	12.02601
99% Chebyshev (MVUE) UCL	19.58624

FDEP Recommended UCL to Use:

26.9714

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

APPENDIX D.3

EXAMPLE CALCULATIONS OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS)

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR CARCINOGENS CONSTRUCTION WORKERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

PURPOSE: To calculate an alternative soil cleanup level for consturction workers exposed to soil.

RELEVANT EQUATIONS:

$$SCTL = \frac{TR \times BW \times AT}{EF \times ED \times FC \times [Intake_{Ing} + Intake_{Der} + Intake_{Inh}]}$$

$$Intake_{Ing} = CSFo \times IRo \times 10^{-6}\ kg/mg$$

$$Intake_{Der} = CSFd \times SA \times AF \times DA \times 10^{-6}\ kg/mg$$

$$Intake_{Inh} = CSFi \times IRi \times (1/VF + 1/PEF)$$

Where:

Chemical	=		Benzo(a)pyrene (cPAHs)
SCTL	=		Soil Cleanup Target Level (mg/kg)
TR	=	1.0E-06	Target Cancer Risk (unitless)
BW	=	70	Body weight (kg)
AT	=	25550	Averaging time (days)
EF	=	250	Exposure frequency (days/year)
ED	=	1	Exposure duration (years)
FC	=	1	Fraction from contaminated source (unitless)
IRo	=	330	Ingestion rate, oral (mg/day)
SA	=	3300	Surface area of skin exposed (cm^2/day)
AF	=	0.3	Adherence factor (mg/cm^2)
DA	=	0.13	Dermal absorption (unitless)
IRi	=	20	Inhalation rate (m^3/day)
VF	=	2.72E+07	Volatilization factor (m^3/kg)
PEF	=	2.43E+06	Particulate emission factor (m^3/kg)
CSFo	=	7.30E+00	Oral cancer slope factor $(mg/kg/day)^{-1}$
CSFd	=	7.30E+00	Dermal cancer slope factor $(mg/kg/day)^{-1}$
CSFi	=	3.10E+00	Inhalation cancer slope factor $(mg/kg/day)^{-1}$

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR CARCINOGENS CONSTRUCTION WORKERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

EXAMPLE CALCULATION

$Intake_{Ing}$ = 7.30E+00 (mg/kg-day)-1 x 330 mg/day x 1E-06 kg/mg

$Intake_{Ing}$ = 2.41E-03 kg-kg/mg

$Intake_{Der}$ = 7.30E+00 (mg/kg-day)-1 x 3300 cm2/day x 0.3 mg/cm2 x 0.13 x 1E-06 kg/mg

$Intake_{Der}$ = 9.40E-04 kg-kg/mg

$Intake_{Inh}$ = 3.10E+00 (mg/kg-day)-1 x 20 m3/day x (1/2.72E+07 m3/kg + 1/2.43E+06 m3/kg)

$Intake_{Inh}$ = 2.78E-05 kg-kg/mg

$$SCTL = \frac{1.E\text{-}06 \times 70\ kg \times 25550\ days}{250\ days/yr \times 1\ yrs \times 1 \times [2.41E\text{-}03\ kg\text{-}kg/mg + 9.40E\text{-}04\ kg\text{-}kg/mg + 2.78E\text{-}05\ kg\text{-}kg/mg]}$$

SCTL = 2.12E+00 mg/kg

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR NONCARCINOGENS - CONSTRUCTION WORKERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

PURPOSE: To calculate an alternative soil cleanup level for consturction workers exposed to soil.

RELEVANT EQUATIONS:

$$SCTL = \frac{THI \times BW \times AT}{EF \times ED \times FC \times [Intake_{Ing} + Intake_{Der} + Intake_{Inh}]}$$

$$Intake_{Ing} = 1/RfDo \times IRo \times 10^{-6}\ kg/mg$$

$$Intake_{Der} = 1/RfDd \times SA \times AF \times DA \times 10^{-6}\ kg/mg$$

$$Intake_{Inh} = 1/RfDi \times IRi \times (1/VF + 1/PEF)$$

Where:

Chemical	=	Arsenic	
SCTL	=		Soil Cleanup Target Level (mg/kg)
THI	=	1	Target Hazard Index (unitless)
BW	=	70	Body weight (kg)
AT	=	365	Averaging time (days)
EF	=	250	Exposure frequency (days/year)
ED	=	1	Exposure duration (years)
FC	=	1	Fraction from contaminated source (unitless)
IRo	=	330	Ingestion rate, oral (mg/day)
SA	=	3300	Surface area of skin exposed (cm^2/day)
AF	=	0.3	Adherence factor (mg/cm^2)
DA	=	0.03	Dermal absorption (unitless)
IRi	=	20	Inhalation rate (m^3/day)
VF	=	1.00E+99	Volatilization factor (m^3/kg)
PEF	=	2.43E+06	Particulate emission factor (m^3/kg)
RfDo	=	3.0E-04	Oral reference dose (mg/kg/day)
RfDd	=	3.0E-04	Dermal reference dose (mg/kg/day)
RfDi	=	3.0E-04	Inhalation reference dose (mg/kg/day)

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR NONCARCINOGENS - CONSTRUCTION WORKERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

EXAMPLE CALCULATION

$Intake_{Ing}$ = 1/3.0E-04 mg/kg-day x 330 mg/day x 1E-06 kg/mg

$Intake_{Ing}$ = 1.10E+00 kg-kg/mg

$Intake_{Der}$ = 1/3.0E-04 mg/kg-day x 3300 cm2/day x 0.3 mg/cm2 x 0.03 x 1E-06 kg/mg

$Intake_{Der}$ = 9.90E-02 kg-kg/mg

$Intake_{Inh}$ = 1/3.0E-04 mg/kg-day x 20 m3/day x (1/1.00E+99 m3/kg + 1/2.43E+06 m3/kg)

$Intake_{Inh}$ = 2.74E-02 kg-kg/mg

$$SCTL = \frac{1 \times 70 \text{ kg} \times 365 \text{ days}}{250 \text{ days/yr} \times 1 \text{ yrs} \times 1 \times [1.10E+00 \text{ kg-kg/mg} + 9.90E-02 \text{ kg-kg/mg} + 2.74E-02 \text{ kg-kg/mg}]}$$

SCTL = 8.33E+01 mg/kg

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR CARCINOGENS MAINTENANCE WORKERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

PURPOSE: To calculate an alternative soil cleanup level for maintenance workers exposed to soil.

RELEVANT EQUATIONS:

$$SCTL = \frac{TR \times BW \times AT}{EF \times ED \times FC \times [Intake_{Ing} + Intake_{Der} + Intake_{Inh}]}$$

$$Intake_{Ing} = CSFo \times IRo \times 10^{-6}\ kg/mg$$

$$Intake_{Der} = CSFd \times SA \times AF \times DA \times 10^{-6}\ kg/mg$$

$$Intake_{Inh} = CSFi \times IRi \times (1/VF + 1/PEF)$$

Where:

Chemical	=		Benzo(a)pyrene (cPAHs)
SCTL	=		Soil Cleanup Target Level (mg/kg)
TR	=	1.0E-06	Target Cancer Risk (unitless)
BW	=	70	Body weight (kg)
AT	=	25550	Averaging time (days)
EF	=	30	Exposure frequency (days/year)
ED	=	25	Exposure duration (years)
FC	=	1	Fraction from contaminated source (unitless)
IRo	=	50	Ingestion rate, oral (mg/day)
SA	=	3300	Surface area of skin exposed (cm^2/day)
AF	=	0.2	Adherence factor (mg/cm^2)
DA	=	0.13	Dermal absorption (unitless)
IRi	=	20	Inhalation rate (m^3/day)
VF	=	2.72E+07	Volatilization factor (m^3/kg)
PEF	=	1.24E+09	Particulate emission factor (m^3/kg)
CSFo	=	7.30E+00	Oral cancer slope factor $(mg/kg/day)^{-1}$
CSFd	=	7.30E+00	Dermal cancer slope factor $(mg/kg/day)^{-1}$
CSFi	=	3.10E+00	Inhalation cancer slope factor $(mg/kg/day)^{-1}$

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR CARCINOGENS MAINTENANCE WORKERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

EXAMPLE CALCULATION

$Intake_{Ing}$ = 7.30E+00 (mg/kg-day)-1 x 50 mg/day x 1E-06 kg/mg

$Intake_{Ing}$ = 3.65E-04 kg-kg/mg

$Intake_{Der}$ = 7.30E+00 (mg/kg-day)-1 x 3300 cm2/day x 0.2 mg/cm2 x 0.13 x 1E-06 kg/mg

$Intake_{Der}$ = 6.26E-04 kg-kg/mg

$Intake_{Inh}$ = 3.10E+00 (mg/kg-day)-1 x 20 m3/day x (1/2.72E+07 m3/kg + 1/1.24E+09 m3/kg)

$Intake_{Inh}$ = 2.33E-06 kg-kg/mg

$$SCTL = \frac{1.E\text{-}06 \times 70\ kg \times 25550\ days}{30\ days/yr \times 25\ yrs \times 1 \times [3.65E\text{-}04\ kg\text{-}kg/mg + 6.26E\text{-}04\ kg\text{-}kg/mg + 2.33E\text{-}06\ kg\text{-}kg/mg]}$$

SCTL = 2.40E+00 mg/kg

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR NONCARCINOGENS - MAINTENANCE WORKERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

PURPOSE: To calculate an alternative soil cleanup level for maintenance workers exposed to soil.

RELEVANT EQUATIONS:

$$SCTL = \frac{THI \times BW \times AT}{EF \times ED \times FC \times [Intake_{Ing} + Intake_{Der} + Intake_{Inh}]}$$

$$Intake_{Ing} = 1/RfDo \times IRo \times 10^{-6}\ kg/mg$$

$$Intake_{Der} = 1/RfDd \times SA \times AF \times DA \times 10^{-6}\ kg/mg$$

$$Intake_{Inh} = 1/RfDi \times IRi \times (1/VF + 1/PEF)$$

Where:

Chemical	=	Arsenic	
SCTL	=		Soil Cleanup Target Level (mg/kg)
THI	=	1	Target Hazard Index (unitless)
BW	=	70	Body weight (kg)
AT	=	9125	Averaging time (days)
EF	=	30	Exposure frequency (days/year)
ED	=	25	Exposure duration (years)
FC	=	1	Fraction from contaminated source (unitless)
IRo	=	50	Ingestion rate, oral (mg/day)
SA	=	3300	Surface area of skin exposed (cm^2/day)
AF	=	0.2	Adherence factor (mg/cm^2)
DA	=	0.03	Dermal absorption (unitless)
IRi	=	20	Inhalation rate (m^3/day)
VF	=	1.00E+99	Volatilization factor (m^3/kg)
PEF	=	1.24E+09	Particulate emission factor (m^3/kg)
RfDo	=	3.0E-04	Oral reference dose (mg/kg/day)
RfDd	=	3.0E-04	Dermal reference dose (mg/kg/day)
RfDi	=	3.0E-04	Inhalation reference dose (mg/kg/day)

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR NONCARCINOGENS - MAINTENANCE WORKERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:** RLyon	**DATE:** 7/28/2005

EXAMPLE CALCULATION

$Intake_{Ing}$ = 1/3.0E-04 mg/kg-day x 50 mg/day x 1E-06 kg/mg

$Intake_{Ing}$ = 1.67E-01 kg-kg/mg

$Intake_{Der}$ = 1/3.0E-04 mg/kg-day x 3300 cm2/day x 0.2 mg/cm2 x 0.03 x 1E-06 kg/mg

$Intake_{Der}$ = 6.60E-02 kg-kg/mg

$Intake_{Inh}$ = 1/3.0E-04 mg/kg-day x 20 m3/day x (1/1.00E+99 m3/kg + 1/1.24E+09 m3/kg)

$Intake_{Inh}$ = 5.38E-05 kg-kg/mg

$$SCTL = \frac{1 \times 70\ kg \times 9125\ days}{30\ days/yr \times 25\ yrs \times 1 \times [1.67E\text{-}01\ kg\text{-}kg/mg + 6.60E\text{-}02\ kg\text{-}kg/mg + 5.38E\text{-}05\ kg\text{-}kg/mg]}$$

SCTL = 3.66E+03 mg/kg

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR CARCINOGENS ADOLESCENT TRESPASSERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

PURPOSE: To calculate an alternative soil cleanup level for adolescent trespassers exposed to soil.

RELEVANT EQUATIONS:

$$SCTL = \frac{TR \times BW \times AT}{EF \times ED \times FC \times [Intake_{Ing} + Intake_{Der} + Intake_{Inh}]}$$

$$Intake_{Ing} = CSFo \times IRo \times 10^{-6}\ kg/mg$$

$$Intake_{Der} = CSFd \times SA \times AF \times DA \times 10^{-6}\ kg/mg$$

$$Intake_{Inh} = CSFi \times IRi \times (1/VF + 1/PEF)$$

Where:

Chemical	=		Benzo(a)pyrene (cPAHs)
SCTL	=		Soil Cleanup Target Level (mg/kg)
TR	=	1.0E-06	Target Cancer Risk (unitless)
BW	=	45	Body weight (kg)
AT	=	25550	Averaging time (days)
EF	=	45	Exposure frequency (days/year)
ED	=	10	Exposure duration (years)
FC	=	1	Fraction from contaminated source (unitless)
IRo	=	100	Ingestion rate, oral (mg/day)
SA	=	3280	Surface area of skin exposed (cm^2/day)
AF	=	0.3	Adherence factor (mg/cm^2)
DA	=	0.13	Dermal absorption (unitless)
IRi	=	4.8	Inhalation rate (m^3/day)
VF	=	2.98E+07	Volatilization factor (m^3/kg)
PEF	=	1.24E+09	Particulate emission factor (m^3/kg)
CSFo	=	7.30E+00	Oral cancer slope factor $(mg/kg/day)^{-1}$
CSFd	=	7.30E+00	Dermal cancer slope factor $(mg/kg/day)^{-1}$
CSFi	=	3.10E+00	Inhalation cancer slope factor $(mg/kg/day)^{-1}$

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR CARCINOGENS ADOLESCENT TRESPASSERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

EXAMPLE CALCULATION

$Intake_{Ing}$ = 7.30E+00 (mg/kg-day)-1 x 100 mg/day x 1E-06 kg/mg

$Intake_{Ing}$ = 7.30E-04 kg-kg/mg

$Intake_{Der}$ = 7.30E+00 (mg/kg-day)-1 x 3280 cm2/day x 0.3 mg/cm2 x 0.13 x 1E-06 kg/mg

$Intake_{Der}$ = 9.34E-04 kg-kg/mg

$Intake_{Inh}$ = 3.10E+00 (mg/kg-day)-1 x 4.8 m3/day x (1/2.98E+07 m3/kg + 1/1.24E+09 m3/kg)

$Intake_{Inh}$ = 5.11E-07 kg-kg/mg

$$SCTL = \frac{1.E\text{-}06 \times 45\ kg \times 25550\ days}{45\ days/yr \times 10\ yrs \times 1 \times [7.30E\text{-}04\ kg\text{-}kg/mg + 9.34E\text{-}04\ kg\text{-}kg/mg + 5.11E\text{-}07\ kg\text{-}kg/mg]}$$

SCTL = 1.54E+00 mg/kg

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR NONCARCINOGENS - ADOLESCENT TRESPASERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

PURPOSE: To calculate an alternative soil cleanup level for adolescent trespassers exposed to soil.

RELEVANT EQUATIONS:

$$SCTL = \frac{THI \times BW \times AT}{EF \times ED \times FC \times [Intake_{Ing} + Intake_{Der} + Intake_{Inh}]}$$

$$Intake_{Ing} = 1/RfDo \times IRo \times 10^{-6}\ kg/mg$$

$$Intake_{Der} = 1/RfDd \times SA \times AF \times DA \times 10^{-6}\ kg/mg$$

$$Intake_{Inh} = 1/RfDi \times IRi \times (1/VF + 1/PEF)$$

Where:

Chemical	=	Arsenic	
SCTL	=		Soil Cleanup Target Level (mg/kg)
THI	=	1	Target Hazard Index (unitless)
BW	=	45	Body weight (kg)
AT	=	3650	Averaging time (days)
EF	=	45	Exposure frequency (days/year)
ED	=	10	Exposure duration (years)
FC	=	1	Fraction from contaminated source (unitless)
IRo	=	100	Ingestion rate, oral (mg/day)
SA	=	3280	Surface area of skin exposed (cm^2/day)
AF	=	0.3	Adherence factor (mg/cm^2)
DA	=	0.03	Dermal absorption (unitless)
IRi	=	4.8	Inhalation rate (m^3/day)
VF	=	1.00E+99	Volatilization factor (m^3/kg)
PEF	=	1.24E+09	Particulate emission factor (m^3/kg)
RfDo	=	3.0E-04	Oral reference dose (mg/kg/day)
RfDd	=	3.0E-04	Dermal reference dose (mg/kg/day)
RfDi	=	3.0E-04	Inhalation reference dose (mg/kg/day)

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR NONCARCINOGENS - ADOLESCENT TRESPASERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

EXAMPLE CALCULATION

$Intake_{Ing}$ = 1/3.0E-04 mg/kg-day x 100 mg/day x 1E-06 kg/mg

$Intake_{Ing}$ = 3.33E-01 kg-kg/mg

$Intake_{Der}$ = 1/3.0E-04 mg/kg-day x 3280 cm2/day x 0.3 mg/cm2 x 0.03 x 1E-06 kg/mg

$Intake_{Der}$ = 9.84E-02 kg-kg/mg

$Intake_{Inh}$ = 1/3.0E-04 mg/kg-day x 4.8 m3/day x (1/1.00E+99 m3/kg + 1/1.24E+09 m3/kg)

$Intake_{Inh}$ = 1.29E-05 kg-kg/mg

$$SCTL = \frac{1 \times 45\ kg \times 3650\ days}{45\ days/yr \times 10\ yrs \times 1 \times [3.33E\text{-}01\ kg\text{-}kg/mg + 9.84E\text{-}02\ kg\text{-}kg/mg + 1.29E\text{-}05\ kg\text{-}kg/mg]}$$

SCTL = 8.45E+02 mg/kg

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR CARCINOGENS ADULT RECREATIONAL USERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

PURPOSE: To calculate an alternative soil cleanup level for adult recreational users exposed to soil.

RELEVANT EQUATIONS:

$$SCTL = \frac{TR \times BW \times AT}{EF \times ED \times FC \times [Intake_{Ing} + Intake_{Der} + Intake_{Inh}]}$$

$$Intake_{Ing} = CSFo \times IRo \times 10^{-6}\ kg/mg$$

$$Intake_{Der} = CSFd \times SA \times AF \times DA \times 10^{-6}\ kg/mg$$

$$Intake_{Inh} = CSFi \times IRi \times (1/VF + 1/PEF)$$

Where:

Chemical	=		Benzo(a)pyrene (cPAHs)
SCTL	=		Soil Cleanup Target Level (mg/kg)
TR	=	1.0E-06	Target Cancer Risk (unitless)
BW	=	70	Body weight (kg)
AT	=	25550	Averaging time (days)
EF	=	45	Exposure frequency (days/year)
ED	=	20	Exposure duration (years)
FC	=	1	Fraction from contaminated source (unitless)
IRo	=	100	Ingestion rate, oral (mg/day)
SA	=	5700	Surface area of skin exposed (cm^2/day)
AF	=	0.07	Adherence factor (mg/cm^2)
DA	=	0.13	Dermal absorption (unitless)
IRi	=	6.4	Inhalation rate (m^3/day)
VF	=	2.98E+07	Volatilization factor (m^3/kg)
PEF	=	1.24E+09	Particulate emission factor (m^3/kg)
CSFo	=	7.30E+00	Oral cancer slope factor $(mg/kg/day)^{-1}$
CSFd	=	7.30E+00	Dermal cancer slope factor $(mg/kg/day)^{-1}$
CSFi	=	3.10E+00	Inhalation cancer slope factor $(mg/kg/day)^{-1}$

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR CARCINOGENS ADULT RECREATIONAL USERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

EXAMPLE CALCULATION

$Intake_{Ing}$ = 7.30E+00 (mg/kg-day)-1 x 100 mg/day x 1E-06 kg/mg

$Intake_{Ing}$ = 7.30E-04 kg-kg/mg

$Intake_{Der}$ = 7.30E+00 (mg/kg-day)-1 x 5700 cm2/day x 0.07 mg/cm2 x 0.13 x 1E-06 kg/mg

$Intake_{Der}$ = 3.79E-04 kg-kg/mg

$Intake_{Inh}$ = 3.10E+00 (mg/kg-day)-1 x 6.4 m3/day x (1/2.98E+07 m3/kg + 1/1.24E+09 m3/kg)

$Intake_{Inh}$ = 6.81E-07 kg-kg/mg

$$SCTL = \frac{1.E\text{-}06 \times 70\ kg \times 25550\ days}{45\ days/yr \times 20\ yrs \times 1 \times [7.30E\text{-}04\ kg\text{-}kg/mg + 3.79E\text{-}04\ kg\text{-}kg/mg + 6.81E\text{-}07\ kg\text{-}kg/mg]}$$

SCTL = 1.79E+00 mg/kg

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR NONCARCINOGENS - ADULT RECREATIONAL USERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

PURPOSE: To calculate an alternative soil cleanup level for adult recreational users exposed to soil.

RELEVANT EQUATIONS:

$$SCTL = \frac{THI \times BW \times AT}{EF \times ED \times FC \times [Intake_{Ing} + Intake_{Der} + Intake_{Inh}]}$$

$$Intake_{Ing} = 1/RfDo \times IRo \times 10^{-6}\ kg/mg$$

$$Intake_{Der} = 1/RfDd \times SA \times AF \times DA \times 10^{-6}\ kg/mg$$

$$Intake_{Inh} = 1/RfDi \times IRi \times (1/VF + 1/PEF)$$

Where:

Chemical	=	Arsenic	
SCTL	=		Soil Cleanup Target Level (mg/kg)
THI	=	1	Target Hazard Index (unitless)
BW	=	70	Body weight (kg)
AT	=	7300	Averaging time (days)
EF	=	45	Exposure frequency (days/year)
ED	=	20	Exposure duration (years)
FC	=	1	Fraction from contaminated source (unitless)
IRo	=	100	Ingestion rate, oral (mg/day)
SA	=	5700	Surface area of skin exposed (cm^2/day)
AF	=	0.07	Adherence factor (mg/cm^2)
DA	=	0.03	Dermal absorption (unitless)
IRi	=	6.4	Inhalation rate (m^3/day)
VF	=	1.00E+99	Volatilization factor (m^3/kg)
PEF	=	1.24E+09	Particulate emission factor (m^3/kg)
RfDo	=	3.0E-04	Oral reference dose (mg/kg/day)
RfDd	=	3.0E-04	Dermal reference dose (mg/kg/day)
RfDi	=	3.0E-04	Inhalation reference dose (mg/kg/day)

CALCULATION WORKSHEET

CLIENT: NAVAL AIR STATION, PENSACOLA		**JOB NUMBER:** 4821
SUBJECT: CALCULATION OF ALTERNATE SOIL CLEANUP TARGET LEVELS (SCTLS) FOR NONCARCINOGENS - ADULT RECREATIONAL USERS		
BASED ON: TECHNICAL REPORT: DEVELOPMENT OF SOIL CLEANUP TARGET LEVELS FOR CHAPTER 62-777, F.A.C., FDEP, FEBRUARY 2005		
BY: T. JACKMAN	**CHECKED BY:**	**DATE:** 7/28/2005

EXAMPLE CALCULATION

$Intake_{Ing}$ = 1/3.0E-04 mg/kg-day x 100 mg/day x 1E-06 kg/mg

$Intake_{Ing}$ = 3.33E-01 kg-kg/mg

$Intake_{Der}$ = 1/3.0E-04 mg/kg-day x 5700 cm2/day x 0.07 mg/cm2 x 0.03 x 1E-06 kg/mg

$Intake_{Der}$ = 3.99E-02 kg-kg/mg

$Intake_{Inh}$ = 1/3.0E-04 mg/kg-day x 6.4 m3/day x (1/1.00E+99 m3/kg + 1/1.24E+09 m3/kg)

$Intake_{Inh}$ = 1.72E-05 kg-kg/mg

$$SCTL = \frac{1 \times 70 \text{ kg} \times 7300 \text{ days}}{45 \text{ days/yr} \times 20 \text{ yrs} \times 1 \times [3.33E\text{-}01 \text{ kg-kg/mg} + 3.99E\text{-}02 \text{ kg-kg/mg} + 1.72E\text{-}05 \text{ kg-kg/mg}]}$$

SCTL = 1.52E+03 mg/kg

APPENDIX D.4

IEUBK CHILD LEAD MODEL
AND
TRW ADULT LEAD MODEL RESULTS

LEAD MODEL FOR WINDOWS Version 1.0

Model Version: 1.0 Build 261
Location: Naval Air Station, Pensacola, Florida (Page 1 of 2)
Site Name: Site 43
Media: Surface Soil
Date: 7/28/2005
Run Mode: Site Risk Assessment

The time step used in this model run: 1 - Every 4 Hours (6 times a day).

****** Air ******

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m^3/day)	Lung Absorption (%)	Outdoor Air Pb Conc (ug Pb/m^3)
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

****** Diet ******

Age	Diet Intake(ug/day)
.5-1	5.530
1-2	5.780
2-3	6.490
3-4	6.240
4-5	6.010
5-6	6.340
6-7	7.000

****** Drinking Water ******

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 4.000 ug Pb/L

****** Soil & Dust ******

Multiple Source Analysis Used
Average multiple source concentration: 766.000 ug/g

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700
Outdoor airborne lead to indoor household dust lead concentration: 100.000
Use alternate indoor dust Pb sources? No

Location: Naval Air Station, Pensacola, Florida (Page 2 of 2)
Site Name: Site 43
Media: Surface Soil
Date: 7/28/2005
Run Mode: Site Risk Assessment

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
.5-1	1080.000	766.000
1-2	1080.000	766.000
2-3	1080.000	766.000
3-4	1080.000	766.000
4-5	1080.000	766.000
5-6	1080.000	766.000
6-7	1080.000	766.000

****** Alternate Intake ******

Age	Alternate (ug Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

****** Maternal Contribution: Infant Model ******

Maternal Blood Concentration: 2.500 ug Pb/dL

****
CALCULATED BLOOD LEAD AND LEAD UPTAKES:
****

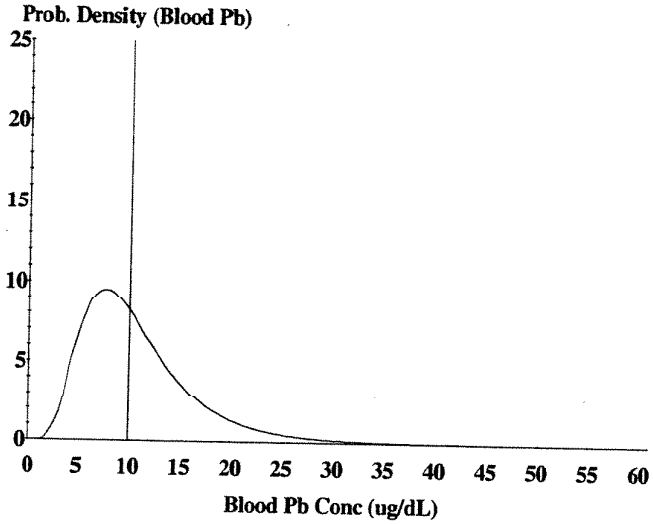
Year	Air (ug/day)	Diet (ug/day)	Alternate (ug/day)	Water (ug/day)
.5-1	0.021	2.170	0.000	0.314
1-2	0.034	2.185	0.000	0.756
2-3	0.062	2.535	0.000	0.813
3-4	0.067	2.514	0.000	0.854
4-5	0.067	2.584	0.000	0.946
5-6	0.093	2.796	0.000	1.023
6-7	0.093	3.128	0.000	1.054

Year	Soil+Dust (ug/day)	Total (ug/day)	Blood (ug/dL)
.5-1	18.156	20.660	10.8
1-2	27.788	30.764	12.5
2-3	28.708	32.117	11.7
3-4	29.605	33.040	11.3
4-5	23.409	27.006	9.5
5-6	21.603	25.515	8.0
6-7	20.674	24.950	7.1

IEUBK MODEL

PENSACOLA - SITE 43

SURFACE 3012 - 1080 mg/Kg



Cutoff = 10.000 ug/dl
Geo Mean = 9.972
GSD = 1.600
% Above = 49.765
% Below = 50.235

Age Range = 0 to 84 months
Time Step = Every 4 Hours
Run Mode = Research

LEAD MODEL FOR WINDOWS Version 1.0

Model Version: 1.0 Build 261
Location: Naval Air Station, Pensacola, Florida (Page 1 of 2)
Site Name: Site 43
Media; Subsurface Soil
Date: 7/28/2005
Run Mode: Site Risk Assessment

The time step used in this model run: 1 - Every 4 Hours (6 times a day).

****** Air ******

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m^3/day)	Lung Absorption (%)	Outdoor Air Pb Conc (ug Pb/m^3)
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

****** Diet ******

Age	Diet Intake(ug/day)
.5-1	5.530
1-2	5.780
2-3	6.490
3-4	6.240
4-5	6.010
5-6	6.340
6-7	7.000

****** Drinking Water ******

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 4.000 ug Pb/L

****** Soil & Dust ******

Multiple Source Analysis Used
Average multiple source concentration: 201.800 ug/g

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700
Outdoor airborne lead to indoor household dust lead concentration: 100.000
Use alternate indoor dust Pb sources? No

Location: Naval Air Station, Pensacola, Florida (Page 2 of 2)
Site Name: Site 43
Media: Subsurface Soil
Date: 7/28/2005
Run Mode: Site Risk Assessment

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
.5-1	274.000	201.800
1-2	274.000	201.800
2-3	274.000	201.800
3-4	274.000	201.800
4-5	274.000	201.800
5-6	274.000	201.800
6-7	274.000	201.800

****** Alternate Intake ******

Age	Alternate (ug Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

****** Maternal Contribution: Infant Model ******

Maternal Blood Concentration: 2.500 ug Pb/dL

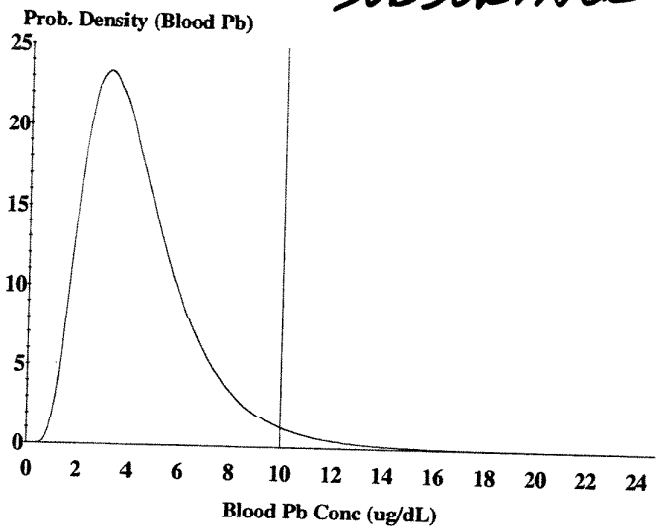
****
CALCULATED BLOOD LEAD AND LEAD UPTAKES:
****

Year	Air (ug/day)	Diet (ug/day)	Alternate (ug/day)	Water (ug/day)
.5-1	0.021	2.514	0.000	0.364
1-2	0.034	2.598	0.000	0.899
2-3	0.062	2.954	0.000	0.947
3-4	0.067	2.878	0.000	0.978
4-5	0.067	2.836	0.000	1.038
5-6	0.093	3.017	0.000	1.104
6-7	0.093	3.345	0.000	1.128

Year	Soil+Dust (ug/day)	Total (ug/day)	Blood (ug/dL)
.5-1	5.431	8.330	4.5
1-2	8.531	12.063	5.0
2-3	8.637	12.599	4.7
3-4	8.754	12.677	4.4
4-5	6.635	10.576	3.7
5-6	6.021	10.236	3.2
6-7	5.709	10.275	2.9

IEUBK MODEL

PENSACOLA – SITE 43
SUBSURFACE SOIL – 274 mg/kg



Cutoff = 10.000 ug/dl
Geo Mean = 4.049
GSD = 1.600
% Above = 2.720
% Below = 97.280

Age Range = 0 to 84 months
Time Step = Every 4 Hours
Run Mode = Research

LEAD MODEL FOR WINDOWS Version 1.0

Model Version: 1.0 Build 261
Location: Naval Air Station, Pensacola, Florida (Page 1 of 2)
Site Name: Site 43
Media: Groundwater
Date: 7/28/2005
Run Mode: Site Risk Assessment

The time step used in this model run: 1 - Every 4 Hours (6 times a day).

****** Air ******

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m^3/day)	Lung Absorption (%)	Outdoor Air Pb Conc (ug Pb/m^3)
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

****** Diet ******

Age	Diet Intake(ug/day)
.5-1	5.530
1-2	5.780
2-3	6.490
3-4	6.240
4-5	6.010
5-6	6.340
6-7	7.000

****** Drinking Water ******

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 29.900 ug Pb/L

****** Soil & Dust ******

Multiple Source Analysis Used
Average multiple source concentration: 150.000 ug/g

Location: Naval Air Station, Pensacola, Florida (Page 2 of 2)
Site Name: Site 43
Media: Groundwater
Date: 7/28/2005
Run Mode: Site Risk Assessment

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700
Outdoor airborne lead to indoor household dust lead concentration: 100.000
Use alternate indoor dust Pb sources? No

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
.5-1	200.000	150.000
1-2	200.000	150.000
2-3	200.000	150.000
3-4	200.000	150.000
4-5	200.000	150.000
5-6	200.000	150.000
6-7	200.000	150.000

****** Alternate Intake ******

Age	Alternate (ug Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

****** Maternal Contribution: Infant Model ******

Maternal Blood Concentration: 2.500 ug Pb/dL

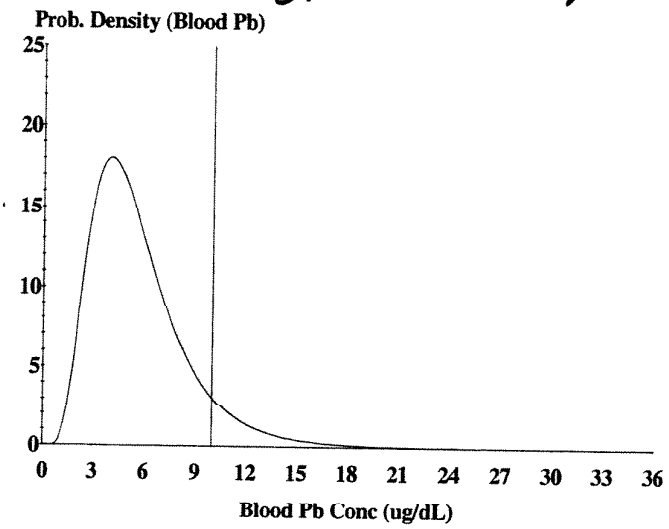
****
CALCULATED BLOOD LEAD AND LEAD UPTAKES:
****

Year	Air (ug/day)	Diet (ug/day)	Alternate (ug/day)	Water (ug/day)
.5-1	0.021	2.489	0.000	2.692
1-2	0.034	2.525	0.000	6.532
2-3	0.062	2.877	0.000	6.892
3-4	0.067	2.811	0.000	7.138
4-5	0.067	2.765	0.000	7.565
5-6	0.093	2.941	0.000	8.045
6-7	0.093	3.264	0.000	8.225

Year	Soil+Dust (ug/day)	Total (ug/day)	Blood (ug/dL)
.5-1	3.960	9.163	4.9
1-2	6.105	15.197	6.2
2-3	6.194	16.025	5.9
3-4	6.294	16.310	5.7
4-5	4.761	15.157	5.1
5-6	4.321	15.401	4.7
6-7	4.102	15.683	4.4

IEUBK MODEL

PENSACOLA – SITE 43
GROUND WATER – 29.9 µg/L



Cutoff = 10.000 ug/dl
Geo Mean = 5.242
GSD = 1.600
% Above = 8.469
% Below = 91.531

Age Range = 0 to 84 months
Time Step = Every 4 Hours
Run Mode = Research

Calculations of Blood Lead Concentrations (PbBs) - NAS Pensacola, Surface Soil - Industrial Worker

U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Version date 05/19/03

Exposure Variable	PbB Equation[1] 1*	2**	Description of Exposure Variable	Units	Values for Non-Residential Exposure Scenario: Using Equation 1, GSDi = Hom	Using Equation 1, GSDi = Het	Using Equation 2, GSDi = Hom	Using Equation 2, GSDi = Het
PbS	X	X	Soil lead concentration	ug/g or ppm	1080	1080	1080	1080
$R_{fetal/maternal}$	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4	0.4	0.4
GSD_i	X	X	Geometric standard deviation PbB	--	2.1	2.3	2.1	2.3
PbB_0	X	X	Baseline PbB	ug/dL	1.5	1.7	1.5	1.7
IR_S	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050	0.050	--	--
IR_{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	0.050	0.050
W_S		X	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--	1.0	1.0
K_{SD}		X	Mass fraction of soil in dust	--	--	--	0.7	0.7
$AF_{S,D}$	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12
$EF_{S,D}$	X	X	Exposure frequency (same for soil and dust)	days/yr	219	219	219	219
$AT_{S,D}$	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365
PbB_{adult}	**PbB of adult worker, geometric mean**			**ug/dL**	**3.1**	**3.3**	**3.1**	**3.3**
$PbB_{fetal,0.95}$	**95th percentile PbB among fetuses of adult workers**			**ug/dL**	**9.3**	**11.5**	**9.3**	**11.5**
PbB_t	**Target PbB level of concern (e.g., 10 ug/dL)**			**ug/dL**	**10.0**	**10.0**	**10.0**	**10.0**
$P(PbB_{fetal} > PbB_t)$	**Probability that fetal PbB > PbB_t, assuming lognormal distribution**			**%**	**4.1%**	**7.0%**	**4.1%**	**7.0%**

[1] Equation 1 does not apportion exposure between soil and dust ingestion (excludes W_S, K_{SD}).
When $IR_S = IR_{S+D}$ and $W_S = 1.0$, the equations yield the same $PbB_{fetal,0.95}$.

***Equation 1, based on Eq. 1, 2 in USEPA (1996).**

PbB_{adult} =	$(PbS*BKSF*IR_{S+D}*AF_{S,D}*EF_S/AT_{S,D}) + PbB_0$
$PbB_{fetal,0.95}$ =	$PbB_{adult} * (GSD_i^{1.645} * R)$

****Equation 2, alternate approach based on Eq. 1, 2, and A-19 in USEPA (1996).**

PbB_{adult} =	$PbS*BKSF*([(IR_{S+D})*AF_S*EF_S*W_S]+[K_{SD}*(IR_{S+D})*(1-W_S)*AF_D*EF_D])/365+PbB_0$
$PbB_{fetal,0.95}$ =	$PbB_{adult} * (GSD_i^{1.645} * R)$

Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

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Exposure Variable	PbB Equation[1] 1*	2**	Description of Exposure Variable	Units	Values for Non-Residential Exposure Scenario: Using Equation 1 GSDi = Hom	Using Equation 1 GSDi = Het	Using Equation 2 GSDi = Hom	Using Equation 2 GSDi = Het
PbS	X	X	Soil lead concentration	ug/g or ppm	1080	1080	1080	1080
$R_{fetal/maternal}$	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4	0.4	0.4
GSD_i	X	X	Geometric standard deviation PbB	--	2.1	2.3	2.1	2.3
PbB_0	X	X	Baseline PbB	ug/dL	1.5	1.7	1.5	1.7
IR_S	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.100	0.100	--	--
IR_{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	0.100	0.100
W_S		X	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--	1.0	1.0
K_{SD}		X	Mass fraction of soil in dust	--	--	--	0.7	0.7
$AF_{S,D}$	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12
$EF_{S,D}$	X	X	Exposure frequency (same for soil and dust)	days/yr	225	225	225	225
$AT_{S,D}$	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365
PbB_{adult}			**PbB of adult worker, geometric mean**	ug/dL	**4.7**	**4.9**	**4.7**	**4.9**
$PbB_{fetal,0.95}$			**95th percentile PbB among fetuses of adult workers**	ug/dL	**14.3**	**17.3**	**14.3**	**17.3**
PbB_t			**Target PbB level of concern (e.g., 10 ug/dL)**	ug/dL	**10.0**	**10.0**	**10.0**	**10.0**
$P(PbB_{fetal} > PbB_t)$			**Probability that fetal PbB > PbB_t, assuming lognormal distribution**	%	**12.3%**	**16.3%**	**12.3%**	**16.3%**

[1] Equation 1 does not apportion exposure between soil and dust ingestion (excludes W_S, K_{SD}).
When $IR_S = IR_{S+D}$ and $W_S = 1.0$, the equations yield the same $PbB_{fetal,0.95}$.

*Equation 1, based on Eq. 1, 2 in USEPA (1996).

PbB_{adult} =	$(PbS*BKSF*IR_{S+D}*AF_{S,D}*EF_S/AT_{S,D}) + PbB_0$
$PbB_{fetal,0.95}$ =	$PbB_{adult} * (GSD_i^{1.645} * R)$

**Equation 2, alternate approach based on Eq. 1, 2, and A-19 in USEPA (1996).

PbB_{adult} =	$PbS*BKSF*([(IR_{S+D})*AF_S*EF_S*W_S]+[K_{SD}*(IR_{S+D})*(1-W_S)*AF_D*EF_D])/365+PbB_0$
$PbB_{fetal,0.95}$ =	$PbB_{adult} * (GSD_i^{1.645} * R)$

Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

Calculations of Blood Lead Concentrations (PbBs) - NAS Pensacola, Surface Soil - Recreational User

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Exposure Variable	PbB Equation 1*	PbB Equation 2**	Description of Exposure Variable	Units	Values for Non-Residential Exposure Scenario: Using Equation 1, GSD1 = Hom	Using Equation 1, GSD1 = Het	Using Equation 2, GSD1 = Hom	Using Equation 2, GSD1 = Het
PbS	X	X	Soil lead concentration	ug/g or ppm	1080	1080	1080	1080
$R_{fetal/maternal}$	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4	0.4	0.4
GSD_i	X	X	Geometric standard deviation PbB	--	2.1	2.3	2.1	2.3
PbB_0	X	X	Baseline PbB	ug/dL	1.5	1.7	1.5	1.7
IR_S	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.100	0.100	--	--
IR_{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	0.100	0.100
W_S		X	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--	1.0	1.0
K_{SD}		X	Mass fraction of soil in dust	--	--	--	0.7	0.7
$AF_{S,D}$	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12
$EF_{S,D}$	X	X	Exposure frequency (same for soil and dust)	days/yr	45	45	45	45
$AT_{S,D}$	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365
PbB_{adult}			**PbB of adult worker, geometric mean**	**ug/dL**	**2.1**	**2.3**	**2.1**	**2.3**
$PbB_{fetal,0.95}$			**95th percentile PbB among fetuses of adult workers**	**ug/dL**	**6.5**	**8.3**	**6.5**	**8.3**
PbB_t			**Target PbB level of concern (e.g., 10 ug/dL)**	**ug/dL**	**10.0**	**10.0**	**10.0**	**10.0**
$P(PbB_{fetal} > PbB_t)$			**Probability that fetal PbB > PbB_t, assuming lognormal distribution**	**%**	**1.3%**	**3.1%**	**1.3%**	**3.1%**

Equation 1 does not apportion exposure between soil and dust ingestion (excludes W_S, K_{SD}).
When $IR_S = IR_{S+D}$ and $W_S = 1.0$, the equations yield the same $PbB_{fetal,0.95}$.

***Equation 1, based on Eq. 1, 2 in USEPA (1996).**

PbB_{adult} =	$(PbS*BKSF*IR_{S+D}*AF_{S,D}*EF_S/AT_{S,D}) + PbB_0$
$PbB_{fetal,0.95}$ =	$PbB_{adult} * (GSD_i^{1.645} * R)$

****Equation 2, alternate approach based on Eq. 1, 2, and A-19 in USEPA (1996).**

PbB_{adult} =	$PbS*BKSF*([(IR_{S+D})*AF_S*EF_S*W_S]+[K_{SD}*(IR_{S+D})*(1-W_S)*AF_D*EF_D])/365+PbB_0$
$PbB_{fetal,0.95}$ =	$PbB_{adult} * (GSD_i^{1.645} * R)$

Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

Calculations of Blood Lead Concentrations (PbBs) - NAS Pensacola, Subsurface Soil - Industrial Worker

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Exposure Variable	PbB Equation[1] 1*	PbB Equation[1] 2**	Description of Exposure Variable	Units	Values for Non-Residential Exposure Scenario: Using Equation 1 GSDi = Hom	Using Equation 1 GSDi = Het	Using Equation 2 GSDi = Hom	Using Equation 2 GSDi = Het
PbS	X	X	Soil lead concentration	ug/g or ppm	274	274	274	274
$R_{fetal/maternal}$	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4	0.4	0.4
GSD_i	X	X	Geometric standard deviation PbB	--	2.1	2.3	2.1	2.3
PbB_0	X	X	Baseline PbB	ug/dL	1.5	1.7	1.5	1.7
IR_S	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050	0.050	--	--
IR_{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	0.050	0.050
W_S		X	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--	1.0	1.0
K_{SD}		X	Mass fraction of soil in dust	--	--	--	0.7	0.7
$AF_{S,D}$	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12
$EF_{S,D}$	X	X	Exposure frequency (same for soil and dust)	days/yr	219	219	219	219
$AT_{S,D}$	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365
PbB_{adult}			**PbB of adult worker, geometric mean**	ug/dL	**1.9**	**2.1**	**1.9**	**2.1**
$PbB_{fetal,0.95}$			**95th percentile PbB among fetuses of adult workers**	ug/dL	**5.8**	**7.4**	**5.8**	**7.4**
PbB_t			**Target PbB level of concern (e.g., 10 ug/dL)**	ug/dL	**10.0**	**10.0**	**10.0**	**10.0**
$P(PbB_{fetal} > PbB_t)$			**Probability that fetal PbB > PbB_t, assuming lognormal distribution**	%	**0.9%**	**2.3%**	**0.9%**	**2.3%**

[1] Equation 1 does not apportion exposure between soil and dust ingestion (excludes W_S, K_{SD}).
When $IR_S = IR_{S+D}$ and $W_S = 1.0$, the equations yield the same $PbB_{fetal,0.95}$.

***Equation 1, based on Eq. 1, 2 in USEPA (1996).**

$$PbB_{adult} = (PbS*BKSF*IR_{S+D}*AF_{S,D}*EF_S/AT_{S,D}) + PbB_0$$

$$PbB_{fetal,0.95} = PbB_{adult} * (GSD_i^{1.645} * R)$$

****Equation 2, alternate approach based on Eq. 1, 2, and A-19 in USEPA (1996).**

$$PbB_{adult} = PbS*BKSF*([(IR_{S+D})*AF_S*EF_S*W_S]+[K_{SD}*(IR_{S+D})*(1-W_S)*AF_D*EF_D])/365+PbB_0$$

$$PbB_{fetal,0.95} = PbB_{adult} * (GSD_i^{1.645} * R)$$

Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

Calculations of Preliminary Remediation Goals (PRGs)

Calculations of Blood Lead Concentrations (PbBs) - NAS Pensacola, Subsurface Soil - Construction Worker

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Exposure Variable	PbB Equation[1] 1*	2**	Description of Exposure Variable	Units	Values for Non-Residential Exposure Scenario: Using Equation 1		Using Equation 2	
					GSD[illegible]	GSD[illegible]	GSD[illegible]	GSD[illegible]
PbS	X	X	Soil lead concentration	ug/g or ppm	274	274	274	274
$R_{fetal/maternal}$	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4	0.4	0.4
GSD_i	X	X	Geometric standard deviation PbB	--	2.1	2.3	2.1	2.3
PbB_0	X	X	Baseline PbB	ug/dL	1.5	1.7	1.5	1.7
IR_S	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.100	0.100	--	--
IR_{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	0.100	0.100
W_S		X	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--	1.0	1.0
K_{SD}		X	Mass fraction of soil in dust	--	--	--	0.7	0.7
$AF_{S,D}$	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12
$EF_{S,D}$	X	X	Exposure frequency (same for soil and dust)	days/yr	225	225	225	225
$AT_{S,D}$	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365
PbB_{adult}	**PbB of adult worker, geometric mean**			**ug/dL**	**2.3**	**2.5**	**2.3**	**2.5**
$PbB_{fetal,0.95}$	**95th percentile PbB among fetuses of adult workers**			**ug/dL**	**7.0**	**8.9**	**7.0**	**8.9**
PbB_t	**Target PbB level of concern (e.g., 10 ug/dL)**			**ug/dL**	**10.0**	**10.0**	**10.0**	**10.0**
$P(PbB_{fetal} > PbB_t)$	**Probability that fetal PbB > PbB_t, assuming lognormal distribution**			**%**	**1.7%**	**3.7%**	**1.7%**	**3.7%**

[1] Equation 1 does not apportion exposure between soil and dust ingestion (excludes W_S, K_{SD}).
When $IR_S = IR_{S+D}$ and $W_S = 1.0$, the equations yield the same $PbB_{fetal,0.95}$.

***Equation 1, based on Eq. 1, 2 in USEPA (1996).**

$$PbB_{adult} = (PbS*BKSF*IR_{S+D}*AF_{S,D}*EF_S/AT_{S,D}) + PbB_0$$

$$PbB_{fetal,0.95} = PbB_{adult} * (GSD_i^{1.645} * R)$$

****Equation 2, alternate approach based on Eq. 1, 2, and A-19 in USEPA (1996).**

$$PbB_{adult} = PbS*BKSF*([(IR_{S+D})*AF_S*EF_S*W_S]+[K_{SD}*(IR_{S+D})*(1-W_S)*AF_D*EF_D])/365+PbB_0$$

$$PbB_{fetal,0.95} = PbB_{adult} * (GSD_i^{1.645} * R)$$

Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

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Exposure Variable	PbB Equation[1] 1*	2**	Description of Exposure Variable	Units	Values for Non-Residential Exposure Scenario: Using Equation 1* GSDi = Hom	GSDi = Het	Using Equation 2** GSDi = Hom	GSDi = Het
PbS	X	X	Soil lead concentration	ug/g or ppm	274	274	274	274
$R_{fetal/maternal}$	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4	0.4	0.4
GSD_i	X	X	Geometric standard deviation PbB	--	2.1	2.3	2.1	2.3
PbB_0	X	X	Baseline PbB	ug/dL	1.5	1.7	1.5	1.7
IR_S	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.100	0.100	--	--
IR_{S-D}		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	0.100	0.100
W_S		X	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--	1.0	1.0
K_{SD}		X	Mass fraction of soil in dust	--	--	--	0.7	0.7
$AF_{S,D}$	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12
$EF_{S,D}$	X	X	Exposure frequency (same for soil and dust)	days/yr	45	45	45	45
$AT_{S,D}$	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365
PbB_{adult}			**PbB of adult worker, geometric mean**	ug/dL	**1.7**	**1.9**	**1.7**	**1.9**
$PbB_{fetal,0.95}$			**95th percentile PbB among fetuses of adult workers**	ug/dL	**5.1**	**5.6**	**5.1**	**6.6**
PbB_t			**Target PbB level of concern (e.g., 10 ug/dL)**	ug/dL	**10.0**	**10.0**	**10.0**	**10.0**
$P(PbB_{fetal} > PbB_t)$			**Probability that fetal PbB > PbB_t, assuming lognormal distribution**	%	**0.5%**	**1.6%**	**0.5%**	**1.6%**

[1] Equation 1 does not apportion exposure between soil and dust ingestion (excludes W_S, K_{SD}).
When $IR_S = IR_{S+D}$ and $W_S = 1.0$, the equations yield the same $PbB_{fetal,0.95}$.

***Equation 1, based on Eq. 1, 2 in USEPA (1996).**

PbB_{adult} =	$(PbS*BKSF*IR_{S+D}*AF_{S,D}*EF_S/AT_{S,D}) + PbB_0$
$PbB_{fetal,0.95}$ =	$PbB_{adult} * (GSD_i^{1.645} * R)$

****Equation 2, alternate approach based on Eq. 1, 2, and A-19 in USEPA (1996).**

PbB_{adult} =	$PbS*BKSF*([(IR_{S+D})*AF_S*EF_S*W_S]+[K_{SD}*(IR_{S-D})*(1-W_S)*AF_D*EF_D])/365+PbB_0$
$PbB_{fetal,0.95}$ =	$PbB_{adul} * (GSD_i^{1.645} * R)$

Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

APPENDIX F

FOOD CHAIN MODELING

APPENDIX E
FOOD CHAIN MODELING

Food chain modeling was conducted as part of the COPC refinement. The objective of the food chain modeling was to investigate potential risks to representative receptors from screening-level COPCs that are known to bioaccumulate or biomagnify (USEPA, 2000a). Toxicity reference values (TRVs), which are contaminant doses associated with adverse effects on growth, survival, and reproduction, were obtained for comparison to doses that the receptors may receive in the environment. TRVs were preferentially selected that represent a threshold for sublethal effects, such as impairment of reproduction or growth. Since toxicity data for the specific receptors chosen herein were not available, toxicity data from laboratory species were extrapolated to receptor species. The TRVs were obtained from wildlife toxicity data that were summarized by Sample et al. (1996). If only a no-observed-adverse-effect level (NOAEL) was available, the value was multiplied by 10 to derive an estimated lowest-observed-adverse-effect level (LOAEL). If only a LOAEL was available, the value was divided by 10 to derive an estimated NOAEL. TRVs used in this ecological risk assessment and their sources are presented in Table E-1.

Food chain modeling was limited to COPCs that are known to bioaccumulate or biomagnify (USEPA, 2000a). USEPA Region IV considers chemicals in this category to consist of those so designated in USEPA's (2000b) *Appendix to Bioaccumulation Testing and Interpretation for the Purpose of Sediment Quality Assessment, Status and Needs, Chemical-Specific Summary Tables*, with the exception of PAHs. USEPA Region IV does not consider PAHs to bioaccumulate unless they are present in percent levels in soil. COPCs at Site 43 that are known to bioaccumulate or biomagnify consist of copper and lead. The remaining COPCs are not known to bioaccumulate or biomagnify and were not included in the food chain model.

Risk via the food chain was evaluated using two scenarios. The first scenario used maximum detected copper and lead concentrations and conservative assumptions for body weight, food consumption, and soil ingestion. The second scenario used average copper and lead concentrations, and average values for body weight, food consumption, and soil ingestion.

REPRESENTATIVE RECEPTORS

Representative ecological receptors used in the food chain model for Site 43 consisted of the short-tailed shrew (*Blarina brevicauda*) and American robin (*Turdus migratorius*), both of which are expected to be located in the vicinity of Site 43. Information regarding these representative receptors is presented below and in Table E-2, and is taken from a literature review performed by USEPA (1993). Table E-3 presents the exposure parameters that were used in the food chain modeling, and was derived from Table E-2.

Short-tailed shrew (*Blarina brevicauda*)

Shrews inhabit a wide variety of habitats and are common in areas with abundant vegetative cover. They need cool, moist habitats because of their high metabolic and water-loss rates. The short-tailed shrew is primarily carnivorous, eating insects such as earthworms, slugs, and snails.

The adult body weight for the short-tailed shrew in various habitats ranged from 0.015 to 0.01921 kg with an average of 0.0161 kg. Wet-weight food ingestion rates were 0.49 and 0.62 g/g-day. The food ingestion rates in kg/day were calculated as shown in Table E-2. The food ingestion rates were then multiplied by 0.16, because earthworms consist of approximately 16 percent solids and 84 percent moisture (Sample et al., 1997), to convert the ingestion rate from a wet-weight value to a dry-weight value. The incidental soil ingestion rate was calculated by multiplying the ingestion rate by the percentage of soil that is incidentally ingested (assumed 3 percent for conservative food chain model and 0.9 percent for the average food chain model) from USEPA (2005). The 90th percentile value is 3 percent and 0.9 percent is the 50th percentile value from USEPA (2005).

American Robin (*Turdus migratorius*)

Habitat for the American robins consists of parks, lawns, moist forests, swamps, open woodlands, and orchards. Robins forage on the ground in open areas, along habitat edges, or the edges of streams. They also may forage above ground in shrubs and within the lower branches of trees. In the months preceding and during the breeding season, robins feed primarily on invertebrates.

The adult body weight for the American robin in New York woodlands and forests and in Pennsylvania ranged from 0.0773 to 0.0862 kg with an average of 0.0804 kg. The only listed food ingestion rates were for robins in Kansas (1.52 g/g-day) and California (0.89 g/g-day), with an average of 1.205 g/g-day. Studies calculating ingestion rates for the robin included in the USEPA (1993) review are based on a diet comprised of berries. Based on these studies, the food ingestion rates in kg/day were calculated as shown in Table E-2. The food ingestion rates were then multiplied by 0.23, which is the portion of solids in fruit (Sample et al., 1997) to convert the ingestion rate from a wet-weight value to a dry-weight value. However, because the robin is being used in the ecological risk assessment to represent insectivorous/vermivorous birds, it is assumed that the 100 percent of the robin's diet is invertebrates, and the ingestion rate for the robin was calculated using field metabolism scaling as presented in Table E-2 following (Nagy et al., 1999). The Nagy-derived values were used in the food chain model for Site 43.

The incidental soil ingestion rate was calculated by multiplying the ingestion rate by the percentage of soil that is incidentally ingested (assumed 3 percent for the conservative food chain model and 0.9 percent for

the average food chain model) from USEPA (2005). The 3 percent and 0.9 percent values are based on the shrew since it is assumed that both the shrew and robin are consuming 100 percent soil invertebrates, and incidental soil ingestion rates were not available for the robin.

Exposure Estimate and Risk Calculation

The following equation presents the food chain model that was used for the shrew and robin:

$$CDI = \frac{[(Cf * If) + (Cs * Is)]}{BW}$$

where:

CDI	=	Chronic daily intake (mg/kg-day)
Cf	=	Contaminant concentration in food (earthworm) (mg/kg)
If	=	Ingestion rate of food (kg/day)
Cs	=	Contaminant concentration in surface soil (mg/kg)
Is	=	Rate of incidental surface soil ingestion (kg/day)
BW	=	Body weight (kg)

The chemical concentrations in earthworms were calculated using the following equation:

$$Ce = BAF_e * Cs$$

Where:

Ce = Chemical concentration in earthworm

BAF_e = Soil-to-invertebrate (i.e., earthworm) bioaccumulation factor (unitless)

The bioaccumulation factors are presented in Table E-4.

The risk characterization is the final phase of a risk assessment that compares the exposure to the ecological effects. It is at this phase that the likelihood of adverse effects occurring as a result of exposure to a stressor is characterized. A Hazard Quotient (HQ) approach was used to characterize the risk to terrestrial receptors. This approach characterizes the potential effects by comparing exposure concentration with the effects data. The HQ for the terrestrial wildlife model is calculated as follows:

$$HQ = \frac{CDI}{TRV}$$

Where:

HQ	=	Hazard Quotient, (unitless)
CDI	=	Chronic daily intake dose, (mg/kg-day)
TRV	=	Toxicity Reference Value, (mg/kg-day)

An HQ of less than 1.0 is considered to indicate that potential risks to the representative ecological receptors are low. An HQ of greater than 1.0 at this stage in the risk assessment process indicates that potential risks to ecological receptors may occur.

Calculation spreadsheets for the representative receptors are presented as Tables E-5 through E-8 and an example calculation is presented following Table E-8.

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TABLE E-1

SOURCES AND ENDPOINTS FOR NOAELS AND LOAELS FOR TERRESTRIAL WILDLIFE
SITE 43
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

Parameters	Concentration (mg/kg-day)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
Inorganics							
Copper	11.71	NOAEL	reproductive	chronic	mink	Aulerich et al., 1982	ATSDR, 1989
Copper	15.14	LOAEL	reproductive	chronic	mink	Aulerich et al., 1982	ATSDR, 1989
Copper	46.97	NOAEL	mortality	chronic	chicks	Mehring et al., 1960	Sample et.al., 1996
Copper	61.72	LOAEL	mortality	chronic	chicks	Mehring et al., 1960	Sample et.al., 1996
Lead	8	NOAEL	reproductive	chronic	rat	Azar et al., 1973	Sample et.al., 1996
Lead	80	LOAEL	reproductive	chronic	rat	Azar et al., 1973	Sample et.al., 1996
Lead	1.13	NOAEL	reproductive	chronic	Japanese quail	Edens et al., 1976	Sample et.al., 1996
Lead	11.3	LOAEL	reproductive	chronic	Japanese quail	Edens et al., 1976	Sample et.al., 1996

NOAL = No Observed Adverse Effect Level
LOAEL = Lowest Observed Adverse Effect Level

References:

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EXAMPLE CALCULATION OF HAZARD QUOTIENT FOR THE AMERICAN ROBIN USING THE MAXIMUM SURFACE SOIL CONCENTRATION OF COPPER CONSERVATIVE SCENARIO

The predicted dose for representative receptors = $\frac{[(Cf * If) + (Cs * Is)]}{BW}$

Cf = Contaminant concentration (mg/kg) in food (soil invertebrates)
If = Ingestion rate of food (kg/day)
Cs = Contaminant concentration in surface soil (mg/kg)
Is = Incidental surface soil ingestion (kg/day)
BW = Body weight (kg)

Concentrations of copper in food items of the robin (Cf) were derived from soil data by multiplying the soil concentration by a soil-to-invertebrate BAF.

BAF for copper = 1.53 (Table E-4)
Cs = 889 mg/kg (Table 6.2-1)
Using these values, Cf = 889 mg/kg × 1.53 = 1,360 mg/kg.

If = 0.01247 kg/day (Conservative scenario, Table E-3)
Is = 0.0003741 kg/day (Conservative scenario, Table E-3)
BW = 0.0773 kg (Conservative scenario, Table E-3)
Using the above values,
Total dose = [(1,360 mg/kg × 0.01247 kg/day) + (889 mg/kg × 0.0003741 kg/day)] ÷ 0.0773 kg
= (16.96 mg/day + 0.333 mg/day) ÷ 0.0773 kg = 224 mg/kg/day

The avian NOAEL for endrin is 46.97 mg/kg/day (Table E-1).
Thus, the NOAEL-based HQ = 224 mg/kg/day ÷ 46.97 mg/kg/day = 4.77 ≈ 4.8 (as shown in Table 6.2-2).

TABLE E-2
DERIVATION OF EXPOSURE FACTORS FOR FOOD CHAIN MODEL
SITE 43
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

Data from EPA (1993) unless otherwise noted				Derivation of Factors for Modeling		
Species/Factor	**Age/Sex/ Cond./Season**	**Value**	**Study Average**	**Calculation of Values**		**Notes**
American Robin						
Body Weight (g)	A B	77.3	77.3	Minimum Value	0.0773 kg	
				Maximum Value	0.0862 kg	
	A M nonbreeding	86.2		Overall Average	0.0804 kg	
	A F nonbreeding	83.6	84.9			
	A M breeding	77.4				
	A F breeding	80.6	79			
Food Ingestion Rate (g/g-day)	B B free-living	0.89		Food ingestion rates were calculated from Nagy et al., (1999) for insectivores as follows:		
				Conservative scenario:	0.01247 kg/day	Used maximum body weight in below equation
	- B free-living	1.52				
				Average scenario:	0.01188 kg/day	Used average body weight in below equation
	Overall Average		1.21			
The above data were from robins that were consuming only fruit. Since the robin is being used to represent birds at Site 43 that consume soil invertebrates rather than fruit, food ingestion rates were based on metabolic scaling using Nagy et al (1999) equation for avian insectivores.				Food ingestion rates (dry weight) were calculated from Nagy et al., (1999) for insectivores as follows: $FI = (9.7 \times BW(g)^{0.705})/18kJ/g/1000$		
Soil Ingestion: Data not available for this species.				The soil ingestion rate for the robin will be assumed to be the same as the shrew (3% of diet).		
Short-Tailed Shrew						
Body Weight (g)	A B	15	15	Minimum Value	0.0150 kg	
				Maximum Value	0.01921 kg	
	M summer	19.21	17.27	Overall Average	0.01613 kg	
	F summer	17.4				
	M fall	16.87				
	M fall	15.58				
Food Ingestion Rate (g/g-day)	A B	0.49		Conservative scenario:	0.0016 kg/day	Maximum ingestion rate × Average Body weight × 0.16[1]
	A B	0.62		Average scenario:	0.00143 kg/day	Average ingestion rate × Average Body weight × 0.16[1]
	Overall Average		0.555			[1] 0.16 = 16 percent solids in earthworms used to convert to a dry weight ingestion rate
Soil Ingestion Rate = 3% of diet (90th percentile of data from USEPA [2003]).						

Notes:
A = Adult
F = Female, M = Male, B = Both
BW = Body Weight

TABLE E-3

EXPOSURE PARAMETERS FOR THE TERRESTRIAL WILDLIFE MODEL
SITE 43
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

Species	Exposure Inputs	Conservative Scenario		Average Scenario		Source
		Values	Units	Values	Units	
Short-Tailed Shrew	Body Weight = BW	0.015	kg	0.01613	kg	USEPA, 1993
	Food Ingestion Rate = If	0.0016	kg/day	0.00143	kg/day	USEPA, 1993
	Soil Ingestion Rate = Is[1]	0.000048	kg/day	0.0000129	kg/day	USEPA, 2005
American Robin	Body Weight = BW	0.0773	kg	0.0804	kg	USEPA, 1993
	Food Ingestion Rate = If	0.01247	kg/day	0.01188	kg/day	USEPA, 1993
	Soil Ingestion Rate = Is[2]	0.0003741	kg/day	0.0001069	kg/day	USEPA, 2005[2]

1 - A soil ingestion rate of 3% was assumed for the conservative scenario and 0.9% for the average scenario as found in USEPA (2005).
2 - The shrew soil ingestion rates were used for the robin food chain model because no ingestion rates are available for the robin in USEPA (2005).

TABLE E-4

DRY WEIGHT EARTHWORM BAFS
SITE 43
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

Chemicals	Earthworm BAFs	
	Conservative	Average
Inorganics		
Copper	1.53E+00	5.15E-01
Lead	1.52E+00	2.66E-01

Notes:
BAF - Bioaccumulation Factor
-Source of the Earthworm BAFs is:
Sample, B.E., J.J. Beauchamp, R.A. Efroymson, G.W., Suter II, and T.L. Ashwood. 1998. Development and Validation of Bioaccumulation Models for Earthworms. Oak Ridge National Laboratory. February. ES/ER/TM-220.
-Conservative value is the 90th percentile; average value is median value.

TABLE E-5
SHORT-TAILED SHREW - CONSERVATIVE INPUTS
TERRESTRIAL WILDLIFE MODEL HAZARD QUOTIENT CALCULATION
SITE 43, NAVAL AIR STATION PENSACOLA, PENSACOLA FLORIDA

Chemical	Max Soil Conc. (mg/kg)	Biotransfer Factor (soil to inv)	Invertebrate Conc. (mg/kg)	Dose (mg/kg/d) from: Soil	Dose (mg/kg/d) from: Invert.	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	NOAEL EEQ	LOAEL EEQ
Metals										
Copper	8.89E+02	1.53E+00	1.36E+03	2.84E+00	1.45E+02	1.48E+02	1.17E+01	1.51E+01	1.3E+01	9.8E+00
Lead	7.36E+03	1.52E+00	1.12E+04	2.36E+01	1.19E+03	1.22E+03	8.00E+00	8.00E+01	1.5E+02	1.5E+01

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	0.015	kg
Food Ingestion Rate = (If)	0.0016	kg/day
Soil Ingestion Rate = (Is)	0.000048	kg/day
Home Range = (HR)	Assume equal to 1	
Contaminated Area = (CA)	Assume equal to home range	

Dose (soil) = (Cs * Is)(H)/BW
Dose (invertebrate) = (Ci * If)(H)/BW
Ci = Contaminant concentration in invertebrate = (soil conc. * Biotransfer Factor)
Cs = Contaminant concentration in soil
Total Dose = Dose (soil) + Dose (invertebrate)
H=HR/CA (Assume = to 1)

TABLE E-6
SHORT-TAILED SHREW - AVERAGE INPUTS
TERRESTRIAL WILDLIFE MODEL HAZARD QUOTIENT CALCULATION
SITE 43, NAVAL AIR STATION PENSACOLA, PENSACOLA FLORIDA

Chemical	Avg Soil Conc. (mg/kg)	Biotransfer Factor (soil to inv)	Invertebrate Conc. (mg/kg)	Dose (mg/kg/d) from: Soil	Dose (mg/kg/d) from: Invert.	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	NOAEL EEQ	LOAEL EEQ
Metals										
Copper	1.14E+02	5.15E-01	5.87E+01	9.10E-02	5.20E+00	5.30E+00	1.17E+01	1.51E+01	4.5E-01	3.5E-01
Lead	1.08E+03	2.66E-01	2.86E+02	8.59E-01	2.54E+01	2.63E+01	8.00E+00	8.00E+01	3.3E+00	3.3E-01

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	0.01613	kg
Food Ingestion Rate = (If)	0.00143	kg/day
Soil Ingestion Rate = (Is)	0.00001287	kg/day
Home Range = (HR)	Assume equal to 1	
Contaminated Area = (CA)	Assume equal to home range	

Dose (soil) = (Cs * Is)(H)/BW
Dose (invertebrate) = (Ci * If)(H)/BW
Ci = Contaminant concentration in invertebrate = (soil conc. * Biotransfer Factor)
Cs = Contaminant concentration in soil
Total Dose = Dose (soil) + Dose (invertebrate)
H=HR/CA (Assume = to 1)

TABLE E-7
AMERICAN ROBIN - CONSERVATIVE INPUTS
TERRESTRIAL WILDLIFE MODEL HAZARD QUOTIENT CALCULATION
SITE 43, NAVAL AIR STATION PENSACOLA, PENSACOLA FLORIDA

Chemical	Max Soil Conc. (mg/kg)	Biotransfer Factor (soil to inv)	Invertebrate Conc. (mg/kg)	Dose (mg/kg/d) from: Soil	Dose (mg/kg/d) from: Invert.	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	NOAEL EEQ	LOAEL EEQ
Metals										
Copper	8.89E+02	1.53E+00	1.36E+03	4.30E+00	2.20E+02	2.24E+02	4.70E+01	6.17E+01	4.8E+00	3.6E+00
Lead	7.36E+03	1.52E+00	1.12E+04	3.56E+01	1.81E+03	1.84E+03	1.13E+00	1.13E+01	1.6E+03	1.6E+02

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	0.0773	kg
Food Ingestion Rate = (If)	0.01247	kg/day
Soil Ingestion Rate = (Is)	0.0003741	kg/day
Home Range = (HR)	Assume equal to 1	
Contaminated Area = (CA)	Assume equal to home range	

Dose (soil) = (Cs * Is)(H)/BW
Dose (invertebrate) = (Ci * If)(H)/BW
Ci = Contaminant concentration in invertebrate = (soil conc. * Biotransfer Factor)
Cs = Contaminant concentration in soil
Total Dose = Dose (soil) + Dose (invertebrate)
H=HR/CA (Assume = to 1)

TABLE E-8
AMERICAN ROBIN - AVERAGE INPUTS
TERRESTRIAL WILDLIFE MODEL HAZARD QUOTIENT CALCULATION
SITE 43, NAVAL AIR STATION PENSACOLA, PENSACOLA FLORIDA

Chemical	Avg Soil Conc. (mg/kg)	Biotransfer Factor (soil to inv)	Invertebrate Conc. (mg/kg)	Dose (mg/kg/d) from: Soil	Dose (mg/kg/d) from: Invert.	Total Dose (mg/kg/d)	NOAEL (mg/kg/d)	LOAEL (mg/kg/d)	NOAEL EEQ	LOAEL EEQ
Metals										
Copper	1.14E+02	5.15E-01	5.87E+01	1.52E-01	8.68E+00	8.83E+00	4.70E+01	6.17E+01	1.9E-01	1.4E-01
Lead	1.08E+03	2.66E-01	2.86E+02	1.43E+00	4.23E+01	4.38E+01	1.13E+00	1.13E+01	3.9E+01	3.9E+00

Cells are shaded if the value is greater than 1.0

Body Weight = (BW)	0.0804	kg
Food Ingestion Rate = (If)	0.01188	kg/day
Soil Ingestion Rate = (Is)	0.0001069	kg/day
Home Range = (HR)	Assume equal to 1	
Contaminated Area = (CA)	Assume equal to home range	

Dose (soil) = (Cs * Is)(H)/BW
Dose (invertebrate) = (Ci * If)(H)/BW
Ci = Contaminant concentration in invertebrate = (soil conc. * Biotransfer Factor)
Cs = Contaminant concentration in soil
Total Dose = Dose (soil) + Dose (invertebrate)
H=HR/CA (Assume = to 1)