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SITE ASSESSMENT REPORT FOR SITE 351-2 NS MAYPORT FL
6/1/2012
TETRA TECH

Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62467-94-D-0888



Rev. 1
06/11/12

Site Assessment Report for Site 351-2

Naval Station Mayport
Jacksonville, Florida

Contract Task Order 0386

June 2012



NAS Jacksonville
Jacksonville, Florida 32212-0030



Document Tracking Number 12JAX0112

June 11, 2012

Project Number 112G00103

Naval Facilities Engineering Command, Southeast
ATTN: Mr. Brian Syme (OPC 6)
Remedial Project Manager
135 Ajax Street North, Building 903
Naval Air Station Jacksonville
Jacksonville, FL 32212-0030

Reference: CLEAN III Contract Number N62467-94-D-0888
Contract Task Order Number 0386

Subject: Final Site Assessment Report, Revision 1, for Site 351-2
Naval Station Mayport, Jacksonville, Florida

Dear Mr. Syme:

Tetra Tech is pleased to submit the Final Site Assessment Report, Revision 1, for Site 351-2 that was prepared for the United States Navy, Naval Facilities Engineering Command Southeast under Contract Task Order (CTO) 0386 for the Comprehensive Long-term Environmental Action Navy (CLEAN) III Contract Number N62467-94-D-0888. Members of the Naval Station (NAVSTA) Mayport Environmental Tier I Partnering Team (Partnering Team) reviewed the draft-final (Revision 1) report, and no comments were received.

If you have any questions with regard to this submittal, please do not hesitate to contact me by telephone at (904) 730-4669, extension 213, or via e-mail at Mark.Peterson@TetraTech.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark A. Peterson'.

Mark A. Peterson
Project Manager

MAP/lc

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Administrative Record (electronic only)
CTO 0386 Project File

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**FINAL
SITE ASSESSMENT REPORT
FOR
SITE 351-2**

**NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA**

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:
Naval Facilities Engineering Command
Southeast
NAS Jacksonville
Jacksonville, Florida 32212-0030**

**Submitted by:
Tetra Tech, Inc.
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**CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0386**

JUNE 2012

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PITTSBURGH, PENNSYLVANIA**



This *Site Assessment Report, Revision 1, for Site 351-2* was prepared under the direct supervision of the undersigned geologist using geologic and hydrogeologic principles standard to the profession at the time the report was prepared in general conformance with the requirements of Chapter 62-770, Florida Administrative Code. 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.

June 11, 2012

Richard D. McCann, P.G.

Florida License Number PG-2358

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ACRONYMS

ABB-ES	ABB Environmental Services, Inc.
bls	below land surface
BMS	BioManagement Services, Inc.
BTEX	benzene, toluene, ethylbenzene, and total xylenes
°C	degree Celsius
C	carcinogen
CTO	Contract Task Order
DPT	direct push technology
ENCO	Environmental Conservation Laboratories, Inc.
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	flame ionization detector
FL-PRO	Florida Residual Petroleum Organics Method
GAG	Gasoline Analytical Group
GCTL	Groundwater Cleanup Target Level
GW-ADV	advanced model for contaminated groundwater
GW-Screen	screening model for contaminated groundwater
ID	inside diameter
J&E	Johnson and Ettinger
KAG	Kerosene Analytical Group
µg/L	microgram per liter
mg/kg	milligram per kilogram
mg/L	milligram per liter
msl	mean sea level
mL	milliliter
MTBE	methyl tertiary-butyl ether
N/A	not applicable
NA	not analyzed
NADC	Natural Attenuation Default Concentration
NAVFAC SE	Naval Facilities Engineering Command Southeast
NAVSTA	Naval Station
NC	non-carcinogen
NIR	no instrument response
NL	none listed
NM	not measured
NS	not sampled

ACRONYMS (Continued)

OVA	organic vapor analyzer
PAH	polynuclear aromatic hydrocarbon
ppm	part per million
PVC	polyvinyl chloride
SA	site assessment
SAR	Site Assessment Report
SCH	schedule
SCTL	Soil Cleanup Target Level
SOP	Standard Operating Procedure
SR	source removal
SWMU	Solid Waste Management Unit
TDS	total dissolved solids
TOC	top of casing
TRPH	total recoverable petroleum hydrocarbons
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOC	volatile organic compound

EXECUTIVE SUMMARY

Tetra Tech has completed a site assessment (SA) at Site 351-2, Naval Station (NAVSTA) Mayport, Jacksonville, Florida in accordance with the requirements of Chapter 62-770, Florida Administrative Code (F.A.C.). This Site Assessment Report (SAR) includes a source removal and treatability study and is being submitted to the Florida Department of Environmental Protection (FDEP) for approval. A SAR summary sheet is included as Appendix A.

For this SA, Tetra Tech completed the following:

- Reviewed available United States Navy documents to:
 - Identify potential sources of petroleum hydrocarbons in the vicinity.
 - Identify private potable wells within a 0.25-mile radius of the site and public water supply wells within a 0.5-mile radius.
 - Locate nearby surface water bodies.
 - Evaluate surface hydrology and drainage.
- Performed a soil vapor survey in the unsaturated zone to delineate areas of excessively contaminated soil. A total of 54 soil borings were completed for soil organic vapor screening sample collection.
- Collected groundwater samples obtained via direct push technology groundwater sampling techniques for analyses by a mobile laboratory.
- Collected confirmatory soil samples at the spill area to be analyzed for Gasoline Analytical Group (GAG)/Kerosene Analytical Group (KAG) constituents per Chapter 62-770, F.A.C.
- Installed five shallow monitoring wells, one deep (40-foot) monitoring well, and 3 temporary monitoring wells. Groundwater samples collected from permanent and temporary wells were analyzed for GAG/KAG constituents per Chapter 62-770, F.A.C.
- Referenced and obtained appropriate aquifer data from the United States Geological Survey to calculate aquifer characteristics at NAVSTA Mayport.

The investigation was focused on the central and eastern portion of a walkway between Buildings 351 and 1388. On December 16, 2003, a release from a fuel line that connected to a day tank occurred and

spilled No. 2 fuel oil onto the grassy median area. The cause of the spill as documented from the Johnson Controls Hill Spill Response form dated 12/16/03 reports, "The fuel supply line from the AST N1388 to boiler in Bldg. 351 broke off in the fuel piping sump located north side of Bldg. 351". Seven 55-gallon drums of petroleum waste were generated during the initial cleanup of the site. The spill response form states under the additional information section, "cleanup of spill is not complete."

The Navy initiated a limited interim soil removal, and on June 28, 2004, Aerostar Environmental Services, Inc. was contracted to remove impacted soil for disposal. The excavation included a 15-foot by 5-foot by 3-foot deep area and resulted in the removal of 14.14 tons of impacted soil. The impacted soil was placed in a roll-off container and transported offsite for disposal at a licensed facility. Soils impacted by the release were limited to a 300 square foot grassed area, which extends to the groundwater table that occurs at approximately 5 feet below land surface (bls). Through soil screening with an organic vapor analyzer, mobile laboratory analyses, and fixed-base laboratory analyses, the remaining impacted area was defined and characterized for removal.

From January 3 through 6, 2007, a source removal overseen by Tetra Tech was conducted to excavate the petroleum-impacted soil at the site. On January 7 and 8, 2007, 76 tons of petroleum-impacted soils were transported from the site by Soil Remediation Inc. of Ray City, Georgia to a state-licensed incinerator for treatment and disposal.

Groundwater samples were collected from the surficial aquifer and analyzed by both a mobile laboratory (analyzed for benzene, toluene, ethylbenzene, and total xylenes and methyl tertiary-butyl ether, plus 1- and 2-methylnaphthalene) and a fixed-base laboratory (GAG/KAG analyses). Analytical results from the groundwater samples identified petroleum constituents in the eastern portion of the area between Buildings 351 and 1388 in excess of FDEP Groundwater Cleanup Target Levels (GCTLs) for volatile organic compounds, polynuclear aromatic hydrocarbons, and total recoverable petroleum hydrocarbons (TRPH). During free product recovery and groundwater monitoring activities at an adjacent site (Site 351-1), the monitoring wells at Site 351-2 were checked for the presence of free product. Approximately 4 inches of free product were observed in monitoring well MW03S.

The vertical and horizontal extent of soil and groundwater contamination was defined at the site. Remedial activities at the site had removed all accessible petroleum-impacted soil. A small quantity of petroleum-impacted soil could not be removed due to the presence of building foundations and utilities and was left in place. The horizontal extent of the groundwater plume extends more than 30 feet under Building 1388 based on groundwater data collected from temporary well TW-23. The vertical extent of groundwater contamination was defined by a sample collected from MW04D, a 40-foot deep well, for which the analytical results were below GCTLs for all parameters.

During the May 13, 2008, NAVSTA Mayport Installation Restoration Partnering Team meeting, the implementation of a treatability study was proposed and approved for Site 351-2 to address remaining groundwater impacts. The treatability study was to evaluate the effectiveness of treatment of contaminated groundwater with BIOX[®], which combines controlled chemical oxidation and enhanced biodegradation of contaminants in soil and groundwater.

In June 2010, BIOX[®] was injected into the shallow groundwater and intermediate zone (3 to 20 feet bls) to remediate the remaining groundwater contamination. One year of post-injection sampling was conducted, commencing in July 2010 and completing in April 2011. Laboratory results of groundwater samples analyzed from the eight monitoring wells identified TRPH in monitoring wells MPT-351-2-MW03S and MPT-351-2-MW06S as the only petroleum constituent that exceeded FDEP GCTLs. Petroleum constituent concentrations have decreased significantly since the completion of the BIOX[®] treatability study. These analytical results suggest that BIOX[®] reagent is an effective remediation strategy, and may be considered for future sites with petroleum contamination.

Based on the post-injection groundwater monitoring results, a second injection is recommended to address the remaining presence of free product, groundwater impacts, and residual soil contamination at the site. If free product or groundwater exceedances in excess of Natural Attenuation Default Concentrations remain, a Remedial Action Plan is recommended.

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

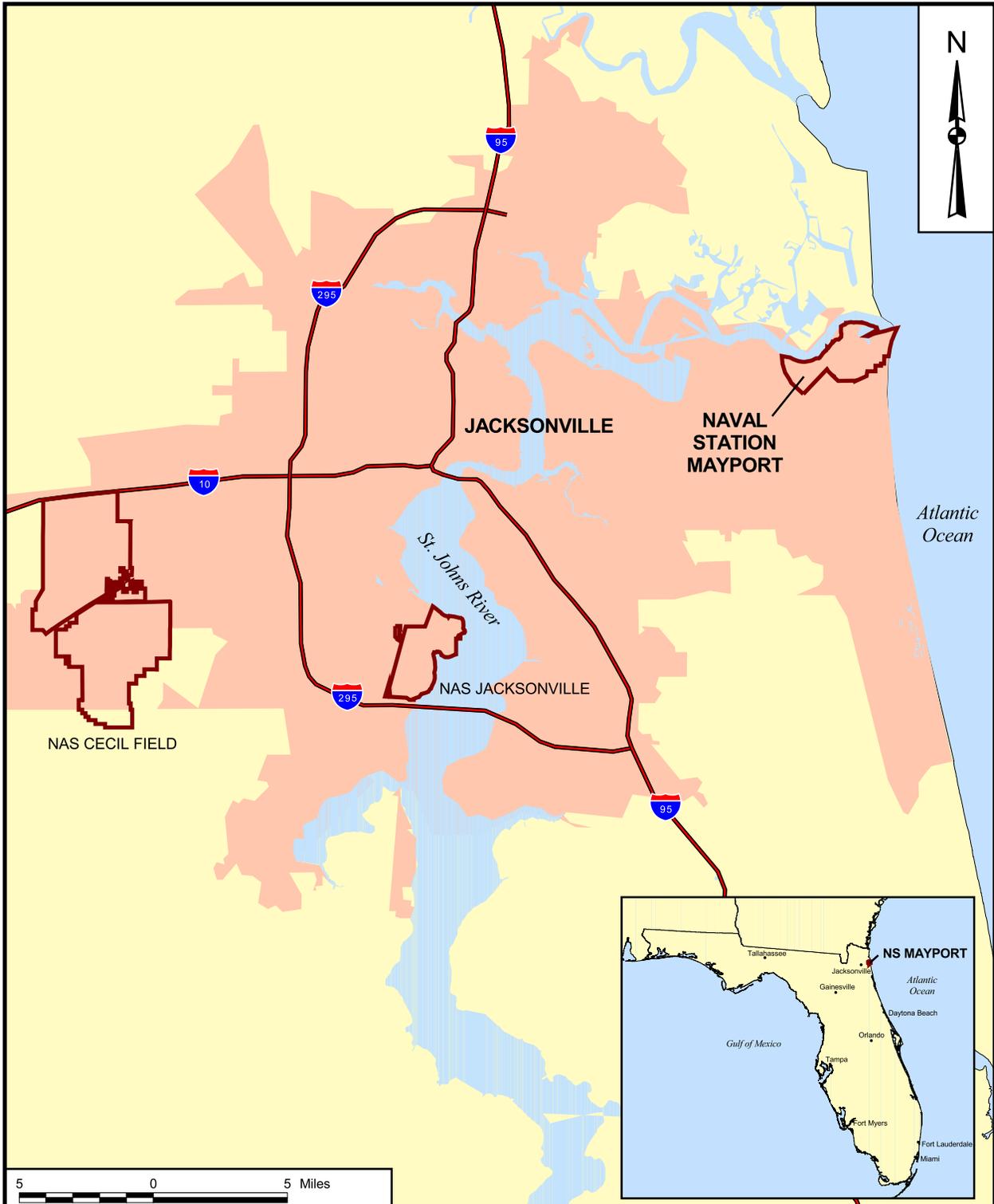
Tetra Tech performed a site assessment (SA) at Site 351-2, Naval Station (NAVSTA) Mayport for the Naval Facilities Engineering Command Southeast (NAVFAC SE) under Comprehensive Long-term Environmental Action Navy Contract Number N62467-94-D-0888, Contract Task Order (CTO) 0386. Information from the field investigation, two soil removals, and a treatability study have been assimilated into this Site Assessment Report (SAR) to provide a characterization of site conditions from which to base future courses of action. A SAR Summary Sheet is included as Appendix A.

The purpose of the SA was to evaluate the nature and extent of remaining petroleum hydrocarbon contamination in soil and groundwater at Site 351-2. Prior to the investigation, a limited source removal (SR) was conducted. A summary of the site investigative history is provided in Section 1.8. During the SA, the area of remaining petroleum-impacted soil was defined, and a SR was completed to remove the impacted soils. A treatability study was conducted to address the groundwater contamination.

1.2 FACILITY AND SITE LOCATION

NAVSTA Mayport is located within the corporate limits of the City of Jacksonville, Duval County, Florida, approximately 12 miles northeast of downtown Jacksonville and adjacent to the town of Mayport. A Site Vicinity Map showing NAVSTA Mayport's location in northeastern Florida is provided as Figure 1-1. The Station complex is located on the northern end of a peninsula bounded by the Atlantic Ocean to the east and the St. Johns River to the north and west. NAVSTA Mayport occupies the entire northern part of the peninsula except for the town of Mayport, which is located to the west between the Station and the St. Johns River.

Site 351-2, which is named after Building 351, is located near the northeastern tip of the peninsula where the Station is situated as shown on Figure 1-2. Building 351 is one of the primary buildings comprising the Training Site Detachment. The source area for the current investigation is located between Building 351 and Building 1388. As shown on Figure 1-3, Building 1388 is approximately 35 feet northwest of Building 351.



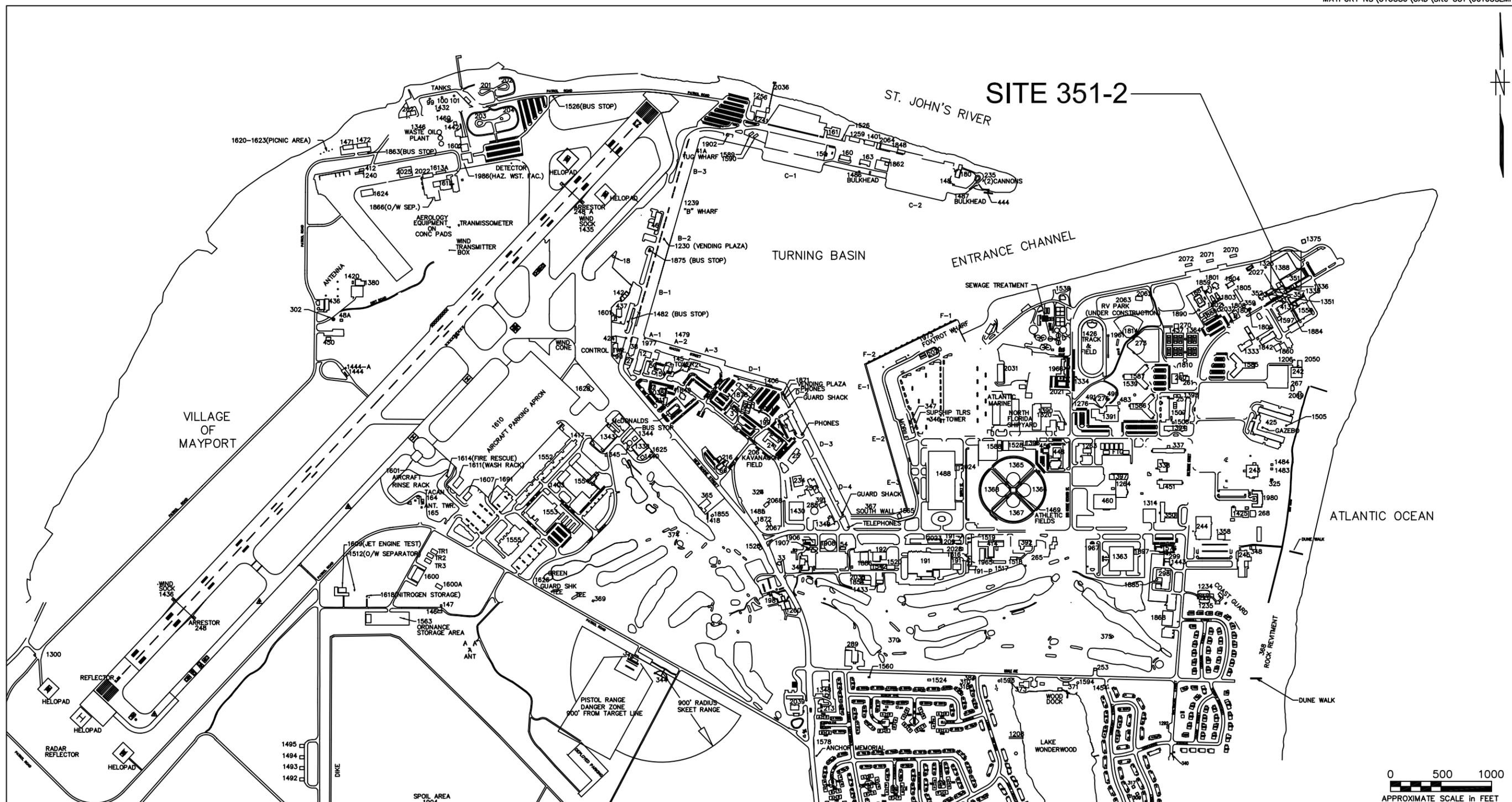
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**SITE VICINITY MAP
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA**

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SITE LOCATION MAP
SITE 351-2
SITE ASSESSMENT REPORT
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NO.	00103
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LEGEND

- T-T- Communications
- E-E- Electricity
- S-S- Sewer
- W-W- Water
- Fuel Oil

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SITE PLAN
SITE 351-2
 SITE ASSESSMENT REPORT
 NAVAL STATION MAYPORT
 JACKSONVILLE, FLORIDA

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1.3 REGIONAL GEOLOGY AND HYDROGEOLOGY

Northeastern Florida is underlain by two main aquifer systems: the surficial aquifer system and the Floridan aquifer system. The surficial aquifer system near NAVSTA Mayport includes sediments of the Upper Hawthorn Group, upper Miocene and Pliocene deposits, and Pleistocene and Holocene deposits (United States Department of Agriculture [USDA], 1978). These undifferentiated surficial deposits extend from land surface to the top of the Hawthorn Group about 50 feet below land surface (bls) (ABB Environmental Services, Inc. [ABB-ES], 1995).

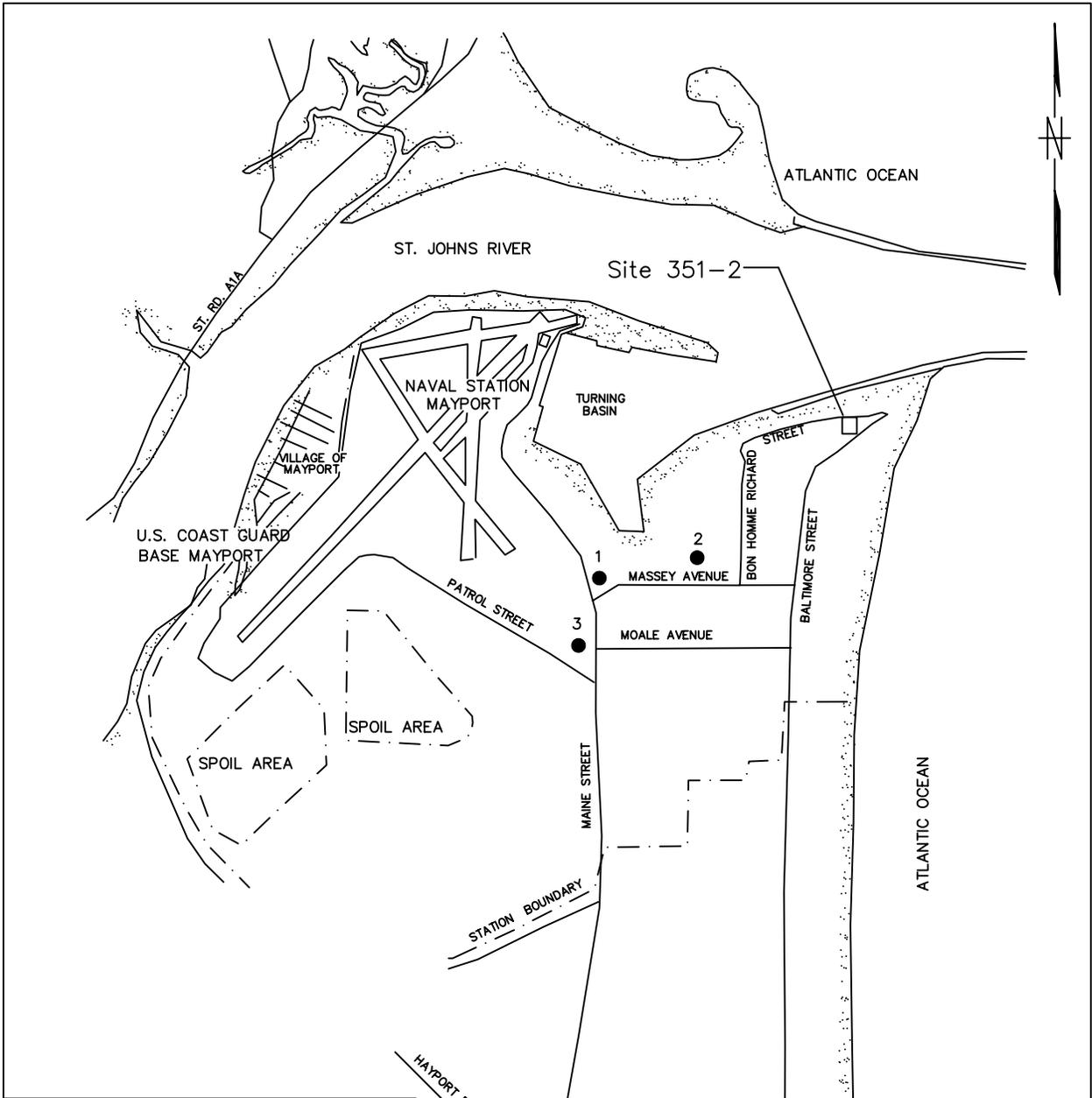
The surficial aquifer system consists of fine-grained sands near the surface interspersed with thin (less than 1 foot) clay lenses and generally grades to a mixture of sand and coarse shell fragments from 30 to 50 feet bls. The base of the surficial aquifer system is its contact with the underlying intermediate confining unit, which is a sequence of marine clays and discontinuous limestone stringers (Spechler, 1994).

The Floridan aquifer system is the principal source of groundwater for public drinking water in most of northeastern Florida. In the area of investigation, the system is comprised of (from youngest to oldest) the Ocala Formation, the Avon Park Formation, and the Oldsmar Limestone. The Hawthorn Group, a confining unit between the surficial aquifer system and Floridan aquifer system, unconformably overlies the Floridan aquifer (USDA, 1978).

1.4 POTABLE WATER WELL SURVEY

The potable water supply information presented in this report was obtained from a Contamination Assessment Report prepared by the United States Army Corps of Engineers (USACE) for a nearby site (Site 1330) in 1992 (USACE, 1992). The locations of the potable wells are depicted on Figure 1-4, and potable well information is summarized on Table 1-1.

Potable water is supplied to NAVSTA Mayport by three on-base supply wells. Two of the active wells (Well Numbers 1 and 2) are within 1 mile of the site as shown on Figure 1-4. One of the three wells is 12 inches in diameter, and the other two are 16-inch diameter wells. All three wells draw water from the Floridan aquifer from depths of approximately 1,000 feet bls. Well capacities range between 2.1 and 2.9 million gallons per day. The water is treated by the Station's water treatment plant prior to distribution.



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POTABLE WATER WELL LOCATIONS
 SITE 351-2
 SITE ASSESSMENT REPORT
 NAVAL STATION MAYPORT
 JACKSONVILLE, FLORIDA

CONTRACT NO. 00103	
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FORM CADD NO. SDIV_AV.DWG - REV 0 - 1/20/98

Table 1-1 Potable Water Well Survey Results Site Assessment Report, Site 351-2 Naval Station Mayport Jacksonville, Florida				
Well Identification	Distance from Site (miles)	Diameter (inches)	Depth of Well (feet bls)	Use
1	>0.5	12	1,000	In use
2	>0.5	16	1,000	In use
3	<1	16	1,000	In use

1.5 TOPOGRAPHY AND DRAINAGE

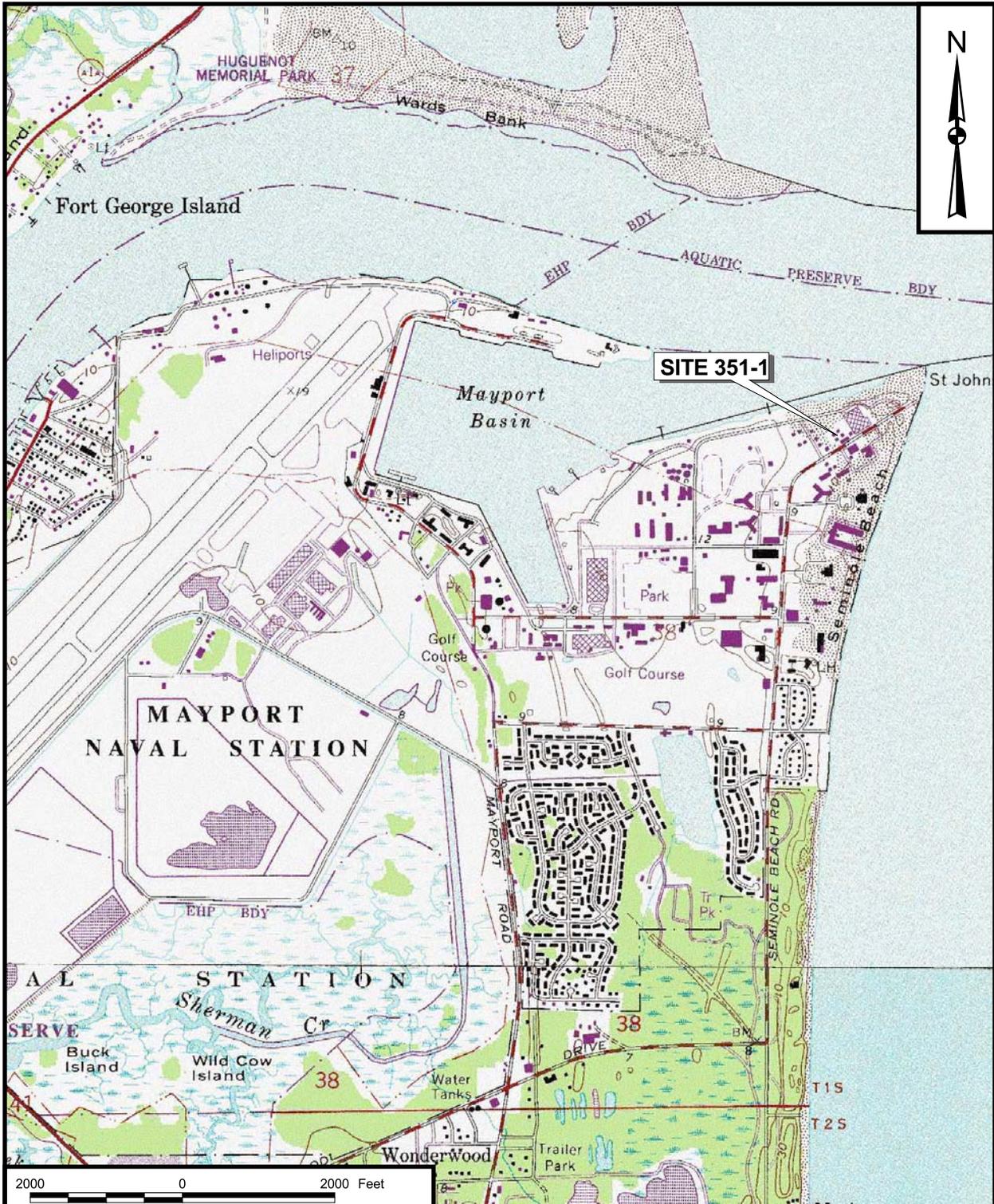
NAVSTA Mayport is located in the Southeastern Coastal Plain physiographic province. The topography is mostly low, gentle to flat, and composed of a series of ancient marine terraces. NAVSTA Mayport is located within the Silver Bluff Terrace. The average land surface elevation at NAVSTA Mayport is between 8 and 10 feet above mean sea level (msl) (United States Geological Survey [USGS], 1992).

Site 351-2 is positioned on a relatively flat parcel located at the northeastern tip of NAVSTA Mayport on a parcel of land separating the St. Johns River from the Mayport Turning Basin as shown on Figure 1-2. A portion of the USGS Mayport, Florida 7.5-minute quadrangle has been reproduced as Figure 1-5 to show the site location relative to its topographic surroundings.

1.6 LAND USE IN SITE VICINITY

The site is located within the northeastern portion of the NAVSTA Mayport. The area surrounding the site is occupied by industrial buildings (Buildings 1388 and 351) used for classrooms, a recreation picnic area, fleet training structures, the Turning Basin, the St. Johns River, and the Atlantic Ocean. These structures and bodies of water are located on the southern side of a peninsula where the St. Johns River meets the Atlantic Ocean.

Building 351 is one of the primary buildings used for the Training Site Detachment. Building 351 is joined by a walkway to the north by Building 1388 (beyond Building 1388 is a recreational area and the St. Johns River), Baltimore Road parallels the southern side of Building 351 (with a parking lot beyond Baltimore Street), a parking lot for Buildings 351 and 1388 and the Atlantic Ocean to the east, and classrooms and fleet trainings structures that simulate Naval emergency situations (such as fire and ship sinking) are located to the west. The average land surface elevation is between 8 feet to 10 feet above msl. No industrial or residential buildings are in the immediate vicinity of the site.



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USGS TOPOGRAPHIC MAP
SITE 351-2
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

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P:\GIS\MAYPORT_NSI\APR4195_230_283QUAD.APR USGS TOPOGRAPHIC MAP_351-1 6/6/06 MKB (KOP)

1.7 SITE DESCRIPTION

A site plan depicting Site 351-2 and its surroundings is provided as Figure 1-3. The floor plan of Building 351, the Fleet Training Center, comprises approximately 20,000 square feet and is oriented with its long dimension northeast to southwest. Building 1388 is situated approximately 35 feet northwest of Building 351, is roughly square, and covers approximately 32,000 square feet. Buildings 351 and 1388 are both classrooms used for fleet training. Building 1388 has a 20-foot wide overhang and concrete walkway along the southeastern side facing Building 351. Building 351 has a landscaped area that parallels Building 351 and faces the concrete walkway of Building 1388. The subject site is located near the mid-point of the Building 351 and abuts a covered walkway. The area of contaminated soil is located east of the covered sidewalk that connects Building 351 to Building 1388. Approximately 4 feet east of this sidewalk, an entrance to Building 351, is the location of the fuel line that ruptured causing the release of No. 2 fuel oil. The site is congested with planters, columns to hold the covered walkway, and large industrial air conditioners. Utilities such as communication, sewer, water, power, and a fuel oil line are set in this grassy area or beneath the concrete walkway.

1.8 SITE OPERATIONS AND INVESTIGATIVE HISTORY

On December 16, 2003, it was discovered that a release of 650 gallons of No. 2 fuel oil from a faulty fuel line located at Building 351 spilled into a grassy area located between Buildings 351 and 1388. This investigation is focused on the area of the release area located in the central area between Buildings 351 and 1388. The cause of the spill as recorded from the December 16, 2003, Johnson Controls Hill, Spill Response Form 2, states, "The fuel supply line from the AST N1388 to boiler in Bldg. 351 broke off in the fuel piping sump located north side of Bldg. 351". Based on a hand drawn sketch, the surficial imprint of the spill area was in the shape of an "L", and the eastern-western extension of the "L" was estimated to be 15 feet long and possibly 5 feet wide. The shorter northern-southern extension of the "L" was estimated to be 12 feet in length and possibly 8 feet wide. Seven 55-gallon drums of petroleum-impacted waste were generated during the initial cleanup of the site. It was documented on the spill response form that "cleanup of spill is not complete". A copy of the Spill/Clean-Up Report Form, Spill Response Form 2 and a Discharge Report Form filed with the Florida Department of Environmental Protection (FDEP) is presented as Appendix B. The spill area is documented to be contained in the grassy area, which is surrounded on northern, eastern, and western sides by sidewalks and the southern side by Building 351. The sidewalks on the eastern and western ends form the boundaries with Building 351, and a cement ramp sidewalk forms the southern boundary. Based on field observations, the contour of the grassy area, which slopes to the center, prevented the migration of the fuel oil from reaching the northern sidewalk.

As part of a removal on June 28, 2004, Aerostar Environmental Services, Inc. was contracted by NAVFAC SE to remove impacted soil for disposal. The excavation included a 15-foot by 5-foot by 3-foot

deep area and resulted in the removal of 14.14 tons of impacted soil. The impacted soil was placed in a roll-off container and transported offsite for disposal at a licensed facility.

Other releases associated with the fuel line that supplies the day tank and boiler have occurred at Building 351. Site 351-1 is located to the southwest of Site 351-2 and has had two reported releases that have been associated with a fuel line. The line has since been replaced, and no additional releases have been documented. The petroleum releases at Site 351-1 are being investigated as a separate assessment, and the contaminant plumes are not commingled.

1.9 PURPOSE OF CURRENT INVESTIGATION

The objective of the SA was to assess the nature and extent of soil and/or groundwater contamination at Site 351-2 resulting from past and/or current fuel usage at the site. The data collected during the investigation was used to prepare this SAR as required by Chapter 62-770.600, Florida Administrative Code (F.A.C.). This SAR provides a characterization of site conditions from which to base future courses of action. A SAR summary sheet is provided as Appendix A. In addition to the SA, a SR was conducted to remove all accessible petroleum-impacted soil identified during the site assessment. A treatability study was conducted to address groundwater impacts.

2.0 SUBSURFACE INVESTIGATION METHODS

2.1 QUALITY ASSURANCE

The site investigation was conducted in general accordance with the FDEP-approved Standard Operating Procedures (SOPs) (DEP-SOP-001/01) (February 2004).

2.2 ASSESSMENT STRATEGY

Soil and groundwater investigations at the site were conducted in two phases: a screening phase (Phase I) in which soil and groundwater grab samples were collected by direct push technology (DPT) and hand drive point methods, and (Phase II) the installation of five permanent and three temporary monitoring wells at locations based upon Phase I results. During Phase I, various soil and groundwater samples were analyzed by an on-site mobile laboratory and soil headspace vapors were screened using an organic vapor analyzer (OVA). During Phase II, collected soil and groundwater samples were analyzed for Gasoline Analytical Group (GAG)/Kerosene Analytical Group (KAG) per Chapter 62-770, F.A.C., by a fixed-base laboratory. Laboratory analytical methods used for the soil and groundwater analyses for the mobile and fixed-base laboratory are discussed in the Section 2.4.2.1 for soil and Section 2.5.2.3 for groundwater.

Since the upper 2 feet of soil in some areas had been removed previously, soil sample depths in several borings were at 3 feet below the fill zone.

2.3 DETERMINATION OF GROUNDWATER GRADIENT

Previous assessments at Building 351 have historically determined that the groundwater flow direction in the shallow aquifer beneath the site is to the north and northeast toward the St. Johns River. Determination of groundwater elevations in the surficial aquifer during previous assessments was accomplished by surveying the top of casing (TOC) elevations of permanent monitoring wells relative to a temporary benchmark, measuring depth to water from the TOC of the wells, and subtracting depth to water measurements from surveyed TOC elevations. During the evaluation of groundwater contour data, incorrect survey measurements were suspected. A new survey was conducted in March 2011, and this document incorporates the revised survey results.

2.4 SOIL QUALITY ASSESSMENT

2.4.1 Field Screening Procedures

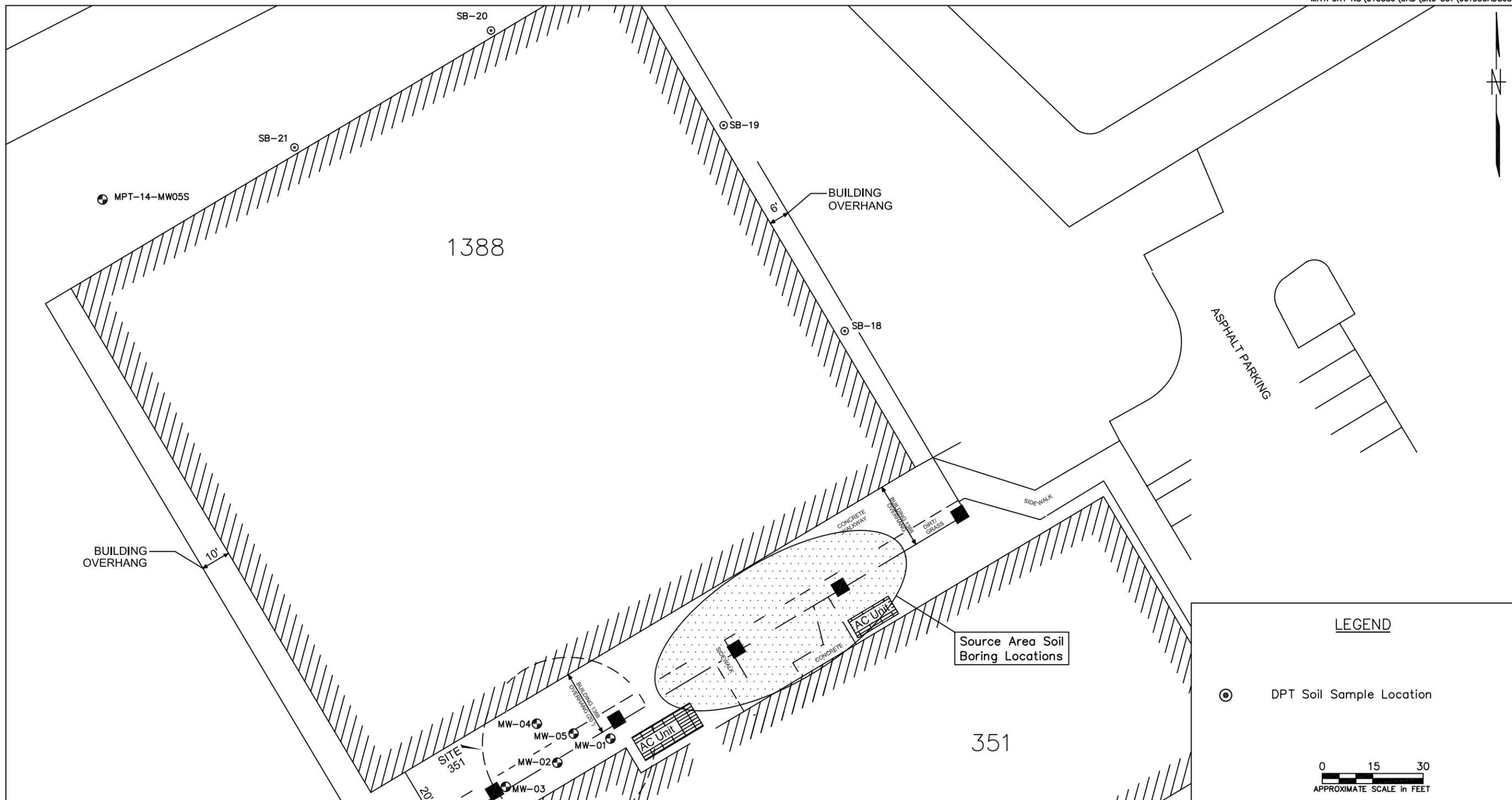
Phase I of the soil assessment involved screening soil for petroleum impacts. Soil boring locations SB-01 through SB-21 were completed at Site 351-2 from August 10 through 12, 2005. A second field effort to obtain screening samples from soil borings SB-26 through SB-58 occurred from March 16 through 22, 2006. Both screening events focused on defining the area of soil impacted from the December 2003 petroleum release. Soil samples collected from borings SB-01 to SB-21 were screened at 1-foot and 3-foot bls intervals, and samples from borings SB-26 through SB-58 were screened at 0.5 foot, 1.5 feet, and 3 feet bls. Soil borings were advanced using a stainless steel, 3-inch inside diameter (ID) hand auger. All samples were screened for organic vapors using an OVA equipped with a flame ionization detector (FID). Soil screening methods used followed the FDEP guidelines presented in FDEP's *Guidelines for Assessment and Source Removal of Petroleum Contaminated Soil* (FDEP, 1998). Soil borings used to screen locations not located within the source area are shown on Figure 2-1, and soil borings used for sample collection within the source area are shown on Figure 2-2.

In addition to screening soils with an OVA-FID, a mobile laboratory group, KB Laboratories of Gainesville, Florida, was subcontracted to analyze soil and groundwater samples for select constituents using United States Environmental Protection Agency (USEPA) Method 8260. On October 10 and 11, 2005, six soil samples (SB-01, SB-02, SB-05, SB-09, SB-10, and SB-14) were collected at a depth of 3 feet bls and analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary-butyl ether (MTBE), naphthalene, and 1- and 2-methylnaphthalene. These samples were collected from areas that were suspected to be impacted from the surface sheet flow of the petroleum release. Samples collected from the area known to be impacted by the petroleum release were collected and submitted to the fixed-base laboratory during Phase II.

2.4.2 Soil Sampling Strategy for Fixed-base Laboratory Analyses

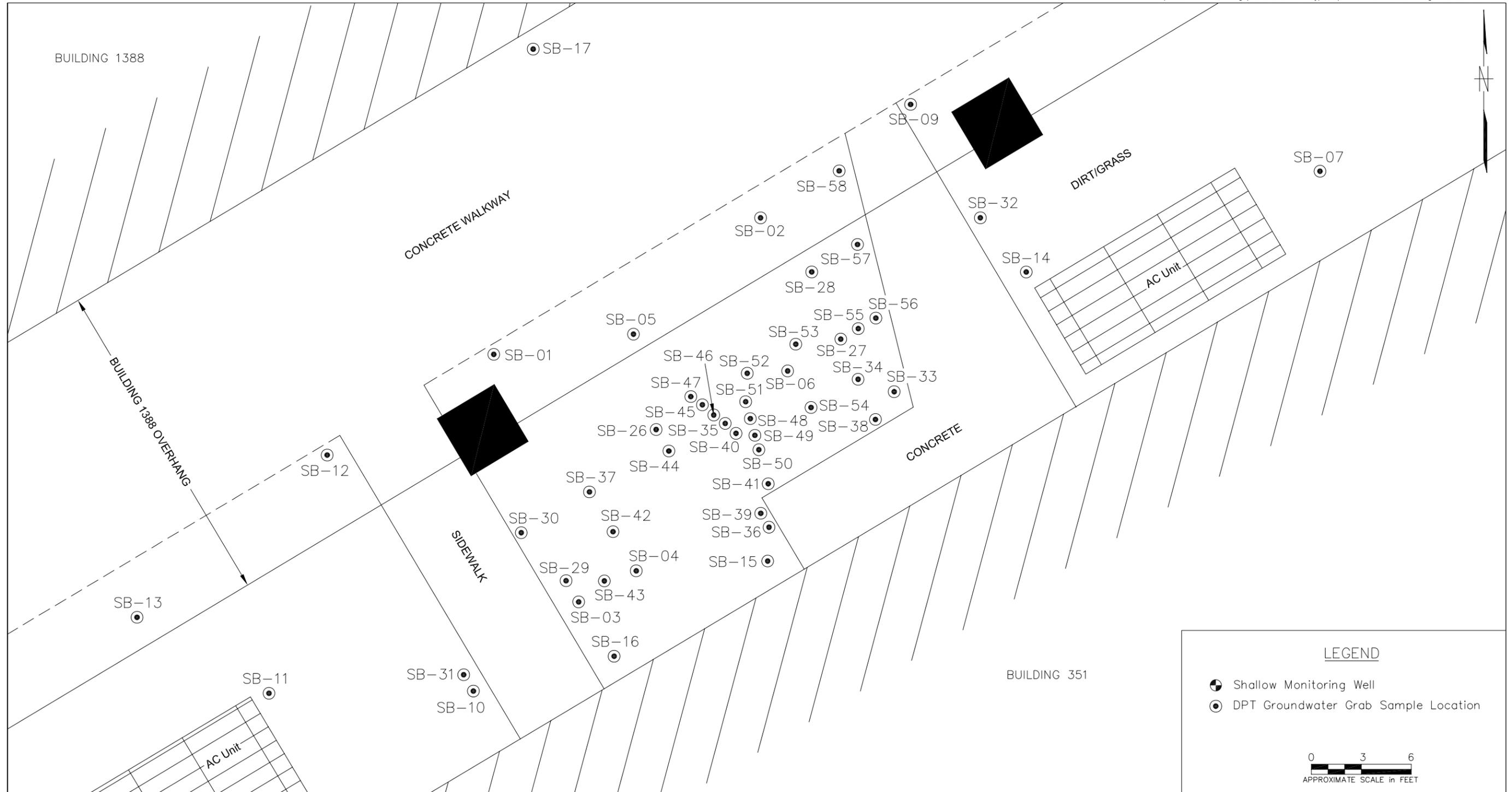
Phase II of the soil assessment involved collecting soil samples for the purpose of meeting State regulatory requirements and defining the extent of the release. The soil samples were collected in accordance with FDEP SOP DEP-SOP001/01 (February 2004) and submitted to a fixed-base laboratory for analyses.

On August 12, 2005, three soil samples were collected and submitted to Environmental Conservation Laboratories, Inc. (ENCO) of Jacksonville, Florida (a fixed-base laboratory) for analyses of volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and total recoverable petroleum hydrocarbons (TRPH) (GAG/KAG) per Table B of Chapter 62-770, F.A.C. All three soil samples were collected at 3 feet bls, and the locations of the soil samples were selected based on either OVA and/or



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE		SOIL BORING LOCATIONS EXCLUDING THE SOURCE AREA		CONTRACT NO. 00103		
							JCF	12/21/07		SITE 351-1		APPROVED BY		DATE
										SITE ASSESSMENT REPORT		APPROVED BY		DATE
										NAVAL STATION MAYPORT		DRAWING NO.		REV.
										JACKSONVILLE, FLORIDA		FIGURE 2-1		0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY JFF DATE 10/18/07
 CHECKED BY DATE
 COST/SCHED-AREA
 SCALE AS NOTED



**SOIL SCREENING LOCATIONS
 AT THE SOURCE AREA
 SITE 351-2
 SITE ASSESSMENT REPORT
 NAVAL STATION MAYPORT
 JACKSONVILLE, FLORIDA**

LEGEND	
	Shallow Monitoring Well
	DPT Groundwater Grab Sample Location
 APPROXIMATE SCALE in FEET	
CONTRACT NO.	00103
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	FIGURE 2-2
REV.	0

mobile laboratory screening results. These samples were collected to fulfill the FDEP regulatory requirement of collecting high, medium, and low petroleum-contaminated samples in accordance with Chapter 62-770, F.A.C. Seven additional soil samples (SB-26, SB-30, SB-31, SB-32, SB-37, SB-53, and SB-58) were collected on March 22, 2006, to characterize the extent of petroleum-impacted soil in preparation for the SR. The soil samples were all collected from a depth of 3 feet bls, which is below the fill material installed after the initial soil removal in 2004.

2.5 GROUNDWATER ASSESSMENT METHODS

2.5.1 DPT Grab Samples

Phase I of the groundwater assessment involved the collection of groundwater screening samples utilizing DPT. The purpose of the DPT investigation (August 10 to 12, 2005) was to collect groundwater grab samples from the upper 4 feet of the saturated zone and, in conjunction with mobile laboratory analyses, estimate the lateral and vertical extent of groundwater contamination present in the shallow portion of the surficial aquifer. Groundwater samples were collected by DPT from 17 borings at an approximate depth interval of 5 to 9 feet bls. One boring was extended to a depth of 20 feet in an attempt to determine the vertical extent of groundwater contamination at the site. Twenty feet was the maximum depth attainable at the site using DPT due to the presence of hard packed fine sands at depth.

The samples were collected using a groundwater sampler that consisted of a detachable drive tip attached to a 48-inch, retractable stainless steel well screen encased in the lead drive casing. After the water sampler was advanced into the designated zone, the casing was withdrawn 48 inches to allow groundwater into the retractable screen. For groundwater recovery, tubing was inserted into a peristaltic pump. Several screen volumes were then pumped from the probe in order to reduce turbidity. Once the turbidity was reduced to an acceptable level, groundwater samples were collected. One groundwater sample was collected from an existing monitoring well located at Solid Waste Management Unit (SWMU) 14 (approximately 160 feet to the northwest of the site). Once collected, the groundwater samples were immediately delivered to the on-site mobile laboratory for analyses of BTEX, MTBE, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene.

2.5.2 Well Installation

On December 29, 2006, Tetra Tech personnel installed temporary wells TW-23, TW-24, and TW-25 in a downgradient position relative to the spill location using a hand auger. Temporary well TW-23 was installed approximately 30 feet inside both the northern and eastern walls of Building 1388, while TW-24 was completed in line with TW-23, but located just outside the eastern wall of Building 1388. Temporary well TW-25 was completed near the northeastern corner of Building 1388. The three temporary wells were installed, sampled, and removed on the same day. The purpose of the temporary wells was to

evaluate the downgradient migration of the petroleum plume, and data from the temporary wells were used to choose the location of the permanent monitoring wells installed at the site. Five permanent monitoring wells (MPT-351-2-MW01S through MW05S) were installed at the site from January 12 through 18, 2006, by Partridge Well Drilling, Inc. of Jacksonville, Florida under Tetra Tech supervision. Positions of the monitoring wells relative to the release area are as follows: MW03S and MW04D are the source area wells; TW-23, TW-24, TW-25, MW01S, and MW05S are downgradient; and MW02S is cross-gradient. Monitoring and temporary well locations are shown on Figure 2-3. Temporary well locations were selected based upon mobile laboratory analytical results generated during Phase I, and permanent well locations were selected based on both Phase I mobile laboratory data and groundwater analytical results from the temporary wells.

2.5.2.1 Drilling Method

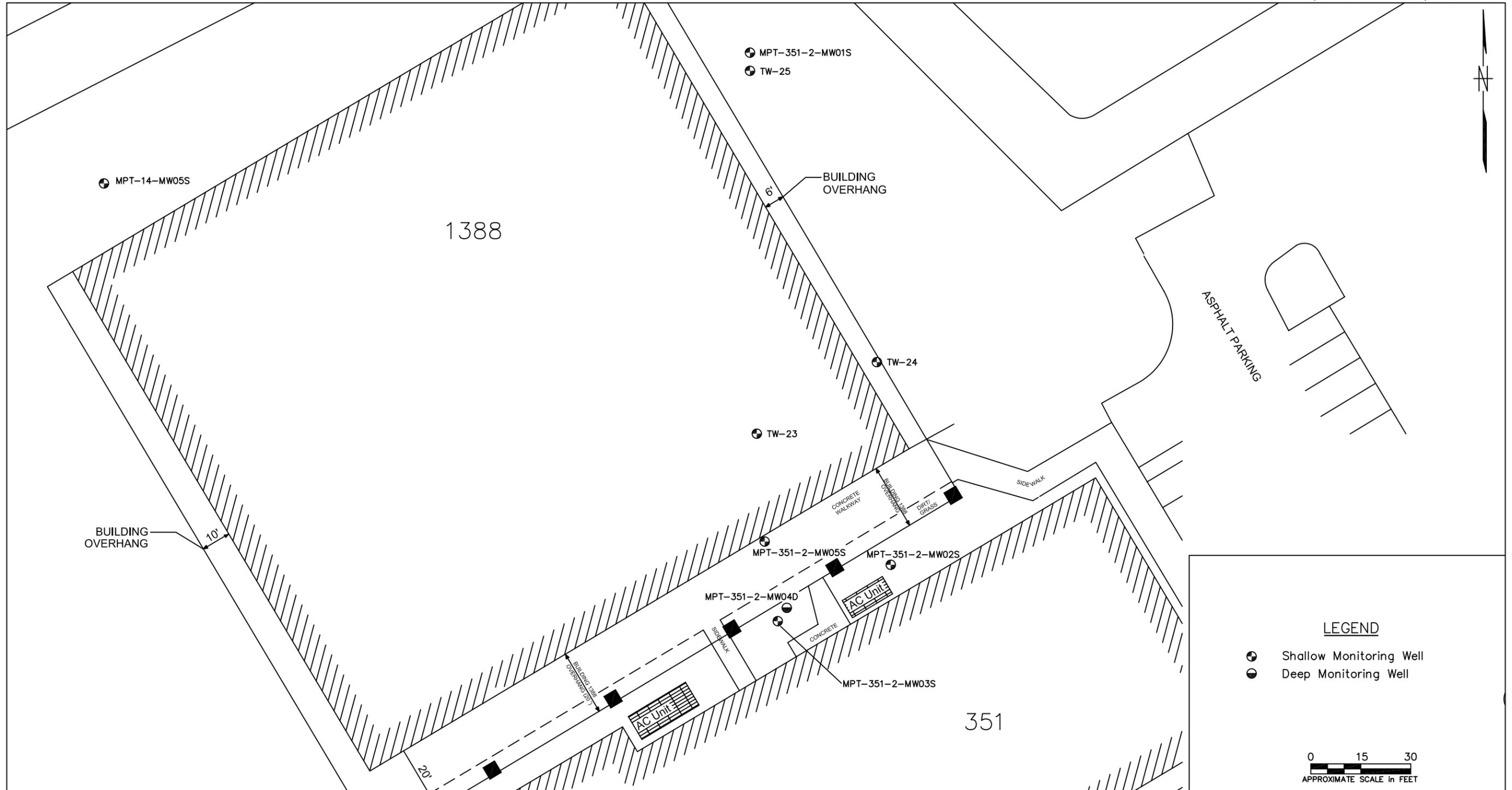
Monitoring wells MW01S, MW02S, MW03S, and MW04D were completed by installing 2-inch diameter Schedule (SCH) 40 polyvinyl chloride (PVC) screen and riser into the borehole created by a hollow stem auger. The monitoring wells were completed using typical monitoring well construction methods as described in Section 2.5.2.2.

Temporary monitoring wells TW-22, TW-23, and TW-24 and monitoring well MW05S were installed using a field-cleaned, stainless steel 3-inch ID hand auger bucket. Once at a depth, the auger was quickly removed, and a 1-inch SCH 40 PVC screen and riser were installed. Unlike the temporary wells, monitoring well MW05S was completed as all permanent monitoring wells were completed. Monitoring well MW05S was installed using a hand auger because of height restrictions caused by the overhang covering the walkway that prevented safe work using a drill rig.

Soil boring logs containing descriptions of cuttings generated during augering of the permanent wells are provided in Appendix C.

2.5.2.2 Well Construction and Development

Monitoring wells MW01S, MW02S, and MW03S were completed by installing 2-inch diameter SCH 40 PVC screen and riser into the borehole created by 4¼-inch ID hollow stem augers. The 2-inch diameter wells consist of 10 feet of 0.010-inch slotted pipe (well screen), and solid PVC casing from the top of the screen to land surface. Standard silica sand (20/30) was used to fill the annular space surrounding the well screen to approximately 0.5 foot above the screen sections. Above the top of this filter pack is a 1-foot thick fine sand seal, and above the fine sand seal is a Type I and II Portland cement grout seal extending to the land surface. The total depths of the wells range from 12 feet to 14 feet bls.



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

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COST/SCHED-AREA

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AS NOTED



**MONITORING WELL AND TEMPORARY WELL
LOCATION MAP**
SITE 351-2
SITE ASSESSMENT REPORT
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NO. 00103	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 2-3	REV. 0

Monitoring well MW04D was completed by installing 1-inch diameter SCH 40 PVC screen and riser into the borehole created by 3-inch diameter hollow stem augers. The 1-inch diameter well consists of 5 feet of 0.010-inch slotted pipe (well screen) and solid PVC casing fitted to the top of the screen to the land surface. Standard silica sand (20/30) was used to fill the annular space surrounding the well screen. Above the top of the filter pack is a 2-foot thick fine sand seal, and above the fine sand seal is a Type I and II Portland cement grout seal extending to the land surface. The total depth of monitoring well MW04D is 40 feet bls.

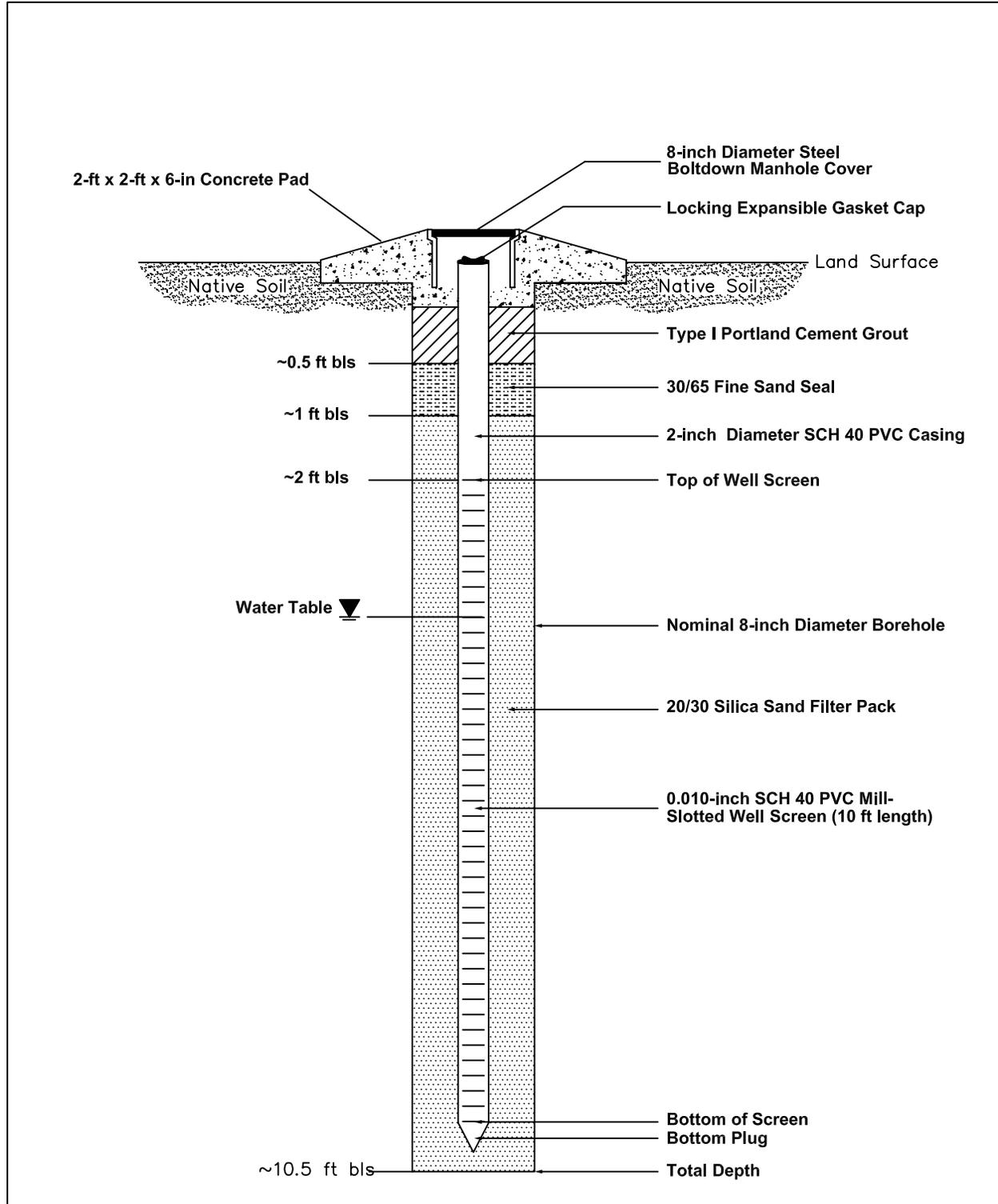
Monitoring well MW05S was completed by installing 1-inch diameter SCH 40 PVC screen and riser into the borehole created by using a field cleaned, stainless steel, 3-inch ID auger bucket. The 1-inch diameter well consists of 7 feet of 0.010-inch slotted pipe (well screen) and solid PVC casing fitted to the top of the screen that extends to land surface. Standard silica sand (20/30) was used in fill the annular space surrounding the well screen to approximately 1 foot above the screen section. Above the top of the filter pack is a 1-foot thick fine sand seal, and above the fine sand seal is a Type I and II Portland cement grout seal extending to the steel manhole. The total depth of monitoring well MW05S is 10 feet bls. Temporary wells TW-23, TW-24, and TW-25 were installed by a hand drive point and with similar construction materials, but were fitted with 5 feet of screen and were not completed as permanent wells. The temporary wells were removed after sampling, and the boreholes were backfilled with natural formation to grade.

Soil boring logs containing descriptions of cuttings generated during permanent well construction are provided in Appendix C. A schematic diagram showing details of a typically constructed monitoring well is provided as Figure 2-4. Construction diagrams for the individual wells are provided in Appendix D.

All permanent wells were developed a minimum 24 hours after completion by Tetra Tech personnel using a peristaltic pump. Wells were developed until the water was virtually clear. All development water and decontamination water generated during well construction were containerized for disposal in 55-gallon steel drums.

2.5.2.3 Groundwater Sampling

Groundwater samples were collected from three temporary monitoring wells and five newly installed monitoring wells as part of Phase II groundwater sampling. The temporary well locations were based on the Phase I mobile laboratory data. Temporary monitoring wells TW-23, TW-24, and TW-25 were sampled on December 29, 2006, and permanent monitoring wells MW01S through MW05S were sampled on January 18, 19, 20, and February 9, 2006. All wells were sampled for GAG/KAG constituents per Chapter 62-770, F.A.C. Sampling activities were documented in a site-specific field logbook.



DRAWN BY JCF	DATE 12/20/07		TYPICAL MONITORING WELL DESIGN SITE 351-2 SITE ASSESSMENT REPORT NAVAL STATION MAYPORT JACKSONVILLE, FLORIDA	CONTRACT NO. 00103
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COST/SCHED-AREA			APPROVED BY	DATE
SCALE NOT TO SCALE			DRAWING NO. FIGURE 2-4	REV. 1

Groundwater sampling was conducted in general accordance with FDEP SOP DEP-SOP-001/01, FS 2200 (February 2004). A minimum one well volume was pumped from each shallow well (partially submerged screen), and a minimum one volume of the pump, associated tubing, and flow cell was pumped from the deep well (fully submerged screen) using a peristaltic pump and the low-flow quiescent purging method. After purging of these initial quantities, purging was continued and field parameters pH, specific conductance, dissolved oxygen, and temperature, were measured periodically (minimum 3-minute intervals) using an YSI 556 instrument. Turbidity was measured using LaMotte 2020 turbidimeter.

Purging was considered complete when three consecutive measurements were within the following limits:

- Temperature \pm 0.2 degree Celsius ($^{\circ}$ C)
- pH \pm 0.2 Standard Units
- Specific conductivity \pm 5 percent of previous reading(s)
- Dissolved oxygen not greater than 20 percent of saturation at field measured temperature
- Turbidity less than or equal to 20 Nephelometric Units

Groundwater sampling logs and low-flow purge sheets compiled during purging and sampling of the monitoring wells are provided in Appendix E.

After collection, samples were immediately placed on ice and delivered to ENCO in Jacksonville, Florida the following morning under proper chain-of-custody and preservation (4° C) protocol. Samples were analyzed for GAG/KAG constituents in accordance with Table B of Chapter 62-770, F.A.C., which included VOCs using USEPA Method 8260, PAHs using USEPA Method 8270, ethylene dibromide using USEPA Method 8011, total lead using USEPA Method 6010, and TRPH using the Florida Residual Petroleum Organic Method (FL-PRO).

2.6 POTENTIAL SUBSURFACE VAPOR INTRUSION EVALUATION

Remedial activities at the site removed all accessible petroleum-impacted soil. A small quantity of petroleum-impacted soil could not be removed due to the presence of building foundations and utilities and was left in place. Based on groundwater data collected from temporary well TW-23, the horizontal extent of the plume appears to extend more than 30 feet under Building 1388.

Estimated indoor air concentrations and the associated health risks from potential subsurface vapor intrusion into Building 1388 were evaluated using the Johnson and Ettinger (J&E) Model (J&E, 1991). The J&E Model aids in estimating the transport of contaminant vapors originating from either subsurface soils or groundwater into indoor spaces located directly above the source of contamination. The

J&E Model is a screening-level model with a number of simplifying assumptions that includes that the groundwater plume impacts the entire area of the building slab. In this case, the groundwater plume appears to only impact approximately 25 percent of the slab of Building 1388 and is, therefore, likely to be overly conservative in predicting risk to human health. Tetra Tech utilized the maximum concentrations of dissolved BTEX, MTBE, naphthalene, and 2-methylnaphthalene detected during field screening activities for modeling purposes. The J&E Model results are discussed in Section 3.4.3 of this report.

3.0 RESULTS OF INVESTIGATION

3.1 SITE GEOLOGY AND HYDROGEOLOGY

3.1.1 Lithology

Descriptions of material underlying Site 351-2 was obtained during the installation of monitoring well MW04D. Soils were collected from the auger flights. Collected soil was described by Tetra Tech's on-site geologist. Soil borings logs containing these lithologic descriptions are provided in Appendix C.

Soils encountered in the upper 40 feet consisted primarily of fine and very fine sand and secondarily of shell hash. Little to no silt was encountered in the upper 40 feet.

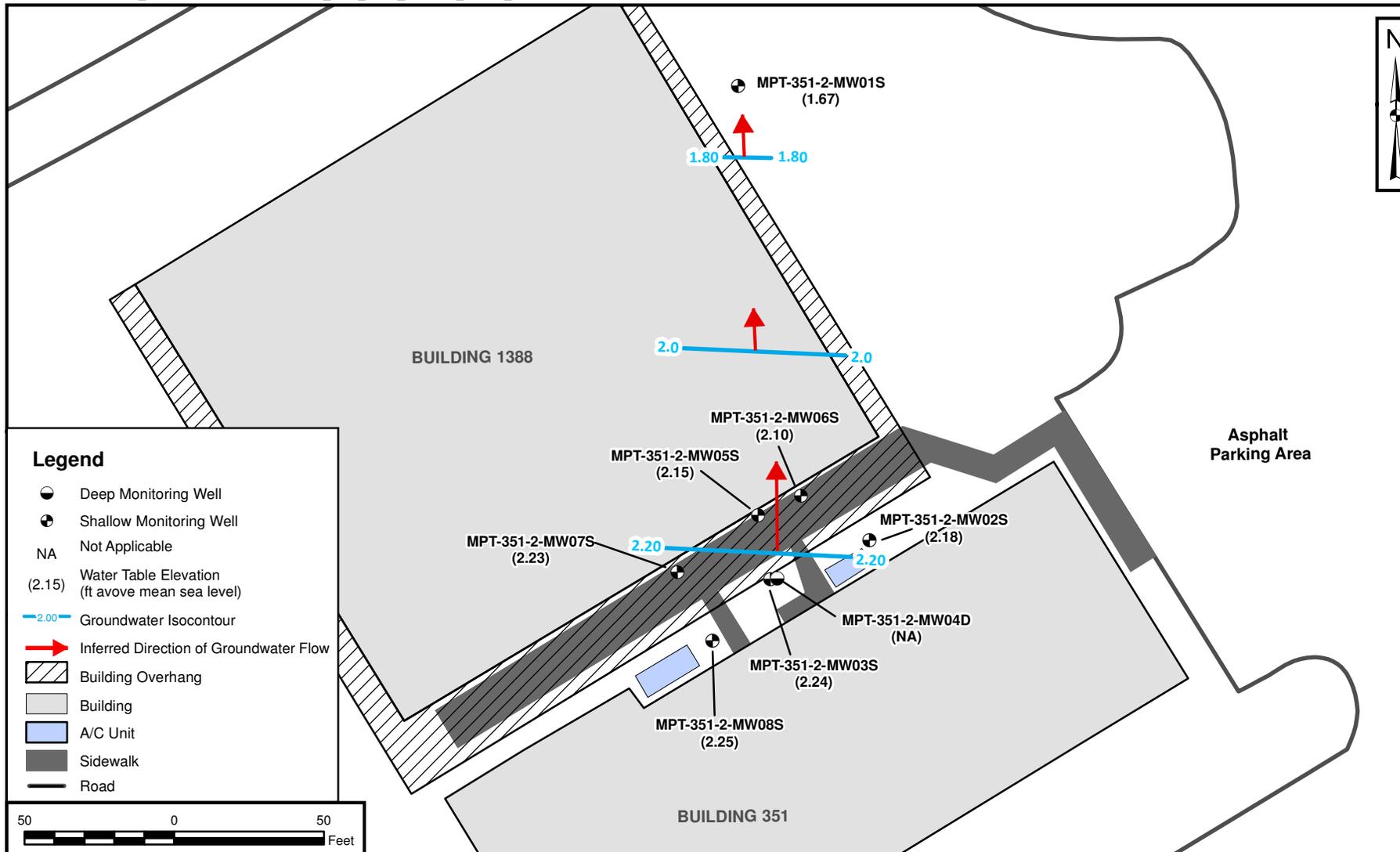
3.1.2 Groundwater Flow Direction

Using the method described in Section 2.3, the direction of groundwater flow in the surficial aquifer underlying the site was determined to be to the north. Surveyed TOC elevations of the permanent monitoring wells; depth to water measurements obtained on April 13, 2011, and July 6, 2011; and water table elevation values for these two sets of measurements are presented in Table 3-1. Groundwater elevation contour maps (potentiometric map) generated from the April 13 and July 6, 2011 data are provided as Figures 3-1 and 3-2, respectively. A review of Figures 3-1 and 3-2 indicates that groundwater flow is to the north for the two events. Historically, the groundwater flow for this area is to the north or northeast. The site is known to be subject to tidal influences due its close proximity to the St. Johns River, Turning Basin, and the Atlantic Ocean.

**Table 3-1
Water Table Elevation Data**

Site Assessment Report, Site 351-2
Naval Station Mayport
Jacksonville, Florida

Monitoring Well	TOC (feet)	13-Apr-11		6-Jul-11	
		Depth-to-Groundwater (feet)	Water Table Elevation (feet above msl)	Depth-to-Groundwater (feet)	Water Table Elevation (feet above msl)
MW01S	5.86	4.19	1.67	4.12	1.74
MW02S	7.59	5.41	2.18	5.55	2.04
MW03S	7.63	5.39	2.24	5.57	2.06
MW05S	8.59	6.44	2.15	6.57	2.02
MW06S	8.41	6.31	2.10	8.68	-0.27
MW07S	8.62	6.39	2.23	6.57	2.05
MW08S	8.04	5.79	2.25	5.96	2.08

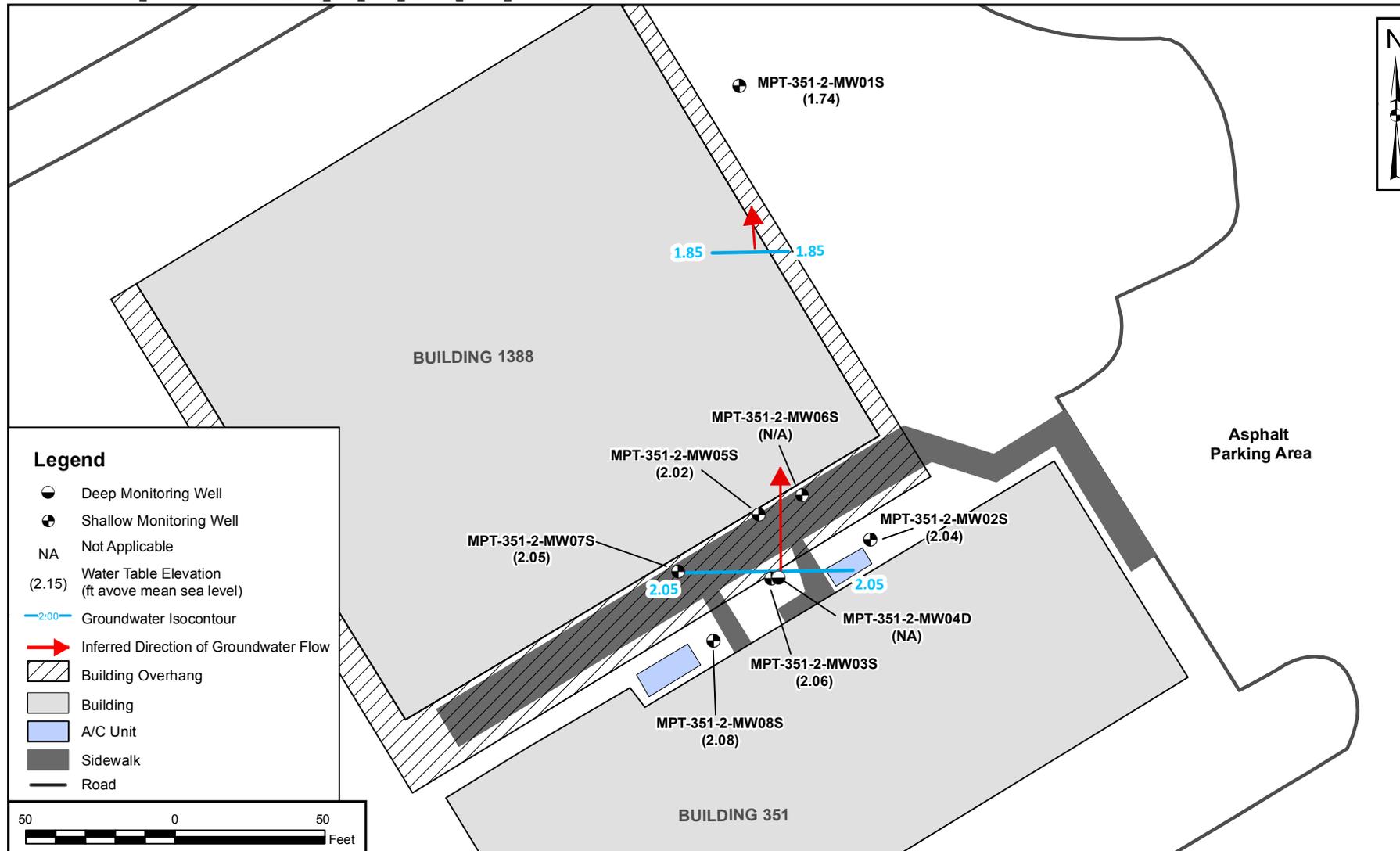


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C. TULLEY	11/28/11
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D. SIEFKEN	11/28/11
REVISED BY	DATE
SCALE	AS NOTED



GROUNDWATER CONTOUR MAP
SITE 351-2
APRIL 13, 2011
SITE ASSESSMENT REPORT
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER 112G00103	CTO NUMBER CTO 0386
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FIGURE NO. 3-1	REV 0



DRAWN BY	DATE
C. TULLEY	11/28/11
CHECKED BY	DATE
D. SIEFKEN	11/28/11
REVISED BY	DATE
SCALE	AS NOTED



GROUNDWATER CONTOUR MAP
SITE 351-2
JULY 6, 2011
SITE ASSESSMENT REPORT
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER 112G00103	CTO NUMBER CTO 0386
APPROVED BY	DATE
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FIGURE NO. 3-2	REV 0

3.1.3 Aquifer Classification and Characteristics

The State of Florida classifies the surficial aquifer underlying the site as G-II. Previous USGS aquifer test data indicate that the average hydraulic conductivity of the surficial aquifer is approximately 4.34 feet per day (Tetra Tech, 2001).

The horizontal groundwater (hydraulic) gradient across the site was evaluated from water level data listed in Table 3-1 and shown on Figures 3-1 and 3-2. Historically, the hydraulic gradient at the site is subject to 180-degree reversal due to the site's position on a narrow peninsula roughly equidistant between two water bodies (St. Johns River and Mayport Turning Basin). The average horizontal hydraulic gradient beneath the site, calculated from potentiometric contours depicted on Figures 3-1 and 3-2, was determined to be 0.0026 foot per foot.

Based on information provided by Driscoll (Driscoll, 1986) and on lithologic descriptions of material encountered during the current investigation, the effective porosity of surficial aquifer sediments was estimated to be 0.30.

Using Darcy's Law, the groundwater velocity at the site was calculated. Darcy's Law may be expressed as follows:

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

where: V = average seepage velocity
K = hydraulic conductivity
n = effective porosity
i = average hydraulic gradient

Using a hydraulic conductivity of 4.34 feet per day, a hydraulic gradient of 0.0026 foot per foot, an inferred effective porosity value of 0.30, and Darcy's law, the groundwater seepage velocity across the site was calculated at 0.0376 foot per day or 13.72 feet per year. However, the reversal in flow direction with tidal influences likely results in a lower net velocity.

3.2 SOIL SCREENING RESULTS

Soil vapor screening methods and sample depths for headspace analyses are discussed in Section 2.4.1. On August 10 and 11, 2005, the first screening event occurred with the second taking place March 16 and 17, 2006. The results of the soil vapor surveys are presented on Table 3-2. A total of 139 samples were screened from 53 soil boring locations. Screening results indicated vapor headspace readings from 20 of the samples exceeding 10 parts per million (ppm) with 15 of the samples exceeding the 50 ppm "excessively contaminated" level per Chapter 62-770, F.A.C. Soil vapor readings were only recorded in the grassy area where the release is documented to have occurred.

**Table 3-2
Soil Vapor Results**

Site Assessment Report, Site 351-2
Naval Station Mayport
Jacksonville, Florida
Page 1 of 3

Soil Boring Number	Date of Measurement	Sample Depth (feet bls)	Headspace Readings (ppm)		
			Total Organic Reading	Carbon Filtered Reading	Net Reading
SB-01	8/10/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-02	8/10/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-03	8/10/2005	1	178	NIR	178
		3	2300	NIR	2300
SB-04	8/10/2005	1	17.6	NIR	17.6
		3	2400	100	2300
SB-05	8/10/2005	1	1.1	NIR	1.1
		3	8.8	NIR	8.8
SB-06	8/10/2005	1	6.3	NIR	6.3
		3	488	NIR	488
SB-07	8/10/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-08	8/10/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-09	8/10/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-10	8/10/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-11	8/10/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-12	8/10/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-13	8/10/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-14	8/10/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-15	8/10/2005	1	381	8	373
		3	1500	NIR	1500
SB-16	8/10/2005	1	2096	352	1744
		3	NA	NA	NA
SB-17	8/10/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-18	8/11/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-19	8/11/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-20	8/11/2005	1	NIR	NA	NIR
		3	NIR	NA	NIR
SB-21	NA	NA	NA	NA	NA
		NA	NA	NA	NA
SB-22	NA	NA	NA	NA	NA
		NA	NA	NA	NA
SB-23	NA	NA	NA	NA	NA
		NA	NA	NA	NA
SB-24	NA	NA	NA	NA	NA
		NA	NA	NA	NA
SB-25	NA	NA	NA	NA	NA
		NA	NA	NA	NA
SB-26	3/16/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR

**Table 3-2
Soil Vapor Results**

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Soil Boring Number	Date of Measurement	Sample Depth (feet bls)	Headspace Readings (ppm)		
			Total Organic Reading	Total Organic Reading	Total Organic Reading
SB-27	3/16/2006	0.5	NIR	NA	NIR
		1.5	5	NIR	5
		3	118	NIR	118
SB-28	3/16/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-29	3/16/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	149	NIR	149
SB-30	3/16/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-31	3/16/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-32	3/16/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-33	3/16/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-34	3/16/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-35	3/16/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-36	3/16/2006	0.5	NIR	NA	NIR
		1.5	129	NIR	129
		3	132	NIR	132
SB-37	3/16/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-38	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-39	3/17/2006	0.5	NIR	NA	NIR
		1.5	2.8	NIR	2.8
		3	18	2	16
SB-40	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-41	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-42	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	14	NIR	14
SB-43	3/17/2006	0.5	NIR	NA	NIR
		1.5	168	NIR	168
		3	NA	NA	NA

**Table 3-2
Soil Vapor Results**

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Soil Boring Number	Date of Measurement	Sample Depth (feet bls)	Headspace Readings (ppm)		
			Total Organic Reading	Total Organic Reading	Total Organic Reading
SB-44	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-45	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	32	10	22
SB-46	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	78	67	11
SB-47	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-48	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	230	95	135
SB-49	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	91	NIR	91
SB-50	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-51	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	17	NIR	17
SB-52	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-53	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-54	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR
SB-55	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	390	12	378
SB-56	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	111	NIR	111
SB-57	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	92	NIR	92
SB-58	3/17/2006	0.5	NIR	NA	NIR
		1.5	NIR	NA	NIR
		3	NIR	NA	NIR

Notes:
NIR = no instrument response
NA = not analyzed

Vapor readings screened at 1 foot and 1.5 feet bls in excess of 10 ppm were restricted to the area of the release where soil was not removed during the SR. A soil vapor concentration contour map for samples screened at 1.0 foot bls and 1.5 feet bls is presented as Figure 3-3. The greatest vapor reading of 2,300 ppm was recorded in soil borings SB-03 and SB-04 at a depth of 3 feet bls. These soil borings were located in the area where impacted soil was not removed during the initial SR completed by Aerostar. A soil vapor concentration contour map for samples screened at 3 feet bls is presented as Figure 3-4.

3.3 SOIL SAMPLE ANALYTICAL RESULTS

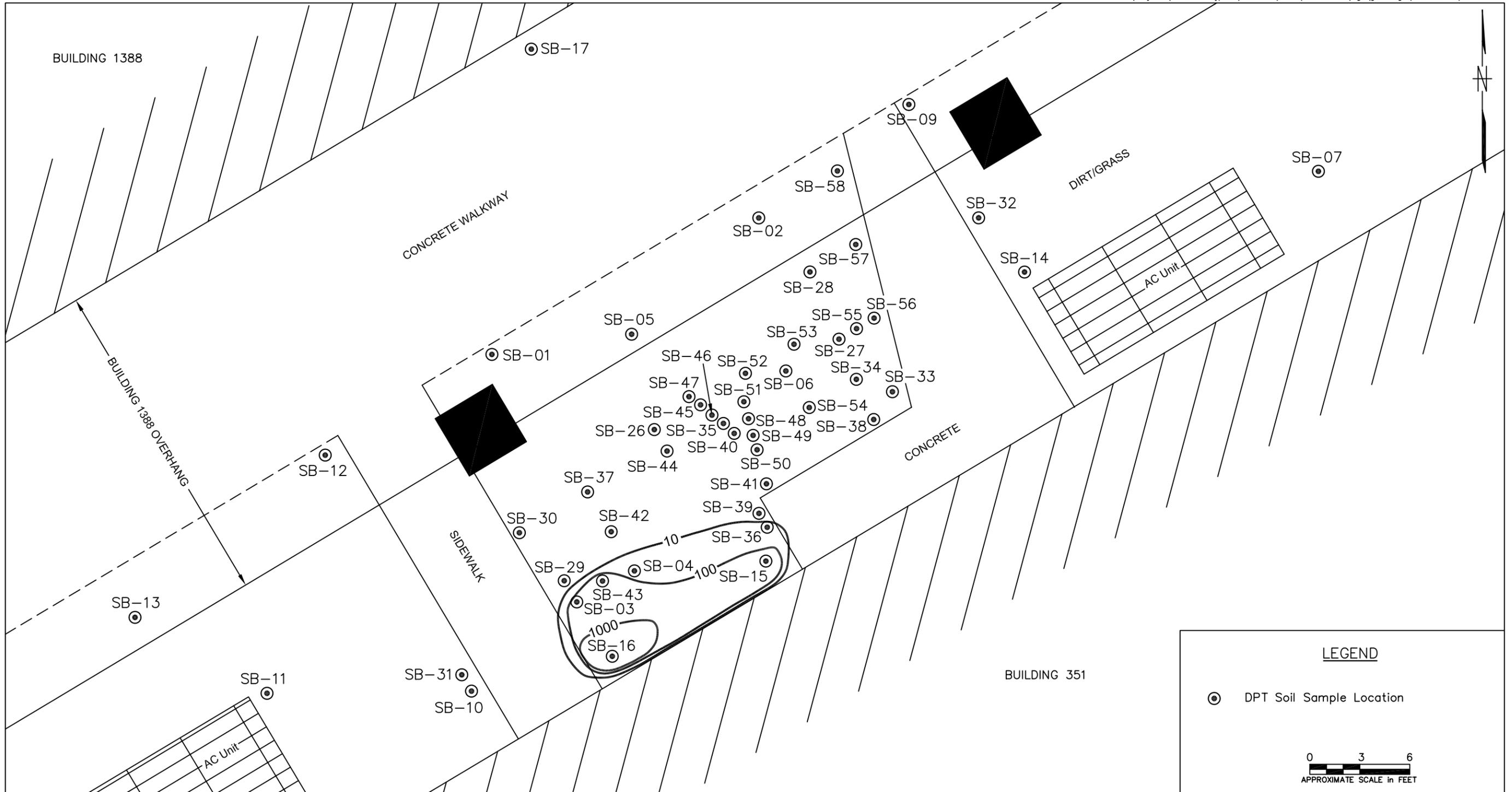
3.3.1 Mobile Laboratory

On August 10 and 11, 2005, six soil samples (SB-01, SB-02, SB-05, SB-09, SB-10, and SB-14) were collected and analyzed by a mobile laboratory operated by KB Laboratories of Gainesville, Florida. The soil samples were collected from the fringe areas of the impacted soil at a depth of 3 feet bls. Samples selected for analyses were determined from field screening results as described in Section 2.4.1 and were analyzed for BTEX, MTBE, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene. No constituents were reported at concentrations exceeding instrument detection limits. The location of the samples collected for mobile laboratory analyses is shown on Figure 3-5. A copy of KB Laboratories' analytical report is provided in Appendix F.

3.3.2 Fixed-base Laboratory

Fixed-base sample locations were selected based on OVA screening results, mobile laboratory sample analyses results, and field observations. In accordance with Chapter 62-770, F.A.C., three samples were collected to fulfill the FDEP regulatory requirement of collecting high, medium, and low petroleum contaminated samples. Soil samples SB-04, SB-06, and SB-14 (high, medium, and low, respectively) were collected from a depth of 3 feet bls on August 12, 2005, for analyses by ENCO, a fixed-base laboratory. The samples were analyzed for GAG/KAG analyses (VOC, PAH, and TRPH) that included additional constituents and analyses (PAH and TRPH) that were not analyzed by the mobile laboratory. Results are provided on Figure 3-6.

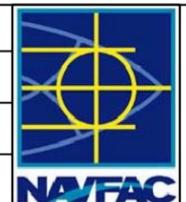
Based on the results of the three samples collected, soil sample SB-04 contained the greatest concentration and number of VOC constituents. Maximum concentrations included 11.0 milligrams per kilogram (mg/kg) for ethylbenzene, 55.1 mg/kg for total xylenes, and 1 mg/kg for toluene, which exceeded each respective FDEP Soil Cleanup Target Level (SCTL) for leachability. Soil sample SB-06 contained three VOC constituents that exceeded the FDEP SCTLs for leachability with 0.81 mg/kg for ethylbenzene, 7.3 mg/kg for total xylenes, and 4,300 mg/kg for TRPH. All other VOC constituents were



NO.	DATE	REVISIONS	BY	CHKD	APPD

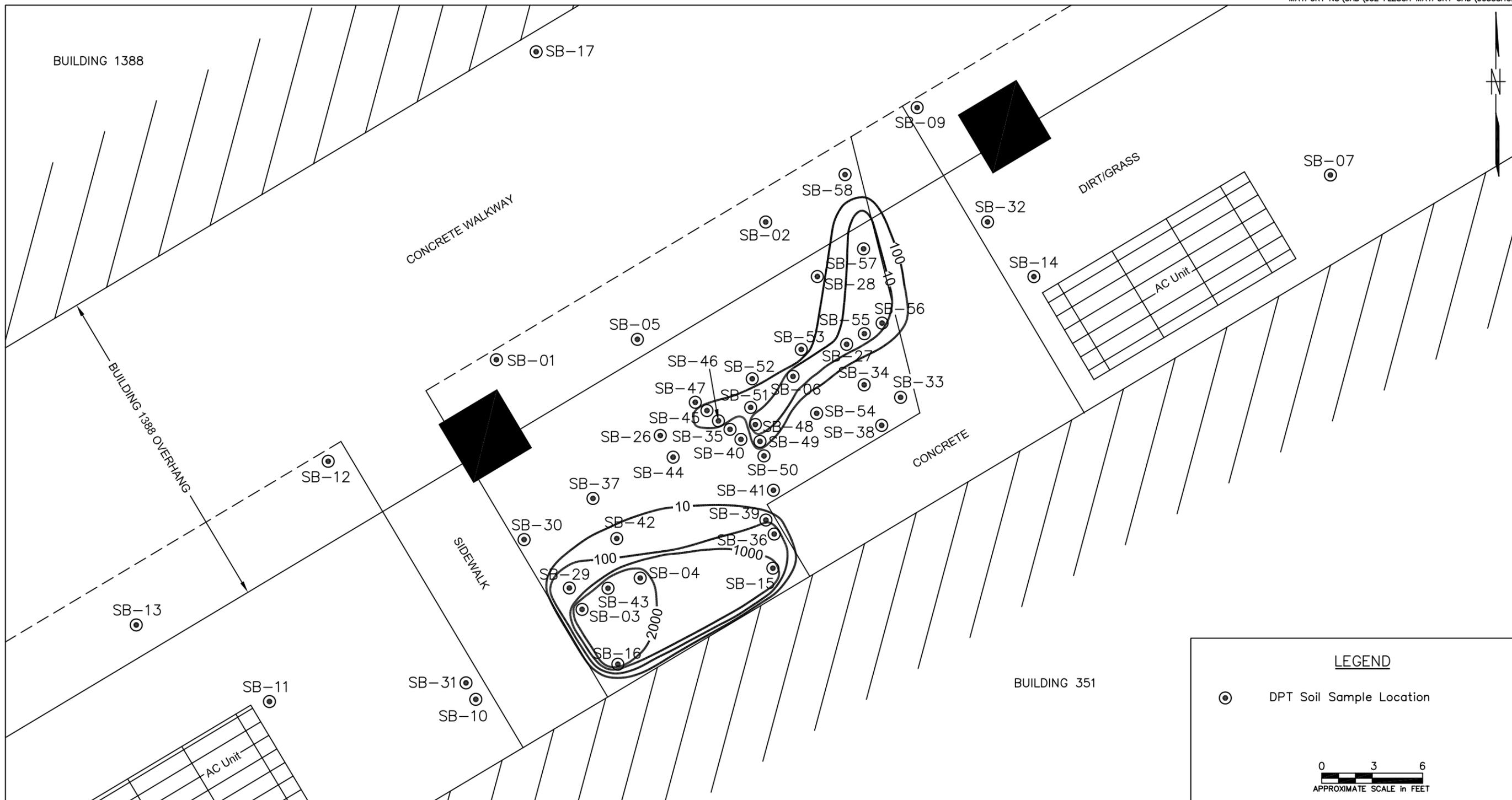
REFERENCES

DRAWN BY JCF	DATE 12/21/07
CHECKED BY	DATE
COST/SCHED-AREA	
SCALE AS NOTED	



OVA SOIL VAPOR RESULTS
COLLECTED AT 1 AND 1.5 FEET BLS
SITE 351-2
SITE ASSESSMENT REPORT
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NO. 00103	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 3-3	REV. 0



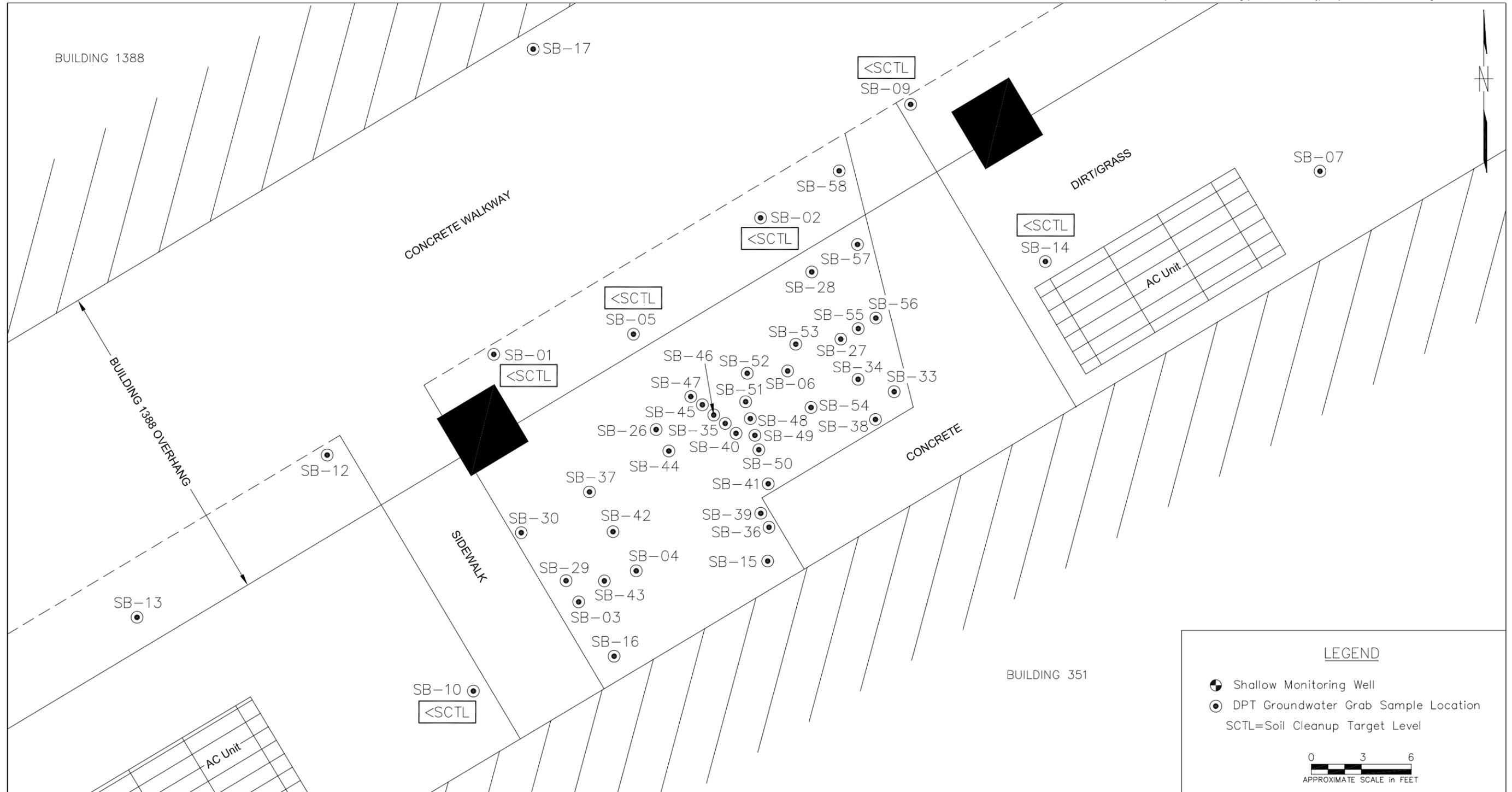
NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY: JCF
 DATE: 1/11/08
 CHECKED BY: DATE:
 COST/SCHED-AREA:
 SCALE: AS NOTED



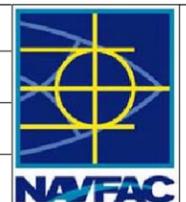
OVA SOIL VAPOR RESULTS
 COLLECTED AT 3 FEET BLS
 SITE 351-1
 SITE ASSESSMENT REPORT
 NAVAL STATION MAYPORT
 JACKSONVILLE, FLORIDA

CONTRACT NO. 00103	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 3-4	REV. 0



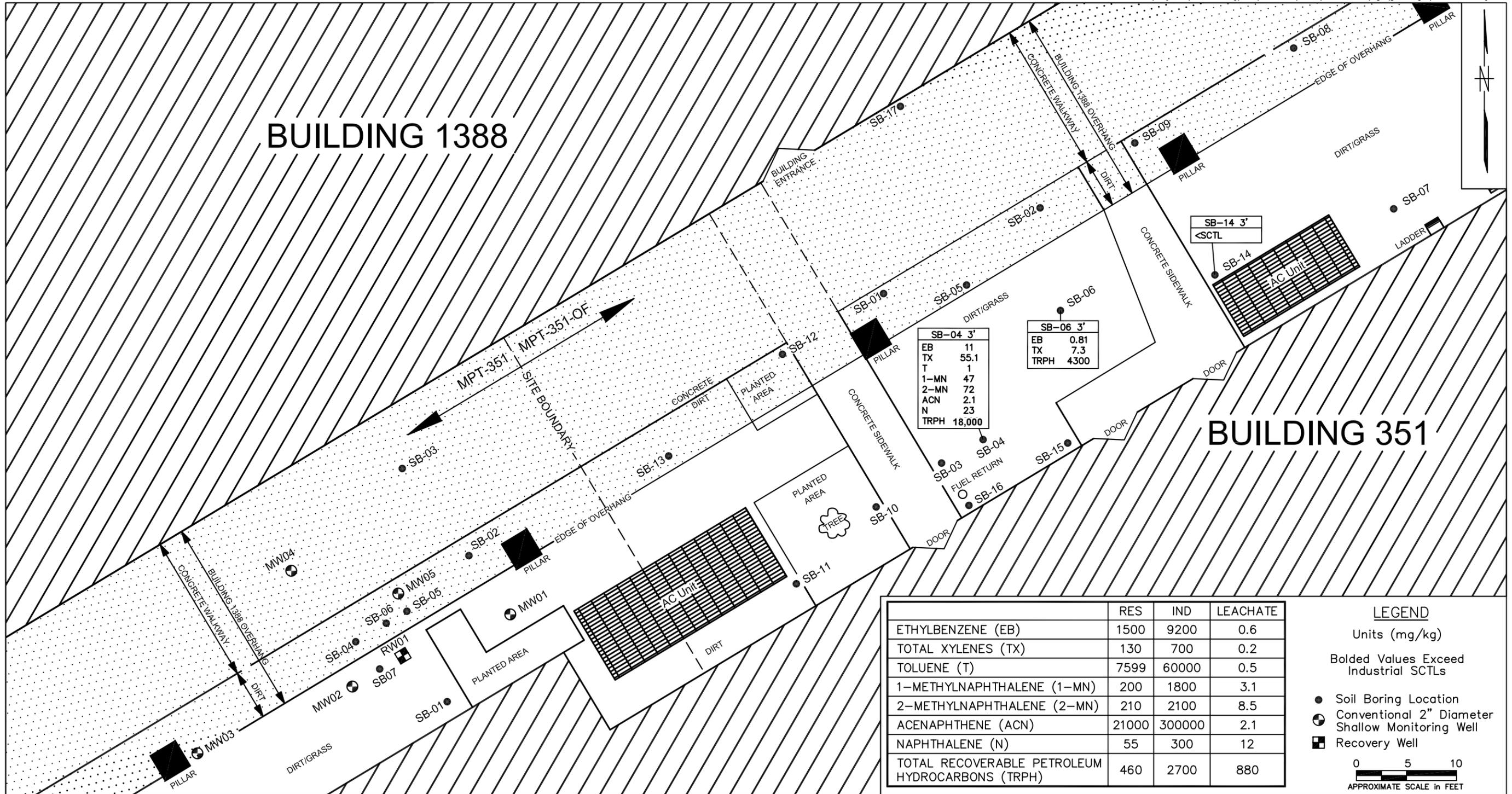
NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY JFF DATE 10/18/07
 CHECKED BY DATE
 COST/SCHED-AREA
 SCALE AS NOTED



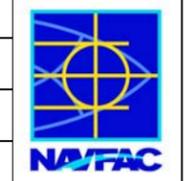
**SOIL MOBILE LABORATORY RESULTS
 SITE 351-2
 SITE ASSESSMENT REPORT
 NAVAL STATION MAYPORT
 JACKSONVILLE, FLORIDA**

CONTRACT NO. 00103	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 3-5	REV. 0



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY JCF DATE 2/26/08
 CHECKED BY DATE
 COST/SCHED-AREA
 SCALE AS NOTED



FIXED-BASE SOIL ANALYTICAL RESULTS
 SITE 351-2
 SITE ASSESSMENT REPORT
 NAVAL STATION MAYPORT
 JACKSONVILLE, FLORIDA

CONTRACT NO. 5863	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 3-6	REV. 0

less than the FDEP SCTLs for leachability, and no VOC constituents exceeded the FDEP residential or industrial SCTLs. Four PAH constituents exceeded FDEP SCTLs for leachability in soil boring SB-04. The PAH exceedances included 47.0 mg/kg for 1-methylnaphthalene, 72.0 mg/kg for 2-methylnaphthalene, 2.1 mg/kg for acenaphthalene, and 23.0 mg/kg for naphthalene. All other PAH constituents were less than the FDEP SCTLs for leachability, and no PAH constituents exceeded the FDEP residential or industrial SCTLs for direct exposure.

TRPH was detected in soil borings SB-04 and SB-06 at concentrations that exceed the FDEP residential, industrial, and leachability SCTLs. A TRPH concentration of 18,000 mg/kg was detected for sample SB-04, and a concentration of 4,300 mg/kg was detected for sample SB-06 with both results exceeding the industrial SCTLs for direct exposure. TRPH was not detected in SB-14.

Seven additional soil samples (SB-26, SB-30, SB-31, SB-32, SB-37, SB-53, and SB-58) were collected on March 22, 2007, to characterize the extent of petroleum-impacted soil in preparation for the SR. The soil samples were all collected from a depth of 3 feet bls and submitted for analyses to ENCO, a fixed-base laboratory. No constituents exceeded the FDEP SCTLs for any of the seven additional samples.

A list of detected concentrations reported by the laboratory is listed in Table 3-3, and Figure 3-6 illustrates the exceedances. The complete laboratory report submitted by ENCO is provided as Appendix G.

3.4 GROUNDWATER ANALYTICAL RESULTS

3.4.1 Mobile Laboratory

On August 10 and 11, 2005, 19 groundwater samples (SB-01, SB-02, SB-04, SB-06, SB-06-20, SB-07, SB-08, SB-09, SB-10, SB-11, SB-12, SB-13, SB-14, SB-17, SB-18, SB-19, SB-20, SB-21, and SWMU-17-05-S) were collected and analyzed by a mobile laboratory operated by KB Laboratories of Gainesville, Florida. Most groundwater samples were collected from a shallow screened interval of 5 feet to 9 feet bls, although one sample collected from boring SB-06 was collected from both the shallow depth and a second screened interval depth of 16 to 20 feet bls. One groundwater sample was collected from an existing monitoring well located on the northern side of Building 1388.

Eleven of the 19 samples (SB-01, SB-02, SB-04, SB-06, SB-06-20, SB-09, SB-10, SB-12, SB-14, SB-17, and SB-19) contained constituents that were detected at concentrations greater than FDEP Groundwater Cleanup Target Levels (GCTLs), whereas no GCTLs were exceeded in eight of the groundwater samples (SB-07, SB-08, SB-11, SB-13, SB-18, SB-20, SB-21, and SWMU-17-05-S). The samples with GCTL exceedances were located near the release area and along the southeastern side of Building 1388.

Table 3-3
Fixed-base Laboratory Soil Analytical Results

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Compound	FDEP SCTLs			High	Medium	Low	Soil Pre-Characterization Samples		
				SB-04-03	SB-06-03	SB-14-03	SB-58-03	SB-53-03	SB-26-03
	Residential	Industrial	Leachability	08/12/05	08/12/05	08/12/05	3/22/2006	3/22/2006	3/22/2006
Volatile Organic Compounds (USEPA Method 8260) (mg/kg)									
1,2-DICHLOROBENZENE	880	5000	17	0.58 U	0.12 U	0.001 U	.0002 U	.0002 U	.0002 U
1,3-DICHLOROBENZENE	380	2200	7	0.58 U	0.12 U	0.001 U	.0002 U	.0002 U	.0002 U
1,4-DICHLOROBENZENE	6.4	9.9	2.2	0.58 U	0.12 U	0.001 U	.0001 U	.0001 U	.0001 U
BENZENE	1.2	1.7	0.007	0.58 U	0.12 U	0.001 U	.0001 U	.0001 U	.0001 U
CHLOROBENZENE	120	650	1.3	0.58 U	0.12 U	0.001 U	.0001 U	.0001 U	.0001 U
ETHYLBENZENE	1500	9200	0.6	11	0.81	0.001 U	.0002 U	.0002 U	.0002 U
M-XYLENE & P-XYLENE	130	700	0.02	47	5	0.002 U	.0003 U	.0003 U	.0003 U
METHYL TERT-BUTYL ETHER	4400	24000	0.09	0.58 U	0.12 U	0.001 U	.0001 U	.0001 U	.0001 U
O-XYLENE	130	700	0.2	8.1	2.3	0.001 U	.0001 U	.0001 U	.0001 U
TOLUENE	7500	60000	0.5	1	0.12 U	0.001	.0002 U	.0002 U	.0002 U
Semivolatile Organic Compounds (USEPA Method 8270 SIM) (mg/kg)									
1-METHYLNAPHTHALENE	200	1800	3.1	47	1.5	0.035 U	0.0112 U	0.0112 U	0.0110 U
2-METHYLNAPHTHALENE	210	2100	8.5	72	1.6	0.035 U	0.0104 U	0.0104 U	0.0103U
ACENAPHTHENE	2400	20000	2.1	2.1	0.27	0.035 U	0.00764 U	0.00764 U	0.00756 U
ACENAPHTHYLENE	1800	20000	27	0.63	0.082	0.035 U	0.0112 U	0.0112 U	0.0110 U
ANTHRACENE	21000	300000	2500	0.036 U	0.95	0.035 U	0.00726 U	0.00726 U	0.00719 U
BENZO(A)ANTHRACENE			0.8	0.094	0.041 U	0.035 U	0.00726 U	0.00726 U	0.00719 U
BENZO(A)PYRENE	0.1	0.7	8	0.047	0.041 U	0.035 U	0.00726 U	0.00726 U	0.00719 U
BENZO(B)FLUORANTHENE			2.4	0.044	0.041 U	0.035 U	0.00561 U	0.00561 U	0.00555 U
BENZO(G,H,I)PERYLENE	2500	52000	32000	0.3	0.3	0.035 U	0.0107 U	0.0107 U	0.0106 U
BENZO(K)FLUORANTHENE			24	0.036 U	0.041 U	0.035 U	0.00726 U	0.00726 U	0.00719 U
CHRYSENE			77	0.18	0.041	0.035 U	0.00768 U	0.00768 U	0.00760 U
DIBENZO(A,H)ANTHRACENE			0.7	0.036 U	0.041 U	0.035 U	0.0118 U	0.0118 U	0.0117 U
FLUORANTHENE	3200	59000	1200	0.56	0.16	0.035 U	0.00937 U	0.00937 U	0.00927 U
FLUORENE	2600	33000	160	5.2	0.69	0.035 U	0.00663 U	0.00663 U	0.00656 U
INDENO(1,2,3-CD)PYRENE			6.6	0.036 U	0.041 U	0.035 U	0.0122 U	0.0122 U	0.0121 U
NAPHTHALENE	55	300	1.2	23	0.59	0.035 U	0.0128 U	0.0128 U	0.0127 U
PHENANTHRENE	2200	36000	250	13	1	0.035 U	0.00726 U	0.00726 U	0.00719 U
PYRENE	2400	45000	880	12	2.2	0.035 U	0.00937 U	0.00937 U	0.00927 U
Petroleum Hydrocarbons (FL -PRO) (mg/kg)									
HYDROCARBONS (C8-C40)	460	2700	340	18000	4300	7 U	5.91 U	5.91 U	5.84 U

**Table 3-3
Fixed-base Laboratory Soil Analytical Results**

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Compound	FDEP SCTLs			Soil Pre-Characterization Samples				Notes:
	Residential	Industrial	Leachability	SB-37-03 3/22/2006	SB-30-03 3/22/2006	SB-32-03 3/22/2006	SB-31-03 3/22/2006	
Volatile Organic Compounds (USEPA Method 8260) (mg/kg)								High, medium, and low samples were collected per FDEP Rule 62-770. Pre-characterization samples were used to define the excavation area.
1,2-DICHLOROBENZENE	880	5000	17	.0002 U	.0002 U	.0002 U	.0002 U	
1,3-DICHLOROBENZENE	380	2200	7	.0002 U	.0002 U	.0002 U	.0002 U	
1,4-DICHLOROBENZENE	6.4	9.9	2.2	.0001 U	.0001 U	.0001 U	.0001 U	
BENZENE	1.2	1.7	0.007	.0001 U	.0001 U	.0001 U	.0001 U	
CHLOROBENZENE	120	650	1.3	.0001 U	.0001 U	.0001 U	.0001 U	
ETHYLBENZENE	1500	9200	0.6	.0002 U	.0002 U	.0002 U	.0002 U	
M-XYLENE & P-XYLENE	130	700	0.02	.0003 U	.0003 U	.0003 U	.0003 U	
METHYL TERT-BUTYL ETHER	4400	24000	0.09	.0001 U	.0001 U	.0001 U	.0001 U	
O-XYLENE	130	700	0.2	.0001 U	.0001 U	.0001 U	.0001 U	
TOLUENE	7500	60000	0.5	.0002 U	.0002 U	.0002 U	.0002 U	
Semivolatile Organic Compounds (USEPA Method 8270 SIM) (mg/kg)								
1-METHYLNAPHTHALENE	200	1800	3.1	0.0114 U	0.0125 U	0.0110 U	0.126 U	
2-METHYLNAPHTHALENE	210	2100	8.5	0.0106 U	0.0116 U	0.0103 U	0.0188 U	
ACENAPHTHENE	2400	20000	2.1	0.00781 U	0.00854 U	0.00756 U	0.00864 U	
ACENAPHTHYLENE	1800	20000	27	0.0114 U	0.0125 U	0.0110 U	0.0126 U	
ANTHRACENE	21000	300000	2500	0.00742 U	0.00812 U	0.00719 U	0.00821 U	
BENZO(A)ANTHRACENE			0.8	0.00742 U	0.00812 U	0.00719 U	0.00821 U	
BENZO(A)PYRENE	0.1	0.7	8	0.00742 U	0.00812 U	0.00719 U	0.00821 U	
BENZO(B)FLUORANTHENE			2.4	0.00573 U	0.00627 U	0.00555 U	0.00634 U	
BENZO(G,H,I)PERYLENE	2500	52000	32000	0.0110 U	0.0120 U	0.0106 U	0.0121 U	
BENZO(K)FLUORANTHENE			24	0.00742 U	0.00812 U	0.00719 U	0.00821 U	
CHRYSENE			77	0.00785 U	0.00859 U	0.00760 U	0.00869 U	
DIBENZO(A,H)ANTHRACENE			0.7	0.0120 U	0.0132 U	0.0117 U	0.0133 U	
FLUORANTHENE	3200	59000	1200	0.00957 U	0.0105 U	0.00927 U	0.0106 U	
FLUORENE	2600	33000	160	0.00677 U	0.00741 U	0.00656 U	0.0075 U	
INDENO(1,2,3-CD)PYRENE			6.6	0.0125 U	0.0136 U	0.0121 U	0.0138 U	
NAPHTHALENE	55	300	1.2	0.0131 U	0.0144 U	0.0127 U	0.0145 U	
PHENANTHRENE	2200	36000	250	0.00742 U	0.00812 U	0.00719 U	0.00821 U	
PYRENE	2400	45000	880	0.00957 U	0.0105 U	0.00927 U	0.0106 U	
Petroleum Hydrocarbons (FL -PRO) (mg/kg)								
HYDROCARBONS (C8-C40)	460	2700	340	6.03 U	171	5.84 U	6.68 U	

Groundwater samples collected from SB-04 (closest sample to the source area) exceeded the GCTLs for all eight analyzed constituents which included; naphthalene (620 micrograms per liter [$\mu\text{g/L}$]), 1-methylnaphthalene (590 $\mu\text{g/L}$), 2-methylnaphthalene (890 $\mu\text{g/L}$), benzene (150 $\mu\text{g/L}$), ethylbenzene (140 $\mu\text{g/L}$), toluene (120 $\mu\text{g/L}$), total xylenes (600 $\mu\text{g/L}$), and MTBE (100 $\mu\text{g/L}$).

In an attempt to define the vertical extent of the impacts to the surficial aquifer, boring SB-06 was selected to be advanced via DPT to an approximate depth of 40 feet bls. While advancing to depth, boring SB-06 met refusal at 20 feet bls. Unable to proceed deeper, a groundwater sample was collected from a screened depth of 16 feet to 20 feet bls. Concentrations of 1-methylnaphthalene (63.6 $\mu\text{g/L}$), 2-methylnaphthalene (98.8 $\mu\text{g/L}$), total xylenes (50 $\mu\text{g/L}$), and naphthalene (50.5 $\mu\text{g/L}$) were detected above their respective GCTLs of 28 $\mu\text{g/L}$, 28 $\mu\text{g/L}$, 20 $\mu\text{g/L}$, and 14 $\mu\text{g/L}$. A summary of detected concentrations are listed in Table 3-4 and shown on Figure 3-7. The analytical report submitted by KB Laboratories is included with the mobile laboratory soil and groundwater analytical results in Appendix G.

3.4.2 Fixed-base Laboratory

On December 29, 2005; January 18 and 19, 2006; and February 9, 2006, Tetra Tech personnel collected groundwater samples from five newly installed monitoring wells (MW01S, MW02S, MW03S, MW04D, and MW05S) and three temporary wells (TW-23, TW-24, and TW-25) at the site. The groundwater samples were submitted to ENCO for analyses of GAG/KAG constituents. Three of the eight samples contained constituents that exceeded FDEP GCTLs (TW-23, MW03S, and MW05S), and five of the eight samples (TW-24, TW-25, MW01S, MW02S, and MW04D) were non-detect or just above laboratory detection limits. One monitoring well (MW04D) was installed near the source area to depth of 40 feet bls to determine vertical extent of impacts. No constituents were detected at concentrations that exceeded GCTLs for the sample analyzed from MW04D.

Groundwater analyzed from three wells (TW-23, MW03S, and MW05S) contained two or more constituents that exceeded the GCTLs. Temporary well TW-23 was installed (downgradient of source area) 30 feet north of the southern wall on the inside of Building 1388 and contained two constituents that exceeded GCTLs. The constituents that exceeded the GCTLs in TW-23 were benzene (31 $\mu\text{g/L}$) and TRPH (6 milligrams per liter [mg/L]). Monitoring well MW03S, located near the source area, contained six constituents that exceeded GCTLs. The constituents that exceeded the GCTLs in MW03S were benzene (42.8 $\mu\text{g/L}$), ethylbenzene (37.8 $\mu\text{g/L}$), total xylenes (185 $\mu\text{g/L}$), 1-methylnaphthalene (75.5 $\mu\text{g/L}$), 2-methylnaphthalene (122 $\mu\text{g/L}$), and naphthalene (102 $\mu\text{g/L}$). Monitoring well MW05S is located (downgradient of the source area) within 4 feet of the southern wall of Building 1388 and contained five constituents that exceeded GCTLs. The constituents that exceeded the GCTLs in MW05S included

Table 3-4
Mobile Laboratory Groundwater Analytical Results

Site Assessment Report, Site 351-2
Naval Station Mayport
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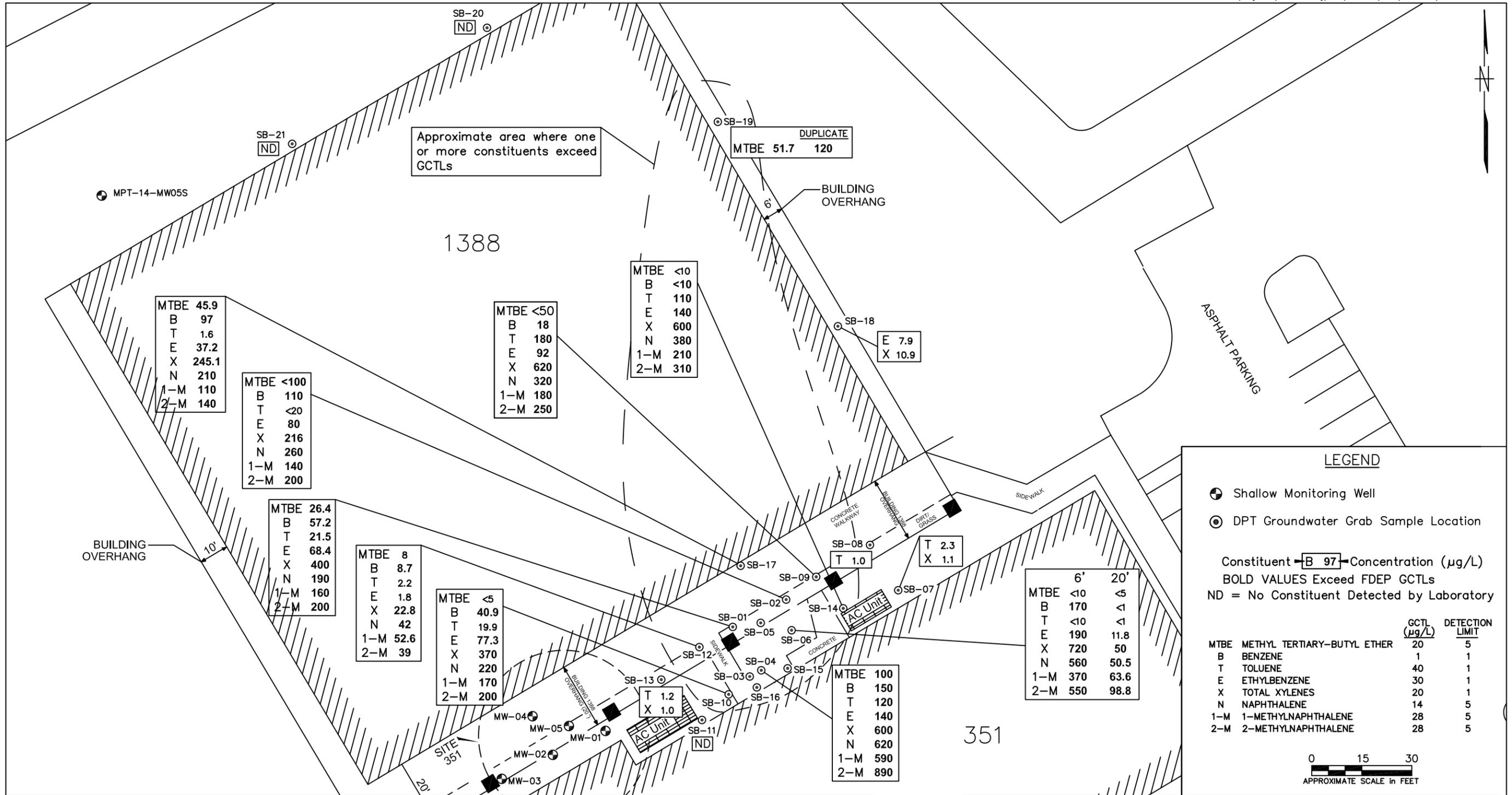
Compound	FDEP GCTL	Sample ID (MPT-351-2) and Sample Date						
		SB-01	SB-02	SB-04	SB-06	SB-06-20	SB-07	SB-08
		08/10/05	08/10/05	08/11/05	08/11/05	08/12/05	08/10/05	08/10/05
Volatile Organic Compounds (USEPA Method 8260B) (µg/L)								
1-METHYLNAPHTHALENE	28	160	140	590	370	63.6	5 U	5 U
2-METHYLNAPHTHALENE	28	200	200	890	550	98.8	5 U	5 U
BENZENE	1	57.2	110	150	170	1 U	1 U	1 U
ETHYLBENZENE	30	68.4	80	140	190	11.8	1 U	1 U
M+P-XYLENES	20	240	190	460	720	50	1.1	1 U
METHYL TERT-BUTYL ETHER	20	26.4	100 U	100	10 U	5 U	5 U	5 U
NAPHTHALENE	14	190	260	620	560	50.5	5 U	5 U
O-XYLENE	20	160	26	140	10 U	1 U	1 U	1 U
TOLUENE	40	21.5	20 U	120	10 U	1 U	2.3	1
TOTAL XYLENES	20	400	216	600	720	50	1.1	1 U

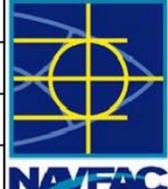
Compound	FDEP GCTL	Sample ID (MPT-351-2) and Sample Date						
		SB-09	SB-10	SB-11	SB-12	SB-13	SB-14	SB-17
		08/10/05	08/10/05	08/10/05	08/10/05	08/10/05	08/11/05	08/10/05
Volatile Organic Compounds (USEPA Method 8260B) (µg/L)								
1-METHYLNAPHTHALENE	28	180	170	5 U	52.6	5 U	210	110
2-METHYLNAPHTHALENE	28	250	200	5 U	39	5 U	310	140
BENZENE	1	18	40.9	1 U	8.7	1 U	10 U	97
ETHYLBENZENE	30	92	77.3	1 U	1.8	1 U	140	37.2
M+P-XYLENES	20	360	180	1 U	20	1	250	180
METHYL TERT-BUTYL ETHER	20	50 U	5 U	5 U	8	5 U	10 U	45.9
NAPHTHALENE	14	320	220	5 U	42	5 U	380	210
O-XYLENE	20	260	190	1 U	2.8	1 U	350	65.1
TOLUENE	40	180	19.9	1 U	2.2	1.2	110	1.6
TOTAL XYLENES	20	620	370	1 U	22.8	1	600	245.1

Table 3-4
Mobile Laboratory Groundwater Analytical Results

Site Assessment Report, Site 351-2
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Compound	FDEP GCTL	Sample ID (MPT-351-2) and Sample Date					
		SB-18	SB-19	SB-19 Dup	SB-20	SB-21	SWMU-17-05-S
		08/11/05	08/11/05	08/11/05	08/11/05	08/11/05	08/11/05
Volatile Organic Compounds (USEPA Method 8260B) (µg/L)							
1-METHYLNAPHTHALENE	28	5 U	5 U	5 U	5 U	5 U	5 U
2-METHYLNAPHTHALENE	28	5 U	5 U	5 U	5 U	5 U	5 U
BENZENE	1	1 U	1 U	1 U	1 U	1 U	1 U
ETHYLBENZENE	30	7.9	1 U	1 U	1 U	1 U	1 U
M+P-XYLENES	20	10.9	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	20	5 U	51.7	120	5 U	5 U	5 U
NAPHTHALENE	14	5 U	5 U	5 U	5 U	5 U	5 U
O-XYLENE	20	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	40	1 U	1 U	1 U	1 U	1 U	1 U
TOTAL XYLENES	20	10.9	1 U	1 U	1 U	1 U	1 U



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE		MOBILE GROUNDWATER ANALYTICAL RESULTS		CONTRACT NO.	
							JCF	1/31/08		AUGUST 2005		00103	
							CHECKED BY	DATE		SITE ASSESSMENT REPORT		APPROVED BY	DATE
							COST/SCHED-AREA			NAVAL STATION MAYPORT		APPROVED BY	DATE
							SCALE	AS NOTED		JACKSONVILLE, FLORIDA		DRAWING NO.	REV.
											FIGURE 3-7	0	

benzene (87.5 µg/L), total xylenes (42.1 µg/L), 1-methylnaphthalene (55.6 µg/L), 2-methylnaphthalene (87.6 µg/L), and naphthalene (151 µg/L). The FDEP GCTLs for constituents identified in the groundwater analyses are as follows: benzene (1 µg/L), ethylbenzene (30 µg/L), total xylenes (20 µg/L), 1-methylnaphthalene (28 µg/L), 2-methylnaphthalene (28 µg/L), and naphthalene (14 µg/L). A summary of detected compounds is presented in Table 3-5 and a summary of exceedances is illustrated on Figure 3-8. Copies of the laboratory reports are provided in Appendix G.

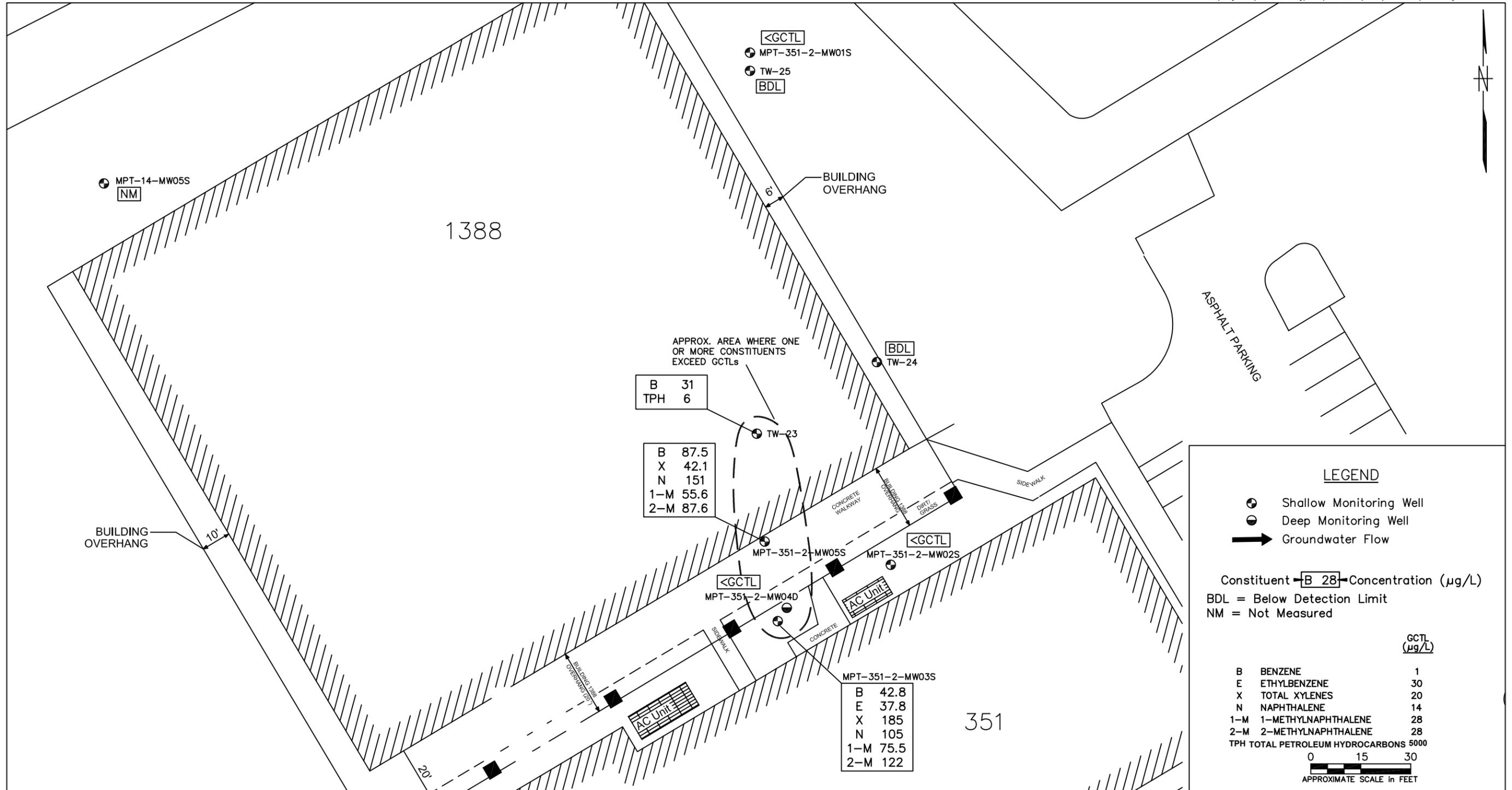
3.4.3 Johnson and Ettinger Model Results

Groundwater quality data collected from the petroleum-impacted area was used to evaluate human health risks from the potential for subsurface contamination to adversely impact indoor air quality. Concentrations of toluene, ethylbenzene, total xylenes, MTBE, naphthalene, and 2-methylnaphthalene were below their respective target groundwater concentrations calculated using the J&E Model and pose no risk to human health. The maximum benzene concentration of 170 µg/L exceeded the most conservative target groundwater concentration of 116 µg/L and was assigned a risk level of 1.50E-06, or approximately “one and one-half in a million”. Table 3-6 shows the J&E Model results.

Table 3-5
Fixed-base Laboratory Groundwater Analytical Results

Site Assessment Report, Site 351-2
Naval Station Mayport
Jacksonville, Florida

Compound	FDEP GCTL	Sample ID (MPT-351-) and Sample Date							
		TMW-23	TMW-24	TMW-25	MW01S	MW02S	MW03S	MW04D	MW05
		12/29/05	12/29/05	12/29/05	01/20/06	01/20/06	01/20/06	01/20/06	2/9/2006
<u>VOCs (USEPA Method 8260B) (µg/L)</u>									
METHYL TERT-BUTYL ETHER	20	10	1 U	1 U	3.27	0.2 U	0.2 U	0.2 U	0.2 U
BENZENE	1	31	1 U	1 U	0.2 U	0.2 U	42.8	0.2 U	87.5
ETHYLBENZENE	30	1 U	1 U	1 U	0.3 U	0.310 I	37.8	0.620 I	14.2
M+P-XYLENES	20	2	2 U	2 U	0.3 U	1.15 I	163	3.27	42.1
O-XYLENE	20	1 U	1 U	1 U	0.2 U	0.2 U	22	0.690 I	0.2 U
TOTAL XYLENES (Ortho- + Meta- and Para- Xylenes)	20	2	1 U	1 U	1 U	1 U	185	1 U	42.1
TOLUENE	40	1 U	1 U	1 U	0.2 U	0.2 U	1.5	0.2 U	0.2 U
<u>PAHs (USEPA Method 8270) (µg/L)</u>									
2-METHYLNAPHTHALENE	28	0.5 U	0.5 U	0.5 U	0.02 U	0.02 U	122 D	13.5	87.6
1-METHYLNAPHTHALENE	28	0.5 U	0.5 U	0.5 U	0.02 U	0.02 U	75.5 D	10.1	55.6
ACENAPHTHENE	20	0.1 U	0.1 U	0.1 U	0.14	0.02 U	2.4	0.75	2.43
ANTHRACENE	2100	0.1 U	0.1 U	0.1 U	0.02 U	0.02 U	0.08 I	0.02 U	0.02 U
FLUORANTHENE	280	0.1 U	0.1 U	0.1 U	0.01 U	0.01 U	0.05 I	0.01 U	0.05 I
FLUORENE	280	0.1 U	0.1 U	0.1 U	0.02 U	0.02 U	5.32	2.05	4.89
NAPHTHALENE	14	0.5 U	0.5 U	0.5 U	0.02 U	0.05 I	102 D	1.85	151
PHENANTHRENE	210	0.1 U	0.1 U	0.1 U	0.02 U	0.02 U	5.06	2.68	3.58
PYRENE	210	0.1 U	0.1 U	0.1 U	0.02 U	0.02 U	0.56	0.45	0.08 I
<u>Metal (USEPA Method 6010)</u>									
TOAL LEAD	15	0.01 U	0.01 U	0.01 U	0.002 U	0.002 U	0.002 I	0.002 U	0.003 I
<u>Petroleum Hydrocarbons (FL-PRO Method) (mg/L)</u>									
TPH (C8-C40)	5	6	0.2 U	0.2 U	0.536	0.094 U	3.55	0.604	3.94
<u>EDB (USEPA Method 504.1)</u>									
EDB	0.02	0.02 U	0.02 U	0.02 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE		FIXED-BASE GROUNDWATER ANALYTICAL RESULTS		CONTRACT NO.	
							JFF	09/26/06		SITE ASSESSMENT REPORT		00103	
							CHECKED BY	DATE		NAVAL STATION MAYPORT		APPROVED BY	DATE
							COST/SCHED-AREA			JACKSONVILLE, FLORIDA		APPROVED BY	DATE
							SCALE	AS NOTED		DRAWING NO.	REV.	FIGURE 3-8	0

<p align="center">Table 3-6 J&E Model Results</p> <p align="center">Site Assess Report, Site 351-2 Naval Station Mayport Jacksonville, Florida</p>							
Constituent	Highest Groundwater Concentration (µg/L)	Target Groundwater Concentration (µg/L)			Risk Type	J&E Model Used	Risk Level at Highest Groundwater Concentration
		10 ⁻⁴	10 ⁻⁵	10 ⁻⁶			
Benzene	170	11,160	1,160	116	C	GW-ADV	1.50E-06
Toluene	180	8,890	8,890	8,890	NC	GW-Screen	N/A
Ethylbenzene	120	21,400	21,400	21,400	NC	GW-Screen	N/A
Total Xylenes	720	2,160	2,160	2,160	NC	GW-Screen	N/A
Naphthalene	620	1,260	1,260	1,260	NC	GW-Screen	N/A
MTBE	120	592,000	592,000	592,000	NC	GW-Screen	N/A
2-Methylnaphthalene	122	13,350	13,350	13,350	NC	GW-Screen	N/A

Notes:

- C = carcinogen
- NC = non-carcinogen
- N/A = not applicable
- GW-ADV = advanced model for contaminated groundwater
- GW-Screen = screening model for contaminated groundwater

J&E Model Assumptions:

1. Slab on grade constructions, 15 centimeters depth below grade.
2. Depth below grade to water table = 122 centimeters (4 feet).
3. Soil type above water table = sand.
4. Average groundwater temperature = 22 °C.
5. Exposure duration = 20 years.
6. Exposure frequency = 87 days per year (five 8 hour days per week times 52 weeks per year equals 76 24-hour days per year).
7. Building height is assumed 12 feet.
8. Target groundwater concentrations are calculated for risk levels of 10⁻⁴, 10⁻⁵, and 10⁻⁶ for carcinogens. The Health Quotient = 1 for non-carcinogens.
9. All other parameters are equal to default values.

Other considerations:

1. The J&E Model assumes that the groundwater plume covers the entire length of the building. In this case, the plume only covers about 25 percent of the building area. Therefore, the model is likely to be overly conservative in predicting risk.
2. The model does not account for contamination at the capillary fringe, which may be caused by fluctuations in the level of the water table.

4.0 SOURCE REMOVAL

4.1 SOIL DELINEATION

The area excavated during the SR was based on soil vapor screening using an OVA, mobile laboratory analyses, and fixed-base laboratory analyses. Descriptions of the specific sampling methods used are provided in Section 2.0.

4.1.1 Soil Screening

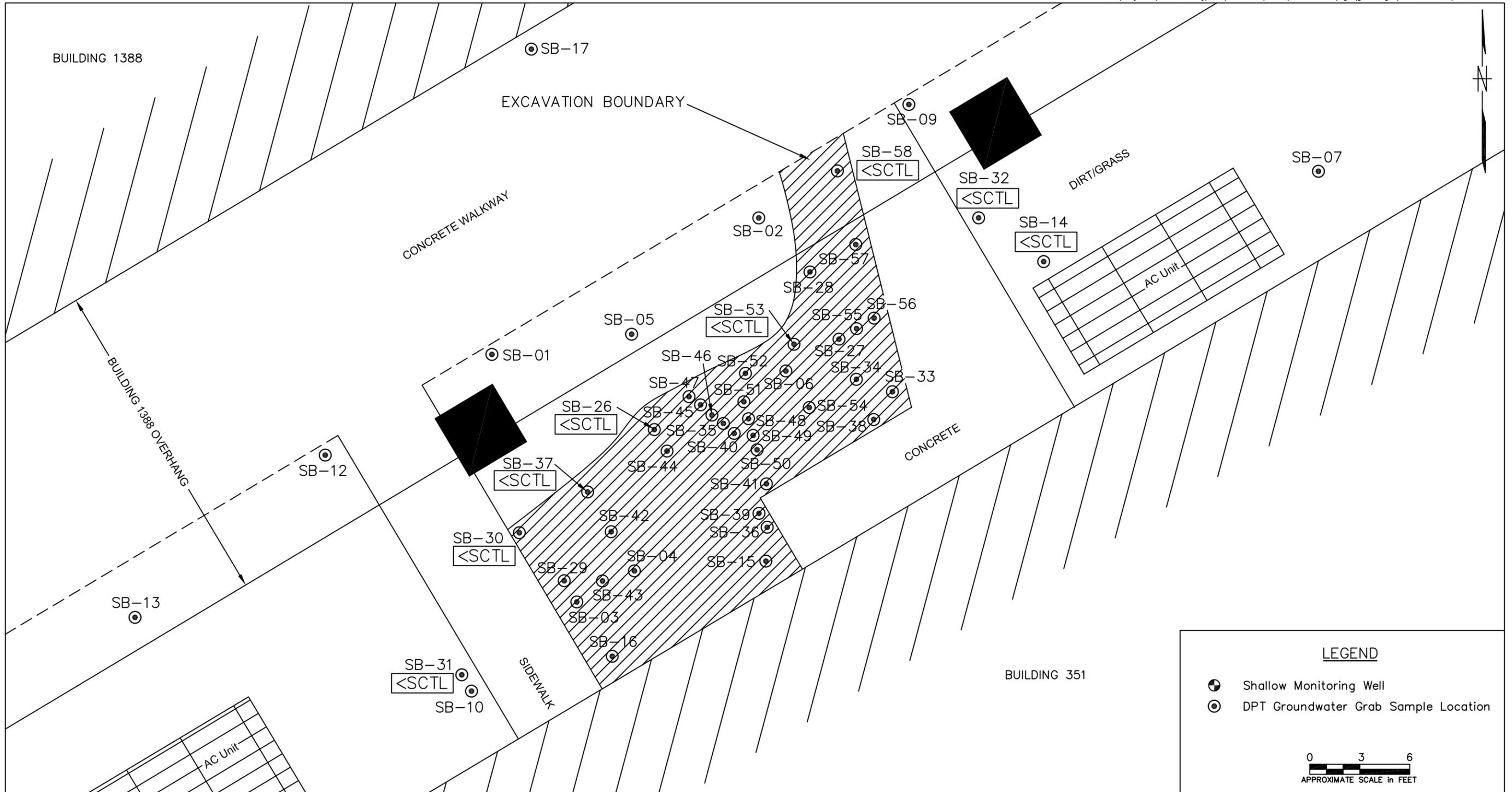
Soil surrounding the excavation area was screened for delineation purposes using an OVA-FID and mobile laboratory. Soil samples collected for organic vapor screening in the excavation area included samples from soil borings SB-26, SB-30, SB-31, SB-32, SB-37, SB-53, and SB-58 collected at depths of 0.5 foot, 1.5 feet, and 3.0 feet bls on March 16 and 17, 2006. Samples from borings SB-10 and SB-14 were collected at depths of 1.0 foot and 3.0 feet bls on August 10, 2005. All vapor readings were equal to background levels and are presented in Table 3-2. Samples SB-10 and SB-14 were also screened using a mobile laboratory on August 10 and 11, 2005, and were determined to be below instrument detection limits for BTEX, MTBE, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. Based on these findings, fixed-base laboratory samples were later collected at these locations. Figure 4-1 depicts the soil locations used to determine the excavation boundary.

4.1.2 Soil Characterization

On August 12, 2005, one soil sample (SB-14) was collected, and on March 22, 2006, seven soil samples (SB-20, SB-26, SB-31, SB-32, SB-37, SB-53, and SB-58) were collected and analyzed by a fixed-base laboratory for GAG/KAG constituents. The soil samples were collected to characterize the extent of the excavation and were collected from a depth of 3 feet bls. The analytical results for the samples were all less than SCTLs. These results are similar to the OVA screening and mobile laboratory results and coincided with the historical account of the location of the petroleum release. Figure 4-1 presents the locations of the samples used to characterize the extent of the soil impacts for the SR. The complete laboratory report submitted by ENCO is provided as Appendix G.

4.2 SOIL EXCAVATION AND DISPOSAL

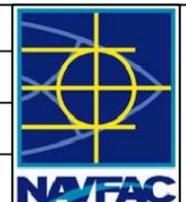
Petroleum-impacted soils at Site 351-2 were excavated from January 3 through 6, 2007, by Fueling Components, Inc. of Jacksonville, Florida and supervised by a Tetra Tech representative. The excavation was irregular shaped covering approximately 12 feet by 25 feet by 5 feet to a depth of 6 feet bls, which extended into the water table. Utility lines were identified during the removal of the impacted soil.



NO.	DATE	REVISIONS	BY	CHKD	APPD

REFERENCES

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 DATE: 1/11/08
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 SCALE: AS NOTED



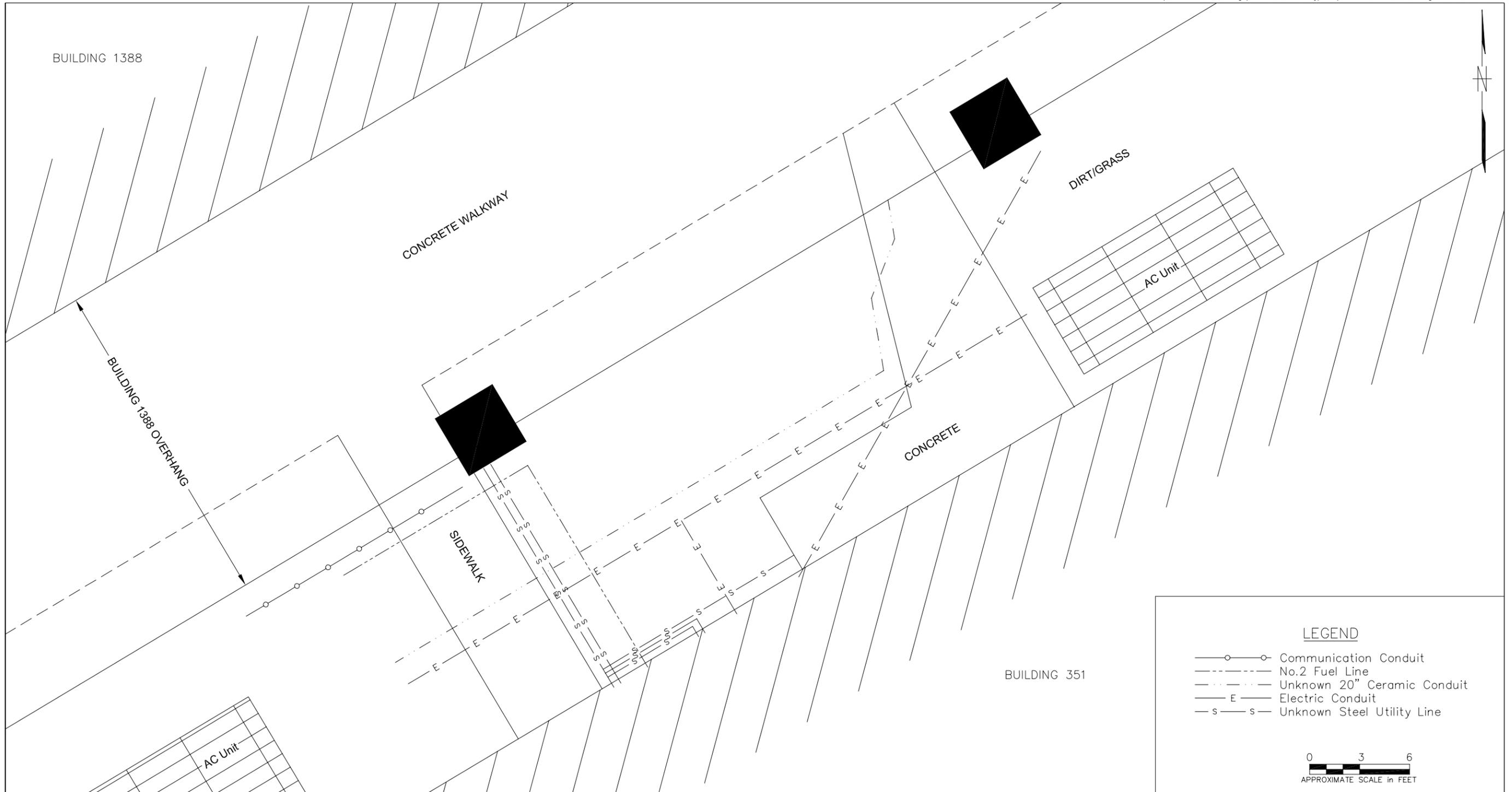
PRE-CHARACTERIZATION SOIL SAMPLE
 LOCATIONS AND EXCAVATION BOUNDARY
 SITE 351-2
 SITE ASSESSMENT REPORT
 NAVAL STATION MAYPORT
 JACKSONVILLE, FLORIDA

CONTRACT NO. 00103	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 4-1	REV. 0

A site map depicting the location of utility lines is provided as Figure 4-2. Contaminated soil surrounding these utilities and foundations were removed by hand. In some locations, the soil was not removed because of possible damage to the structure or utility. For this reason, the excavation was completed in sections leaving soil in areas for support while other areas were removed for disposal. Whenever possible, the excavation extended beyond the top of the water table, which began at 5 feet bls, although the entire site was not excavated to the top of the water table due to obstructions. The obstructions included the following:

- Ceramic pipe: A ceramic pipe, presumed to be conveying wastewater or stormwater, measuring approximately 20 inches in diameter was located on the floor of the excavation. The top of the pipe was approximately 4 feet bls and extended to the top of the water table and, therefore, was not excavated. The ceramic pipe crossed the excavation east to west turning northeast along the eastern excavation boundary and extended toward Building 1388. The location of the ceramic pipe prevented the excavation of soils surrounding the pipe. See Photos 1 and 2 in Appendix H.
- Three cement electrical conduits: The top of the first cement encased electrical conduit was located near the center of the excavation, approximately 2 feet bls, and is approximately 1.5 feet thick and 2 feet wide. This conduit is offset to the south of the ceramic pipe partially covering a portion of the 20-inch ceramic pipe located just below this electrical conduit. A second cement encased conduit is set upon the first electrical conduit and extends on a 45 degree angle from below the service ramp extending northeast where it was exposed in the southeastern corner of the excavation and continues northeast under the sidewalk. The second cement conduit is approximately 1 foot thick and the width was not visible and, therefore, not documented. The third cement encased conduit connected into the large electrical conduit located near the center of the excavation. The smaller conduit runs north and south and is approximately 10 inches in diameter and approximately 8 inches thick with the top of the conduit being 2.0 feet bls. See Photos 3, 4, and 5 in Appendix H.
- Support column: A brick support column used in conjunction with the framework for a covered walkway is located near the southwestern corner of the excavation. The approximate depth at the base of the foundation was approximately 3.5 feet bls requiring the surrounding soil to support the column. See Photo 6 in Appendix H.

The excavation was continued to the base of the foundation of Building 351, which extended to the top of the water table (5 feet bls). The excavation was not extended beyond the base of the foundation to ensure the structural integrity of the building. Photos of the excavation and obstructions encountered are provided in Appendix H. Approximately 76 tons of soil were removed from the excavation and stockpiled at the site to await disposal. The excavation was backfilled with clean fill and compacted to an estimated



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

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**UTILITY LOCATION MAP
 SITE 351-2
 SITE ASSESSMENT REPORT
 NAVAL STATION MAYPORT
 JACKSONVILLE, FLORIDA**

CONTRACT NO.	00103
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	FIGURE 4-2
REV.	0

90 percent compaction using a hand compactor to reduce subsidence. Photographs 7 and 8 in Appendix H depict the backfilling of individual areas excavated and the completely backfilled site.

On January 8, 2007, soils from the excavation of Sites 351-1 and 351-2 were removed for disposal by Soil Remediation, Inc. of Kingsland, Georgia, a State-licensed soil incineration facility. Manifests dated January 8, 2007, for the soil removed from Site 351-1 and Site 351-2 are provided since the soil was not manifested as separate sites. Diane Racine from the NAVSTA Mayport Environmental Department was present to sign the manifests, and copies are provided in Appendix I. The volume of soil from Site 351-1 was 6 cubic yards and was added to the 76 tons from Site 351-2.

4.3 DECONTAMINATION AND DEMOBILIZATION

Decontamination activities were completed by a Tetra Tech representative each day of site work. This decontamination activity included sweeping excess soil deposited during the transport of soil to the short-term stockpile and the removal of soils from the excavation equipment. Decontamination wastes were combined with the excavated material to be disposed at the incineration facility.

5.0 BIOX[®] TREATABILITY STUDY

5.1 PREPARATION FOR BIOX[®] INJECTIONS

During the May 13, 2008, NAVSTA Mayport Installation Restoration Partnering Team meeting, the implementation of a treatability study was proposed and approved for Site 351-2 to address remaining groundwater impacts and free product. The treatability study was performed to evaluate the effectiveness of BIOX[®] reagent by BioManagement Services, Inc. (BMS) for the treatment of free product and contaminated groundwater. BIOX[®] combines controlled chemical oxidation and enhanced biodegradation of contaminants in soil and groundwater. The treatability study was designed to inject BIOX[®] reagent into the shallow groundwater and intermediate zone (3 to 20 feet bls) to remediate the remaining groundwater contamination. To utilize this technology, the free product present at the site must be less than 1 inch in thickness.

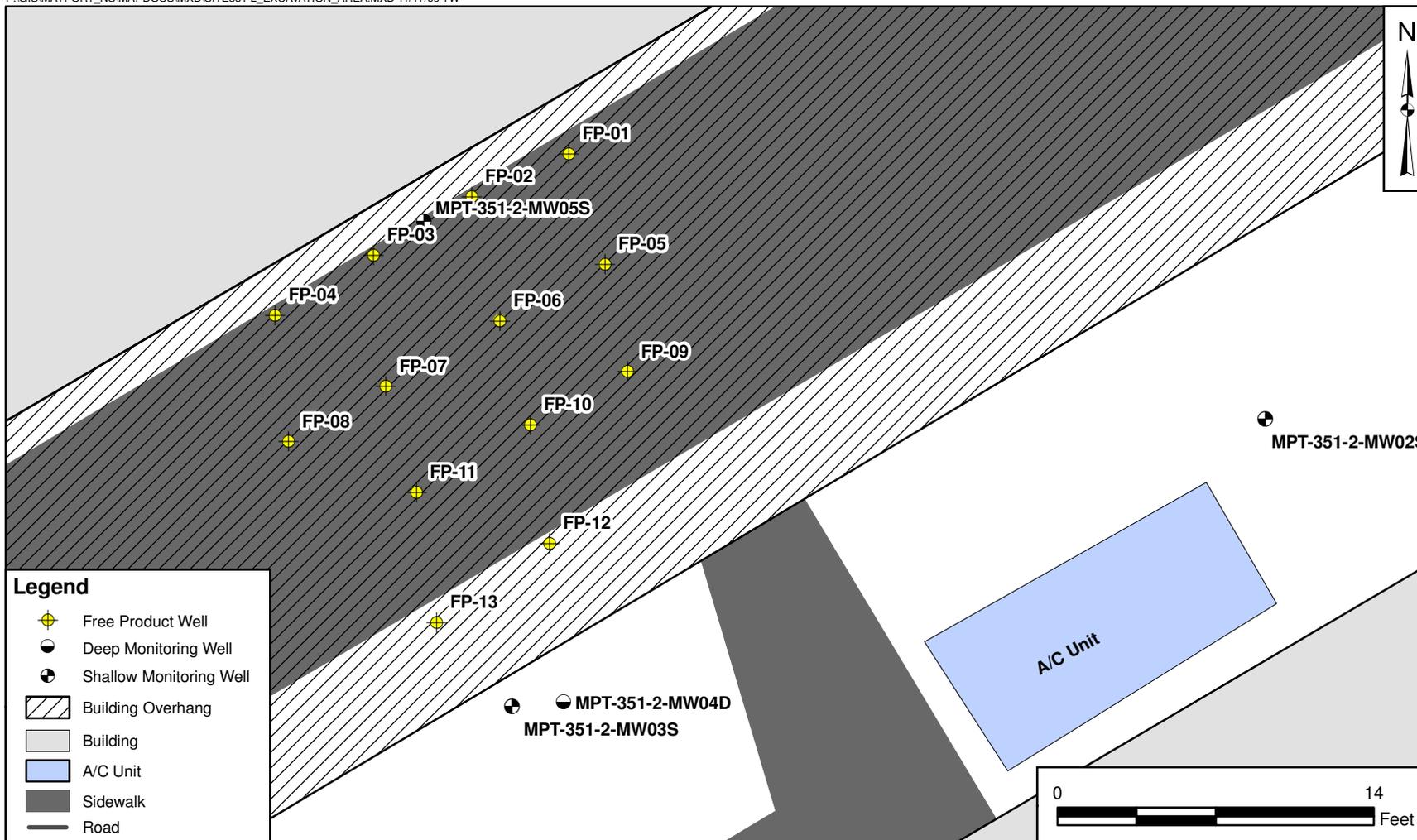
The Treatability Study Work Plan for Site 351-2 (included as Appendix J) was completed in general accordance with the requirements of Chapter 62-780, F.A.C. Also included in the Treatability Study Work Plan is the February 14, 2005, FDEP approval letter that allows for the use of BIOX[®] as a remediation technology.

To facilitate the reduction of free product, Tetra Tech supervised the installation of 13 free product recovery wells (FP-01 through FP-13) installed from January 6 through 8, 2009, to an approximate depth of 12 feet bls. The free product recovery wells were installed via hand auger and were placed near monitoring wells MPT-351-2-MW05S and MPT-351-2-MW03S. The free product recovery wells locations are shown in Figure 5-1 and were installed for the sole purpose of maximizing free product recovery. Petroleum sorbent materials (called “socks”) were installed in the free product recovery wells, and any free product not collected in the sock was removed using a peristaltic pump.

5.2 BIOX[®] INJECTIONS

From June 4, 2010, through June 18, 2010, 95 locations at the site were injected with 7,125 gallons of BIOX[®] with Tetra Tech oversight. The injections ranged in vertical extent from 3 to 20 feet bls with injection point spacing averaging 4.5 feet. The injection methodology and locations are found in the BMS report in Appendix K.

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T. WHEATON	11/03/09
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COST/SCHEDULE AREA	
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FREE PRODUCT RECOVERY WELL LOCATIONS
SITE 351-2
SITE ASSESSMENT REPORT
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

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FIGURE NO.	REV
FIGURE 5-1	0

5.3 BIOX[®] TREATABILITY STUDY GROUNDWATER SAMPLE EVENTS AND ANALYSIS

Groundwater sampling events were performed as one baseline sampling event and four quarterly post-injection sampling events.

The baseline groundwater sampling event was conducted on May 18 and 19, 2010, approximately one month prior to the BIOX[®] injection (June 4-18, 2010) and included the collection of groundwater samples from monitoring wells MPT-351-2-MW01S through MW08S. Monitoring well locations are shown on Figure 5-2. This sampling regime of eight wells were resampled during four quarterly field efforts during the period of one year on October 12 and 13, 2010, November 29 and December 2, 2010, January 11, 2011, and April 13 and 14, 2011. During each of these monitoring events, all eight wells were sampled for BTEX using USEPA Method 8260B, PAHs using USEPA Method 8270, and TRPH using FL-PRO for all petroleum constituents identified during SAR activities. In addition to petroleum-related analyses, permit-required parameters were also analyzed that included iron and sodium using USEPA Method 6010B, ammonia using USEPA Method 350.1, nitrate using USEPA Method 353.2, sulfate using USEPA Method 300, and total dissolved solids (TDS) using USEPA Method 160.1.

At the recommendation of BIOX[®] personnel, one additional sampling event was conducted closely following the BIOX[®] Injection event to provide additional data to evaluate the remediation effectiveness. This sampling event occurred on July 13 and 14, 2010, which was between the baseline and the first quarterly post-injection groundwater monitoring event. The groundwater analyses and wells sampled paralleled the baseline sampling regime. Since the purpose of this sampling event was to assist in demonstrating a trend and was not part of the quarterly sampling event, the results of this extra event will not be described in text but can be viewed in the Permit-Required Groundwater Results Summary, Table 5-1 and Petroleum Groundwater Results Summary, Table 5-2.

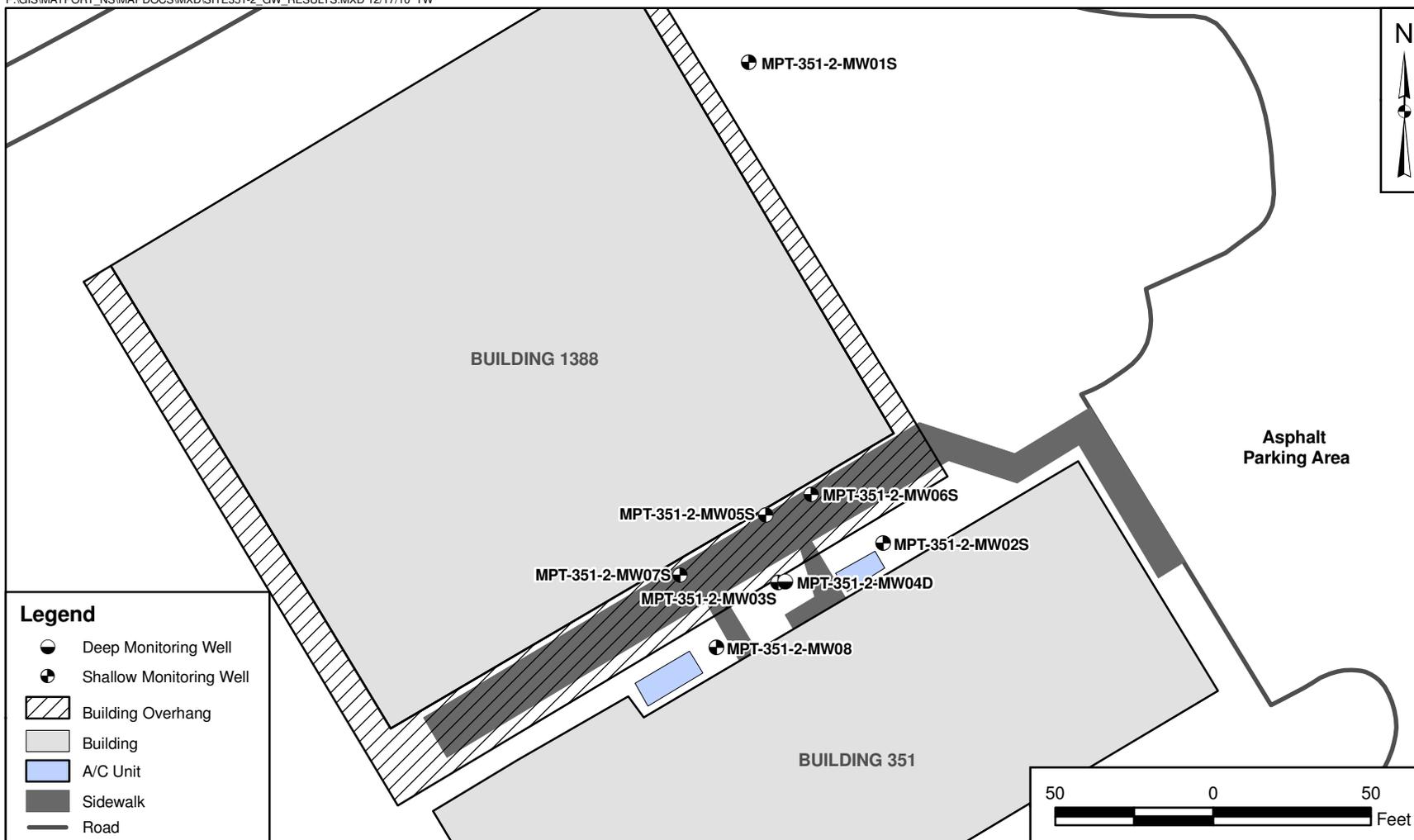
5.4 BIOX[®] TREATABILITY STUDY GROUNDWATER RESULTS

5.4.1 Baseline Pre-injection Groundwater Sampling Event

During May 18 and 19, 2010, the baseline samples were collected for permit-required parameters and petroleum based impacts. The permit-required parameters are summarized in Table 5-1 and the positive detections for petroleum constituents reported during the baseline sampling event are summarized in Table 5-2.

Based on the laboratory analytical results, groundwater samples exceeding FDEP GCTLs were recorded for monitoring wells MPT-351-2-MW03S, MPT-351-2-MW05S and MPT-351-2-MW06S. Concentrations

P:\GIS\MAYPORT_NS\MAPDOCS\MXD\SITE351-2_GW_RESULTS.MXD 12/17/10 TW



DRAWN BY	DATE
T. WHEATON	11/03/09
CHECKED BY	DATE
D. SIEFKEN	12/17/10
COST/SCHEDULE AREA	
SCALE AS NOTED	



BIOX® MONITORING WELL LOCATIONS
SITE 351-2
SITE ASSESSMENT REPORT
NAVAL STATIONA MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER CTO 0386	
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. FIGURE 5-2	REV 0

**Table 5-1
Permit-Required Groundwater Results Summary**

Site Assessment Report, Site 351-2
Naval Station Mayport
Jacksonville, Florida
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Constituent	GCTLs µg/L	NADCs	MW-01S					
			May 2010	Jul 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Iron	300	3000	3370	419	1600	2740	1990	2230
Sodium	160000	1600000	238000	181000	183000	130000	133000	206000
Ammonia	2800	28000	170	55	260	580	417	480
Total Dissolved Solids	500000	5000000	1020000	710000	767000	749000	684000	944000
Sulfate	250000	2500000	40000	25000	14400	3600	7380	38900

Constituent	GCTLs µg/L	NADCs	MW-02S					
			May 2010	Jul 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Iron	300	3000	32.2 l	110	35 U	35 U	30.0 U	30.0 U
Sodium	160000	1600000	19800	16500	14400	15900	15200	13000
Ammonia	2800	28000	39 U	10 U	50 U	55	110 U	110 U
Total Dissolved Solids	500000	5000000	276000	290000	241000	254000	252000	251000
Sulfate	250000	2500000	21000	19000	20700	21200	19100	23500

Constituent	GCTLs µg/L	NADCs	MW-03S					
			May 2010	Jul 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Iron	300	3000	1670	6970	3050	3780	889	4260
Sodium	160000	1600000	12600	17900	16600	15800	8660	8410
Ammonia	2800	28000	570	170000	53700	7200	624	1030
Total Dissolved Solids	500000	5000000	320000	550000	345000	294000	129000	163000
Sulfate	250000	2500000	2100	93000	56000	20500	11500	673 l

Constituent	GCTLs µg/L	NADCs	MW-04D					
			May 2010	Jul 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Iron	300	3000	10.0 U	10.0 U	50.4 l	35 U	30.0 U	30.0 U
Sodium	160000	1600000	55200	49600	45100	56500	62600	57800
Ammonia	2800	28000	1100	900	1300	1400	1220	1330
Total Dissolved Solids	500000	5000000	492000	500000	496000	443000	499000	525000
Sulfate	250000	2500000	47000	44000	43400	38000	35100	27200

Constituent	GCTLs µg/L	NADCs	MW-05S					
			May 2010	Jul 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Iron	300	3000	2610	4080	5990	7120	3640	921
Sodium	160000	1600000	4880	12100	6090 l	18400	19400	7950
Ammonia	2800	28000	1000	880	33900	236000	152000	59400
Total Dissolved Solids	500000	5000000	240000	510000	439000	519000	297000	186000
Sulfate	250000	2500000	110	81000	80300	68200	51300	20900

**Table 5-1
Permit-Required Groundwater Results Summary**

Site Assessment Report, Site 351-2
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Constituent	GCTLs µg/L	NADCs	MW-06S					
			May 2010	Jul 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Iron	300	3000	10500	3900	1930	1600	NS	1870
Sodium	160000	1600000	75600	14100	29400	29300	NS	31300
Ammonia	2800	28000	2400	150000	35600	25100	NS	14200
Total Dissolved Solids	500000	5000000	688000	380000	349000	361000	NS	412000
Sulfate	250000	2500000	110 U	92000	85900	67400	NS	13600

Constituent	GCTLs µg/L	NADCs	MW-07S					
			May 2010	Jul 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Iron	300	3000	384	241	111 I	164 I	41.4 I	32.9 I
Sodium	160000	1600000	22000	19400	19600	37000	56800	33200
Ammonia	2800	28000	46	39	50 U	50 U	110 U	110 U
Total Dissolved Solids	500000	5000000	268000	250000	213000	332000	278000	261000
Sulfate	250000	2500000	34000	24000	20900	26600	23300	22100

Constituent	GCTLs µg/L	NADCs	MW-08S					
			May 2010	Jul 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Iron	300	3000	1330	1810	1320	809	604	2410
Sodium	160000	1600000	19600	21100	21100	18100	14600	11500
Ammonia	2800	28000	77	230	380	220	179 I	270 I
Total Dissolved Solids	500000	5000000	280000	310000	212000	240000	213000	258000
Sulfate	250000	2500000	29000	26000	17800	20400	23200	21500

Notes:

All values are µg/L.

U = Not detected.

NS = Not sampled.

Bold represents locations where GCTLs were exceeded.

Shaded cells represent exceedances of NADCs.

I = Result is greater than the detection limit, but less than the reporting limit.

Table 5-2
Petroleum Groundwater Results Summary

Site Assessment Report, Site 351-2
Naval Station Mayport
Jacksonville, Florida
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Constituents	GCTLs	NADCs	MW-01S								
			Jan 2006	July 2008	Feb 2010	May 2010	July 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Benzene	1	100	0.20 U	1.0 U	0.21 U	0.27 U	0.27 U	0.21 U	0.20 U	0.250 U	0.250 U
Ethylbenzene	30	300	0.30 U	1.0 U	0.20 U	0.26 U	0.26 U	0.20 U	0.20 U	0.250 U	0.250 U
Toluene	40	400	0.20 U	1.0 U	0.20 U	0.30 U	0.30 U	0.20 U	0.20 U	0.250 U	0.250 U
Xylene (total)	20	200	1.0 U	1.0 U	0.54 U	0.50 U	0.50 U	0.54 U	0.52 U	0.750 U	0.750 U
1-Methylnaphthalene	28	280	0.02 U	0.046 U	0.24 U	0.21	0.10	0.61	1.8	1.02	0.407
2-Methylnaphthalene	28	280	0.02 U	0.046 U	0.24 U	0.031 U	0.052 I	0.24 U	0.73	0.447	0.303
Acenaphthene	20	200	0.14	0.041 U	0.48 U	0.13	0.15	0.51	0.58	0.551	0.236
Anthracene	2100	21000	0.02 U	0.046 U	0.48 U	0.014 U	0.075 I	0.48 U	0.24 U	0.0463 U	0.0463 U
Fluoranthene	280	2800	0.01 U	0.046 U	0.24 U	0.011 U	0.038 I	0.24 U	0.24 U	0.0463 U	0.0463 U
Fluorene	280	2800	0.02 U	0.046 U	0.48 U	0.023 I	0.097 I	0.48 U	0.38 U	0.0463 U	0.0463 U
Naphthalene	14	140	0.02 U	0.046 U	0.24 U	0.056 I	0.079 I	0.52	1.4	0.0610 I	0.477 U
Phenanthrene	210	2100	0.02 U	0.046 U	0.24 U	0.011 U	0.096 I	0.24 U	0.24 U	0.0463 U	0.0463 U
Pyrene	210	2100	0.02 U	0.046 U	0.24 U	0.022 I	0.056 I	0.24 U	0.24 U	0.0463 U	0.0463 U
TRPH mg/L	5	50	0.536	0.85	0.509	2.0	0.32 I	1.13	1.81	0.864	0.209 I

Table 5-2
Petroleum Groundwater Results Summary

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Constituents	GCTLs	NADCs	MW-02S								
			Jan 2006	July 2008	Feb 2010	May 2010	July 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Benzene	1	100	0.2 U	1.0 U	0.21 U	0.27 U	0.27 U	0.21 U	0.20 U	0.250 U	0.250 U
Ethylbenzene	30	300	0.31 U	1.0 U	0.20 U	0.26 U	0.26 U	0.20 U	0.20 U	0.250 U	0.250 U
Toluene	40	400	0.2 U	1.0 U	0.20 U	0.30 U	0.30 U	0.20 U	0.20 U	0.250 U	0.250 U
Xylene (total)	20	200	NA	1.0 U	0.54 U	0.50 U	0.50 U	0.54 U	0.52 U	0.750 U	0.750 U
1-Methylnaphthalene	28	280	0.02 U	0.068	0.24 U	0.025 U	0.030 U	0.24 U	0.38 U	0.0463 U	0.0463 U
2-Methylnaphthalene	28	280	0.02 U	0.046	0.24 U	0.031 U	0.031 U	0.24 U	0.38 U	0.0463 U	0.0463 U
Acenaphthene	20	200	0.02 U	0.046 U	0.48 U	0.011 U	0.030 U	0.48 U	0.38 U	0.0463 U	0.0463 U
Anthracene	2100	21000	0.02 U	0.028 U	0.48 U	0.014 U	0.030 U	0.48 U	0.24 U	0.0463 U	0.0463 U
Fluoranthene	280	2800	0.01 U	0.046 U	0.24 U	0.011 U	0.030 U	0.24 U	0.24 U	0.0463 U	0.0463 U
Fluorene	280	2800	0.02 U	0.046 U	0.48 U	0.014 U	0.030 U	0.48 U	0.38 U	0.0463 U	0.0463 U
Naphthalene	14	140	0.05 U	0.046 U	0.24 U	0.032 I	0.030 U	0.24 U	0.38 U	0.0463 U	0.0463 U
Phenanthrene	210	2100	0.02 U	0.053	0.24 U	0.023 I	0.030 U	0.24 U	0.24 U	0.0463 U	0.0463 U
Pyrene	210	2100	0.02 U	0.041 U	0.24 U	0.016 U	0.030 U	0.24 U	0.24 U	0.0463 U	0.0463 U
TRPH mg/L	5	50	0.094 U	0.46	0.16 U	0.054 U	0.17 U	0.16 U	0.14 U	0.157 U	0.157 U

Table 5-2
Petroleum Groundwater Results Summary

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Constituents	GCTLs	NADCs	MW-03S								
			Jan 2006	July 2008	Feb 2010	May 2010	July 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Benzene	1	100	42.8	NS	0.56 U	1.8	0.27 U	0.48	0.54	0.250 U	0.985
Ethylbenzene	30	300	37.8	NS	8.0	6.0	2.0	0.77	0.86	1.07	4.56
Toluene	40	400	1.5	NS	0.22 U	0.97 I	0.30 U	0.20 U	0.20 U	0.250 U	0.250 U
Xylene (total)	20	200	NA	NS	11.2	6.8	1.6	3.7	2.1	2.27 I	0.750 U
1-Methylnaphthalene	28	280	75.5	NS	26	12	30	5.3	15.8	0.161 I	15.8
2-Methylnaphthalene	28	280	122	NS	23.6	1.3	34	1.0	12.0	0.0463 U	9.93
Acenaphthene	20	200	2.4	NS	1.5	1.9	1.5	1.0	1.6	0.0463 U	1.41
Anthracene	2100	21000	0.08 U	NS	0.48 U	0.014 U	0.15 I	0.48 U	0.24 U	0.0463 U	0.0463 U
Fluoranthene	280	2800	0.05 U	NS	0.24 U	0.078 I	0.15 U	0.24 U	0.24 U	0.0463 U	0.0463 U
Fluorene	280	2800	5.32	NS	3.7	3.1	3.6	1.6	4.3	0.0463 U	0.0463 U
Naphthalene	14	140	102	NS	23.8	8.9	24	1.9	2.9	0.274	12.0
Phenanthrene	210	2100	5.06	NS	2.0	0.062 I	3.6	0.31	2.9	0.0463 U	1.39
Pyrene	210	2100	0.56	NS	0.89 U	0.88	1.2	2.2	1.6	1.01	1.86
TRPH mg/L	5	50	3.55	NS	3.44	3.6	4.2	5.86	2.69	2.62	5.01

Table 5-2
Petroleum Groundwater Results Summary

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Constituents	GCTLs	NADCs	MW-04D								
			Jan 2006	July 2008	Feb 2010	May 2010	July 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Benzene	1	100	0.2 U	1.0 U	0.21 U	0.27 U	0.27 U	0.21 U	0.20 U	0.250 U	0.250 U
Ethylbenzene	30	300	0.62 U	1.0 U	0.20 U	0.26 U	0.26 U	0.20 U	0.20 U	0.250 U	0.250 u
Toluene	40	400	0.2 U	1.0 U	0.20 U	0.30 U	0.30 U	0.20 U	0.20 U	0.250 U	0.250 U
Xylene (total)	20	200	NA	1.0 U	0.54 U	0.50 U	0.50 U	0.54 U	0.52 U	0.750 U	0.750 U
1-Methylnaphthalene	28	280	10.1	0.046 U	0.24 U	0.025 U	0.030 U	0.24 U	0.38 U	0.0463 U	0.0463 U
2-Methylnaphthalene	28	280	13.5	0.046 U	0.24 U	0.031 U	0.031 U	0.24 U	0.38 U	0.0463 U	0.0463 U
Acenaphthene	20	200	0.75	0.046 U	0.48 U	0.011 U	0.030 U	0.48 U	0.38 U	0.0463 U	0.0463 U
Anthracene	2100	21000	0.02 U	0.032 U	0.48 U	0.014 U	0.030 U	0.48 U	0.24 U	0.0463 U	0.0463 U
Fluoranthene	280	2800	0.01 U	0.046 U	0.24 U	0.011 U	0.030 U	0.24 U	0.24 U	0.0463 U	0.0463 U
Fluorene	280	2800	2.05	0.046 U	0.48 U	0.014 U	0.030 U	0.48 U	0.38 U	0.0463 U	0.0463 U
Naphthalene	14	140	1.85	0.046 U	0.24 U	0.023 U	0.030 U	0.24 U	0.38 U	0.0463 U	0.0463 U
Phenanthrene	210	2100	2.68	0.061	0.24 U	0.011 U	0.030 U	0.24 U	0.24 U	0.0463 U	0.0463 U
Pyrene	210	2100	0.45	0.046 U	0.24 U	0.016 U	0.030 U	0.24 U	0.24 U	0.0463 U	0.0463 U
TRPH mg/L	5	50	0.604	0.46 U	0.16 U	0.054 U	0.17 U	0.16 U	0.14 U	0.157 U	0.266 I

Table 5-2
Petroleum Groundwater Results Summary

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Constituents	GCTLs	NADCs	MW-05S								
			Jan 2006	Feb 2006	Feb 2010	May 2010	July 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Benzene	1	100	NS	87.5	0.92 U	1.4	0.32 I	0.49	1.5	1.21	0.606 I
Ethylbenzene	30	300	NS	14.2	0.6 U	0.26 U	0.26 U	0.20 U	0.20 U	0.732 I	1.69
Toluene	40	400	NS	0.20 U	0.20 U	0.30 U	0.30 U	0.20 U	0.20 U	0.250 U	0.250 U
Xylene (total)	20	200	NS	42.1	1.0 U	0.50 U	0.50 U	0.54 U	0.52 U	0.954 I	2.06 I
1-Methylnaphthalene	28	280	NS	55.6	56.9	110	22	8.7	6.9	4.70	2.09
2-Methylnaphthalene	28	280	NS	87.6	75.0	150	9.8	0.72	0.38 U	0.0463 U	0.223
Acenaphthene	20	200	NS	2.43	2.0	4.0	1.4	1.0	1.1	1.48	0.773
Anthracene	2100	21000	NS	0.02 U	0.48 U	0.14 U	0.15 U	0.48 U	0.26	0.0463 U	0.0463 U
Fluoranthene	280	2800	NS	0.05 I	0.24 U	0.11 U	0.15 U	0.24 U	0.24 U	0.0463 U	0.0463 U
Fluorene	280	2800	NS	4.89	4.8	9.3	2.5	1.8	1.5	1.17	1.00
Naphthalene	14	140	NS	151	47.2	120	18	1.1	0.38 U	0.943	1.93
Phenanthrene	210	2100	NS	3.58	4.6	6.8	0.65	1.3	1.4	0.624	0.0463 U
Pyrene	210	2100	NS	0.08 I	0.88 U	0.91 I	0.95	0.77	0.68	0.482	0.676
TRPH mg/L	5	50	NS	3.94	3.87	2.9	1.7	1.35	7.34	6.31	1.27

Table 5-2
Petroleum Groundwater Results Summary

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Constituents	GCTLs	NADCs	MW-06S					
			May 2010	July 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Benzene	1	100	6.0	0.27 U	0.38	0.25	NS	0.648 I
Ethylbenzene	30	300	0.70 I	2.3	1.3	0.43	NS	0.664 I
Toluene	40	400	0.30 U	0.30 U	0.20 U	0.20 U	NS	0.250 U
Xylene (total)	20	200	1.2	1.1	0.58	0.52 U	NS	0.750 U
1-Methylnaphthalene	28	280	110	45	8.5	4.3	NS	6.1
2-Methylnaphthalene	28	280	140	58	6.9	4.9	NS	4.1
Acenaphthene	20	200	3.7	2.4	0.69	0.38 U	NS	0.0463 U
Anthracene	2100	21000	0.14 U	0.40 I	0.48 U	0.24 U	NS	0.0463 U
Fluoranthene	280	2800	0.11 U	0.40 I	0.24 U	0.24 U	NS	0.0463 U
Fluorene	280	2800	8.4	6.8	1.9	0.79	NS	2.42
Naphthalene	14	140	180	36	4.0	3.6	NS	1.47
Phenanthrene	210	2100	5.1	8.0	1.2	0.81	NS	0.0463 U
Pyrene	210	2100	0.55 I	4.3	1.0	0.43	NS	1.13
TRPH mg/L	5	50	14	3.0	1.32	1.19	NS	5.49

Table 5-2
Petroleum Groundwater Results Summary

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Constituents	GCTLs	NADCs	MW-07S					
			May 2010	July 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Benzene	1	100	0.27 U	0.27 U	0.21 U	0.20 U	0.250 U	0.250 U
Ethylbenzene	30	300	0.26 U	0.26 U	0.20 U	0.20 U	0.250 U	0.250 U
Toluene	40	400	0.30 U	0.30 U	0.20 U	0.20 U	0.250 U	0.250 U
Xylene (total)	20	200	0.50 U	0.50 U	0.54 U	0.52 U	0.750 U	0.750 U
1-Methylnaphthalene	28	280	0.025 U	0.030 U	0.24 U	0.38 U	0.0463 U	0.0463 U
2-Methylnaphthalene	28	280	0.031 U	0.031 U	0.24 U	0.38 U	0.0463 U	0.0463 U
Acenaphthene	20	200	0.011 U	0.030 U	0.48 U	0.38 U	0.0463 U	0.0463 U
Anthracene	2100	21000	0.014 U	0.030 U	0.48 U	0.24 U	0.0463 U	0.0463 U
Fluoranthene	280	2800	0.011 U	0.030 U	0.24 U	0.24 U	0.0463 U	0.0463 U
Fluorene	280	2800	0.014 U	0.030 U	0.48 U	0.38 U	0.0463 U	0.0463 U
Naphthalene	14	140	0.027 I	0.030 U	0.24 U	0.38 U	0.0463 U	0.0463 U
Phenanthrene	210	2100	0.021 I	0.030 U	0.24 U	0.24 U	0.0463 U	0.0463 U
Pyrene	210	2100	0.037 I	0.030 U	0.24 U	0.24 U	0.0463 U	0.0463 U
TRPH mg/L	5	50	0.054 U	0.17 U	0.16 U	0.14 U	0.157 U	0.157 U

Table 5-2
Petroleum Groundwater Results Summary

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Constituents	GCTLs	NADCs	MW-08S					
			May 2010	July 2010	Oct 2010	Dec 2010	Jan 2011	Apr 2011
Benzene	1	100	0.27 U	0.27 U	0.21 U	0.20 U	0.250 U	0.250 U
Ethylbenzene	30	300	0.26 U	0.26 U	0.20 U	0.20 U	0.250 U	0.250 U
Toluene	40	400	0.30 U	0.30 U	0.20 U	0.20 U	0.250 U	0.250 U
Xylene (total)	20	200	0.50 U	0.50 U	0.54 U	0.52 U	0.750 U	0.750 U
1-Methylnaphthalene	28	280	0.025 U	0.030 U	0.24 U	0.38 U	0.0463 U	0.0463 U
2-Methylnaphthalene	28	280	0.031 U	0.031 U	0.24 U	0.38 U	0.0463 U	0.0463 U
Acenaphthene	20	200	0.011 U	0.030 U	0.48 U	0.38 U	0.0463 U	0.0463 U
Anthracene	2100	21000	0.014 U	0.030 U	0.48 U	0.24 U	0.0463 U	0.0463 U
Fluoranthene	280	2800	0.011 U	0.030 U	0.24 U	0.24 U	0.0463 U	0.0463 U
Fluorene	280	2800	0.014 U	0.030 U	0.48 U	0.38 U	0.0463 U	0.0463 U
Naphthalene	14	140	0.041 I	0.030 I	0.24 U	0.38 U	0.0463 U	0.0463 U
Phenanthrene	210	2100	0.011 U	0.030 U	0.24 U	0.24 U	0.0463 U	0.0463 U
Pyrene	210	2100	0.15 U	0.11	0.24 U	0.24 U	0.0463 U	0.0463 U
TRPH mg/L	5	50	0.12 I	0.30 I	1.03	0.586	0.452 I	1.92

Notes:

All values are micrograms per liter.

NL = none listed

NS = not sampled (due to heavy sheen)

NA = not analyzed

U = not detected

Bold represents locations where GCTLs were exceeded.

Shaded cells represent exceedances of NADCs.

I = result is greater than the detection limit but less than the reporting limit

of 180 µg/L naphthalene exceeded the Natural Attenuation Default Concentration (NADC) of 150 µg/L for the sample analyzed from monitoring well MPT-351-2-MW06S.

5.4.2 Post-Injection Groundwater Sampling Results

Four quarters of post-injection samples were collected and analyzed for permit-required parameters and petroleum constituents. TRPH exceedances of GCTLs were documented in each quarter of monitoring, and benzene was identified in excess of GCTLs during two of the four field efforts. Heavy sheen was also observed during the third quarter event in monitoring well MPT-351-2-MW06S and, therefore, not sampled. An overview of the wells and quarterly sampling results that exceeded the GCTLs are summarized as follows:

- First Quarter GCTL Exceedances, October 12 and 13, 2010
 - MPT-351-2-MW03S – TRPH = 5.86 mg/L
- Second Quarter GCTL Exceedances, November 29 and December 2, 2010
 - MPT-351-2-MW05S – TRPH = 7.34 mg/L and benzene = 1.5 µg/L
- Third Quarter GCTL Exceedances, January 11, 2011
 - MPT-351-2-MW05S - TRPH = 6.31 mg/L and benzene = 1.21 µg/L
 - Groundwater was not collected from monitoring well MPT-351-2-MW06S due to heavy sheen.
- Fourth Quarter GCTL Exceedances, April 13 and 14, 2011
 - MPT-351-2-MW03S – TRPH = 5.01 mg/L
 - MPT-351-2-MW06S – TRPH = 5.49 mg/L

Permit-required constituents iron (MPT-351-2-MW03S) and ammonia (MPT-351-2-MW05S) remain in excess of GCTLs and NADCs due to the BIOX[®] injections. Table 5-1 depicts permit-required constituent analytical results and Table 5-2 depicts the petroleum detection summary table. Post-injection field data sheets are included as Appendix L, and post-injection study groundwater analytical results are included as Appendix M.

5.4.3 Free Product

Beginning in April 2008, Tetra Tech representatives measured thicknesses of free product using an ORS electronic free product probe and removed free product, when present, at Site 351-2. If free product was present, the free product was removed by low-flow pumping using a peristaltic pump and recovered product was containerized for disposal. Sorbent socks were also installed and checked weekly for free product saturation. Saturated socks were removed and containerized. The volume of free product absorbed by the socks was estimated by field personnel and included with removed standing free product volumes. Free product readings have been recorded monthly from April 2008 through January 2011.

Once the free product was reduced to approximately 1 inch in thickness through manual removal and natural attenuation, BIOX[®] injections were to remove most, if not all, remaining free product. A second injection of BIOX[®] was recommended by the manufacturer's representative if free product remained.

Based on field observations, free product is still present at this site. Between the BIOX[®] injection event (June 2010) and the first quarter of monitoring (October 2010), free product was present in recovery wells RW8, RW9, RW10, and RW11 at approximately 0.01 foot thick. Free product did not appear until January 11, 2011, during the third quarter post-injection quarterly monitoring event when heavy petroleum sheen was present on the groundwater in MPT-351-2-MW06S. On January 6, 2011, free product was also present in a petroleum sorbent material sock placed in recovery well RW8, but not in the groundwater. A free product summary table is provided as Table 5-3. This table includes pre- and post-injection data.

5.5 POST-INJECTION SUMMARY AND CONCLUSIONS

During the year of post- injection groundwater monitoring, free product was initially observed in recovery wells RW8, RW9, RW10 and RW11 during May 2010 through August 2010 before becoming immeasurable in thickness. Free product was not present again until January 6, 2011, when free product was observed in a petroleum-sorbent sock placed in recovery well RW8. All petroleum was bound in the sorbent sock and no measurable petroleum was present on the groundwater. On January 8, 2011, heavy petroleum sheen was observed on groundwater in monitoring well MPT-351-2-MW06S during the third post-injection quarterly monitoring event. This was the last occurrence of free product during the post-injection year of monitoring. Monthly free product monitoring of site wells will continue through calendar year 2012 as part of the Navy-funded free product removal action. Based on these observations, free product is still present at the site, but at lesser thicknesses than observed before the initial injection of BIOX[®] reagent.

Coinciding with the reduction of free product, the impacts from petroleum constituent concentrations appear to have decreased significantly when comparing the baseline concentrations to the fourth post-injection quarterly monitoring event. Petroleum concentrations are significantly less than the exceedances of VOC and PAH constituents reported for monitoring well MPT-351-2-MW03S and VOC, PAH, and TRPH constituents reported for monitoring wells MPT-351-2-MW05S and MPT-351-2-MW06S. Currently, fourth quarter of post-injection groundwater sampling results show TRPH concentrations exceeding the GCTL of 5 mg/L for samples analyzed from monitoring wells MPT-351-2-MW03S and MPT-351-2-MW06S. No groundwater exceedances were reported for samples analyzed from monitoring well MPT-351-2-MW05S. These analytical results suggest that the BIOX[®] reagent is an effective remediation strategy and may be considered for future sites with petroleum contamination.

**Table 5-3
Free Product Measurements and Recovery**

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DATE	MW03S		MW05S		RW01		RW04	
	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)
04/07/08	1.40	1500*	1.10	300*	0.00	0	0.00	0
05/29/08	0.55	2000*	0.16	200*	0.00	0	0.00	0
06/20/08	1.85	3000*	0.00	0	0.00	0	0.00	0
07/15/08	0.60	2350*	0.75	300*	0.00	0	0.00	0
07/25/08	0.44	1500*	0.50	300*	0.00	0	0.00	0
08/01/08	0.27	2500*	0.00	0	0.00	0	0.00	0
08/08/08	0.08	200*	0.10	100*	0.00	0	0.00	0
08/14/08	0.31	2500*	0.00	0	0.00	0	0.00	0
08/28/08	0.35	2500*	0.00	0	0.00	0	0.00	0
09/04/08	0.50	3500*	0.00	0	0.00	0	0.00	0
09/08/08	0.35	2000*	0.00	0	0.00	0	0.00	0
09/18/08	0.31	2400*	0.00	0	0.00	0	0.00	0
09/25/08	0.31	3500*	0.00	0	0.00	0	0.00	0
10/02/08	0.43	3500*	0.00	0	0.00	0	0.00	0
10/07/08	0.30	3000*	0.00	0	0.00	0	0.00	0
10/16/08	0.24	3500*	0.00	0	0.00	0	0.00	0
10/27/08	0.13	4000*	0.00	0	0.00	0	0.00	0
11/07/08	0.20	3000*	0.00	0	0.00	0	0.00	0
11/26/08	0.23	4000*	0.00	0	0.00	0	0.00	0
01/09/09	0.34	500*	0.00	0	0.00	0	0.00	0
01/15/09	0.54	1000*	0.00	0	0.00	0	0.00	0
01/22/09	0.00	1000**	0.00	0	0.00	0	0.00	0
01/30/09	2.49	6000*	0.00	0	0.00	0	0.00	0
02/02/09	0.26	2000*	0.00	0	0.00	0	0.00	0
02/09/09	0.94	2000*	0.00	0	0.00	0	0.00	500**
02/19/09	0.00	0	0.00	0	0.00	0	0.00	500**
02/26/09	1.02	2000*	0.00	0	0.00	0	0.00	500**
02/27/09	0.88	2500*	0.00	0	0.00	0	0.00	0
03/02/09	1.03	3000*	0.00	0	0.00	0	0.00	0
03/13/09	1.09	3000*	0.00	0	0.00	0	0.00	0
03/19/09	1.11	3000*	0.00	0	0.00	0	0.00	500**
03/23/09	0.00	1000**	0.00	0	0.00	500**	0.00	0
04/01/09	0.00	0	0.00	0	0.00	0	0.00	200**
04/13/09	0.60	1000*	0.00	0	0.00	0	0.00	0
04/16/09	0.37	2000*	0.00	0	0.00	0	0.00	0
04/22/09	0.00	0	0.00	0	0.00	0	0.00	0
06/05/09	2.10	2000*	0.00	0	0.00	0	0.00	0
06/08/09	0.00	0	0.00	0	0.00	0	0.00	0
06/24/09	0.00	450**	0.00	0	0.00	0	0.00	0
07/01/09	0.00	250**	0.00	0	0.00	0	0.00	0
07/07/09	0.00	250**	0.00	0	0.00	0	0.00	0

**Table 5-3
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DATE	MW03S		MW05S		RW01		RW04	
	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)
07/17/09	0.00	500**	0.00	0	0.00	0	0.00	0
07/31/09	0.00	100**	0.00	0	0.00	0	0.00	0
08/05/09	0.00	0	0.00	0	0.00	0	0.00	0
08/10/09	0.00	0	0.00	0	0.00	0	0.00	0
08/19/09	0.00	0	0.00	0	0.00	0	0.00	0
09/03/09	0.00	0	0.00	0	0.00	0	0.00	0
10/02/09	0.00	0	0.00	0	0.00	0	0.00	0
10/07/09	0.00	0	0.00	0	0.00	0	0.00	0
10/13/09	0.00	0	0.00	0	0.00	0	0.00	0
10/21/09	0.00	0	0.00	0	0.00	0	0.00	0
10/27/09	0.00	0	0.00	0	0.00	0	0.00	0
11/18/09	0.00	0	0.00	0	0.00	0	0.00	0
11/25/09	0.00	0	0.00	0	0.00	0	0.00	0
12/08/09	0.00	0	0.00	0	0.00	0	0.00	0
12/09/09	0.00	0	0.00	0	0.00	0	0.00	0
12/30/09	0.00	0	0.00	0	0.00	0	0.00	0
01/06/10	0.00	0	0.00	0	0.00	0	0.00	0
01/11/10	0.00	0	0.00	0	0.00	0	0.00	0
01/29/10	0.00	0	0.00	0	0.00	0	0.00	0
02/04/10	0.00	0	0.00	0	0.00	0	0.00	0
02/11/10	0.00	0	0.00	0	0.00	0	0.00	0
02/18/10	0.00	0	0.00	0	0.00	0	0.00	0
02/26/10	0.00	0	0.00	0	0.00	0	0.00	0
03/05/10	0.00	0	0.00	0	0.00	0	0.00	0
03/10/10	0.00	0	0.00	0	0.00	0	0.00	0
03/19/10	0.00	0	0.00	0	0.00	0	0.00	0
03/25/10	0.00	0	0.00	0	0.00	0	0.00	0
04/01/10	0.00	0	0.00	0	0.00	0	0.00	0
04/09/10	0.00	0	0.00	0	0.00	0	0.00	0
04/16/10	0.00	0	0.00	0	0.00	0	0.00	0
04/19/10	0.00	0	0.00	0	0.00	0	0.00	0
04/28/10	0.00	0	0.00	0	0.00	0	0.00	0
05/07/10	0.00	0	0.00	0	0.00	0	0.00	0
05/14/10	0.00	0	0.00	0	0.00	0	0.00	0
05/21/10	0.00	0	0.00	0	0.00	0	0.00	0
05/27/10	0.00	0	0.00	0	0.00	0	0.00	0
07/30/10	0.00	0	0.00	0	0.00	0	0.00	0
08/13/10	0.00	0	0.00	0	0.00	0	0.00	0
08/18/10	0.00	0	0.00	0	0.00	0	0.00	0
08/27/10	0.00	0	0.00	0	0.00	0	0.00	0
09/01/10	0.00	0	0.00	0	0.00	0	0.00	0

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DATE	MW03S		MW05S		RW01		RW04	
	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)
09/17/10	0.00	0	0.00	0	0.00	0	0.00	0
09/23/10	0.00	0	0.00	0	0.00	0	0.00	0
10/01/10	0.00	0	0.00	0	0.00	0	0.00	0
10/07/10	0.00	0	0.00	0	0.00	0	0.00	0
10/15/10	0.00	0	0.00	0	0.00	0	0.00	0
10/21/10	0.00	0	0.00	0	0.00	0	0.00	0
10/29/10	0.00	0	0.00	0	0.00	0	0.00	0
11/03/10	0.00	0	0.00	0	0.00	0	0.00	0
11/12/10	0.00	0	0.00	0	0.00	0	0.00	0
114/23/10	0.00	0	0.00	0	0.00	0	0.00	0
12/08/10	0.00	0	0.00	0	0.00	0	0.00	0
12/17/10	0.00	0	0.00	0	0.00	0	0.00	0
12/22/10	0.00	0	0.00	0	0.00	0	0.00	0
12/27/10	0.00	0	0.00	0	0.00	0	0.00	0
01/06/11	0.00	0	0.00	0	0.00	0	0.00	0
01/27/11	0.00	0	0.00	0	0.00	0	0.00	0
02/04/11	0.00	0	0.00	0	0.00	0	0.00	0
02/11/11	0.00	0	0.00	0	0.00	0	0.00	0
02/17/11	0.00	0	0.00	0	0.00	0	0.00	0
02/25/11	0.00	0	0.00	0	0.00	0	0.00	0
03/03/11	0.00	0	0.00	0	0.00	0	0.00	0
03/10/11	0.00	0	0.00	0	0.00	0	0.00	0
03/14/11	0.00	0	0.00	0	0.00	0	0.00	0
03/24/11	0.00	0	0.00	0	0.00	0	0.00	0
04/01/11	0.00	0	0.00	0	0.00	0	0.00	0
04/08/11	0.00	0	0.00	0	0.00	0	0.00	0
04/14/11	0.00	0	0.00	0	0.00	0	0.00	0
04/22/11	0.00	0	0.00	0	0.00	0	0.00	0

DATE	RW07		RW08		RW09		RW10	
	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)
04/07/08	0.00	0	0.00	0	0.00	0	0.00	0
05/29/08	0.00	0	0.00	0	0.00	0	0.00	0
06/20/08	0.00	0	0.00	0	0.00	0	0.00	0
07/15/08	0.00	0	0.00	0	0.00	0	0.00	0
07/25/08	0.00	0	0.00	0	0.00	0	0.00	0
08/01/08	0.00	0	0.00	0	0.00	0	0.00	0
08/08/08	0.00	0	0.00	0	0.00	0	0.00	0
08/14/08	0.00	0	0.00	0	0.00	0	0.00	0

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DATE	RW07		RW08		RW09		RW10	
	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)
08/28/08	0.00	0	0.00	0	0.00	0	0.00	0
09/04/08	0.00	0	0.00	0	0.00	0	0.00	0
09/08/08	0.00	0	0.00	0	0.00	0	0.00	0
09/18/08	0.00	0	0.00	0	0.00	0	0.00	0
09/25/08	0.00	0	0.00	0	0.00	0	0.00	0
10/02/08	0.00	0	0.00	0	0.00	0	0.00	0
10/07/08	0.00	0	0.00	0	0.00	0	0.00	0
10/16/08	0.00	0	0.00	0	0.00	0	0.00	0
10/27/08	0.00	0	0.00	0	0.00	0	0.00	0
11/07/08	0.00	0	0.00	0	0.00	0	0.00	0
11/26/08	0.00	0	0.00	0	0.00	0	0.00	0
01/09/09	0.00	0	0.00	0	0.00	0	0.00	0
01/15/09	0.00	0	0.00	0	0.00	0	0.00	0
01/22/09	0.00	0	0.00	0	0.00	0	0.00	0
01/30/09	0.00	0	0.00	0	0.00	0	0.00	0
02/02/09	0.00	0	0.00	0	0.00	0	0.00	0
02/09/09	0.00	0	1.23	3000*	0.00	0	0.00	0
02/19/09	0.00	0	1.23	3000*	0.00	0	0.00	0
02/26/09	0.00	0	0.15	500*	0.00	0	0.00	0
02/27/09	0.00	0	0.00	0	0.00	0	0.00	0
03/02/09	0.00	0	0.00	1000**	0.00	200**	0.00	0
03/13/09	0.00	0	0.20	1000*	0.00	250**	0.00	0
03/19/09	0.00	0	0.00	500**	0.00	0	0.16	800*
03/23/09	0.00	0	0.00	500**	0.00	0	0.00	0
04/01/09	0.00	200**	0.00	500**	0.00	200**	0.00	500**
04/13/09	0.00	0	0.00	0	0.00	0	0.00	0
04/16/09	0.00	0	0.00	0	0.00	0	0.00	0
04/22/09	0.00	0	0.00	0	0.00	0	0.00	0
06/05/09	0.00	0	0.00	0	0.00	0	0.00	0
06/08/09	0.00	0	0.00	0	0.00	0	0.00	0
06/24/09	0.00	0	0.00	0	0.00	0	0.00	0
07/01/09	0.00	0	0.00	0	0.00	0	0.00	0
07/07/09	0.00	0	0.00	0	0.00	0	0.00	0
07/17/09	0.00	0	0.00	0	0.00	0	0.00	0
07/31/09	0.00	0	0.00	100**	0.00	0	0.00	0
08/05/09	0.00	0	0.00	0	0.00	0	0.00	0
08/10/09	0.00	0	0.00	0	0.00	0	0.00	0
08/19/09	0.00	0	0.00	0	0.00	0	0.00	0
09/03/09	0.00	0	0.00	0	0.00	0	0.00	0
10/02/09	0.00	0	0.00	0	0.00	0	0.00	0
10/07/09	0.00	0	0.00	0	0.00	0	0.00	0

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DATE	RW07		RW08		RW09		RW10	
	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)
10/13/09	0.00	0	0.00	0	0.00	0	0.00	0
10/21/09	0.00	0	0.00	0	0.00	0	0.00	0
10/27/09	0.00	0	0.00	0	0.00	0	0.00	0
11/18/09	0.00	0	0.00	0	0.00	0	0.00	0
11/25/09	0.00	0	0.00	0	0.00	0	0.00	0
12/08/09	0.00	0	0.00	0	0.00	0	0.00	0
12/09/09	0.00	0	0.00	0	0.00	0	0.00	0
12/30/09	0.00	0	0.00	0	0.00	0	0.00	0
01/06/10	0.00	0	0.00	0	0.00	0	0.00	0
01/11/10	0.00	0	0.00	0	0.00	0	0.00	0
01/29/10	0.00	0	0.00	0	0.00	0	0.00	0
02/04/10	0.00	0	0.00	0	0.00	0	0.00	0
02/11/10	0.00	0	0.00	0	0.00	0	0.00	0
02/18/10	0.00	0	0.00	0	0.00	0	0.00	0
02/26/10	0.00	0	0.00	0	0.00	0	0.00	0
03/05/10	0.00	0	0.00	0	0.00	0	0.00	0
03/10/10	0.00	0	0.00	0	0.00	0	0.00	0
03/19/10	0.00	0	0.00	0	0.00	0	0.00	0
03/25/10	0.00	0	0.00	0	0.00	0	0.00	0
04/01/10	0.00	0	0.00	0	0.00	0	0.00	0
04/09/10	0.00	0	0.00	0	0.00	0	0.00	0
04/16/10	0.00	0	0.00	0	0.00	0	0.00	0
04/19/10	0.00	0	0.00	0	0.00	0	0.00	0
04/28/10	0.00	0	0.00	500**	0.00	0	0.00	0
05/07/10	0.00	0	0.00	500**	0.00	0	0.00	0
05/14/10	0.00	0	0.00	500**	0.00	0	0.00	0
05/21/10	0.00	0	0.00	0	0.00	0	0.00	0
05/27/10	0.00	0	0.00	0	0.00	0	0.00	0
07/30/10	0.00	0	0.09	945**	0.00	0	0.00	0
08/13/10	0.00	0	0.11	1000**	0.00	0	0.00	0
08/18/10	0.00	0	0.00	1000**	0.00	0	0.00	500**
08/27/10	0.00	0	0.00	1000**	0.00	0	0.00	0
09/01/10	0.00	0	0.14	1000**	0.00	200**	0.00	200**
09/17/10	0.00	0	0.00	0	0.00	0	0.00	0
09/23/10	0.00	0	0.00	0	0.00	0	0.00	0
10/01/10	0.00	0	0.00	0	0.00	0	0.00	0
10/07/10	0.00	0	0.00	0	0.00	0	0.00	0
10/15/10	0.00	0	0.00	0	0.00	0	0.00	0
10/21/10	0.00	0	0.00	0	0.00	0	0.00	0
10/29/10	0.00	0	0.00	0	0.00	0	0.00	0
11/03/10	0.00	0	0.00	0	0.00	0	0.00	0
11/12/10	0.00	0	0.00	0	0.00	0	0.00	0

**Table 5-3
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DATE	RW07		RW08		RW09		RW10	
	THICKNESS (feet)	VOLUME RECOVERED (mL)						
11/23/10	0.00	0	0.00	0	0.00	0	0.00	0
12/08/10	0.00	0	0.00	0	0.00	0	0.00	0
12/17/10	0.00	0	0.00	0	0.00	0	0.00	0
12/22/10	0.00	0	0.00	0	0.00	0	0.00	0
12/27/10	0.00	0	0.00	0	0.00	0	0.00	0
01/06/11	0.00	0	0.00	0	0.00	0	0.00	0
01/27/11	0.00	0	0.00	0	0.00	0	0.00	0
02/04/11	0.00	0	0.00	0	0.00	0	0.00	0
02/11/11	0.00	0	0.00	0	0.00	0	0.00	0
02/17/11	0.00	0	0.00	0	0.00	0	0.00	0
02/25/11	0.00	0	0.00	0	0.00	0	0.00	0
03/03/11	0.00	0	0.00	0	0.00	0	0.00	0
03/10/11	0.00	0	0.00	0	0.00	0	0.00	0
03/14/11	0.00	0	0.00	0	0.00	0	0.00	0
03/24/11	0.00	0	0.00	0	0.00	0	0.00	0
04/01/11	0.00	0	0.00	0	0.00	0	0.00	0
04/08/11	0.00	0	0.00	0	0.00	0	0.00	0
04/14/11	0.00	0	0.00	0	0.00	0	0.00	0
04/22/11	0.00	0	0.00	0	0.00	0	0.00	0

DATE	RW11		RW12		RW13	
	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)
04/07/08	0.00	0	0.00	0	0.00	0
05/29/08	0.00	0	0.00	0	0.00	0
06/20/08	0.00	0	0.00	0	0.00	0
07/15/08	0.00	0	0.00	0	0.00	0
07/25/08	0.00	0	0.00	0	0.00	0
08/01/08	0.00	0	0.00	0	0.00	0
08/08/08	0.00	0	0.00	0	0.00	0
08/14/08	0.00	0	0.00	0	0.00	0
08/28/08	0.00	0	0.00	0	0.00	0
09/04/08	0.00	0	0.00	0	0.00	0
09/08/08	0.00	0	0.00	0	0.00	0
09/18/08	0.00	0	0.00	0	0.00	0
09/25/08	0.00	0	0.00	0	0.00	0
10/02/08	0.00	0	0.00	0	0.00	0
10/07/08	0.00	0	0.00	0	0.00	0
10/16/08	0.00	0	0.00	0	0.00	0
10/27/08	0.00	0	0.00	0	0.00	0
11/07/08	0.00	0	0.00	0	0.00	0
11/26/08	0.00	0	0.00	0	0.00	0

**Table 5-3
Free Product Measurements and Recovery**

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DATE	RW11		RW12		RW13	
	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)
01/09/09	0.00	0	0.00	0	0.00	0
01/15/09	0.00	0	0.00	0	0.00	0
01/22/09	0.00	0	0.00	0	0.00	0
01/30/09	0.00	0	0.00	0	0.00	0
02/02/09	0.00	0	0.00	0	0.00	0
02/09/09	0.00	0	0.00	0	0.00	0
02/19/09	0.00	0	0.00	0	0.00	0
02/26/09	0.00	0	0.00	0	0.00	0
02/27/09	0.00	0	0.00	0	0.00	0
03/02/09	0.00	0	0.00	0	0.00	0
03/13/09	0.00	0	0.00	0	0.00	0
03/19/09	0.00	0	0.00	0	0.00	1000**
03/23/09	0.00	0	0.00	0	0.20	500*
04/01/09	0.00	200**	0.00	500**	0.00	500**
04/13/09	0.00	0	0.30	800*	0.00	500**
04/16/09	0.00	0	0.00	0	0.50	1000*
04/22/09	0.00	0	0.00	0	0.00	0
06/05/09	0.00	0	0.40	1000*	0.67	1000*
06/08/09	0.00	0	0.00	0	0.67	500*
06/24/09	0.00	200**	0.20	600*	0.00	400**
07/01/09	0.00	0	0.00	0	0.00	0
07/07/09	0.00	0	0.00	0	0.00	0
07/17/09	0.00	0	0.00	0	0.00	0
07/31/09	0.00	0	0.00	0	0.00	500**
08/05/09	0.00	0	0.00	0	0.00	0
08/10/09	0.00	0	0.00	0	0.00	0
08/19/09	0.00	0	0.00	0	0.00	0
09/03/09	0.00	0	0.00	0	0.00	0
10/02/09	0.00	0	0.00	0	0.00	0
10/07/09	0.00	0	0.00	0	0.00	0
10/13/09	0.00	0	0.00	0	0.00	0
10/21/09	0.00	0	0.00	0	0.00	0
10/27/09	0.00	0	0.00	0	0.00	0
11/18/09	0.00	0	0.00	0	0.00	0
11/25/09	0.00	0	0.00	0	0.00	0
12/08/09	0.00	0	0.00	0	0.00	0
12/09/09	0.00	0	0.00	0	0.00	0
12/30/09	0.00	0	0.00	0	0.00	0
01/06/10	0.00	0	0.00	0	0.00	0
01/11/10	0.00	0	0.00	0	0.00	0
01/29/10	0.00	0	0.00	0	0.00	0
02/04/10	0.00	0	0.00	0	0.00	0

**Table 5-3
Free Product Measurements and Recovery**

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DATE	RW11		RW12		RW13	
	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)
02/11/10	0.00	0	0.00	0	0.00	0
02/18/10	0.00	0	0.00	0	0.00	0
02/26/10	0.00	0	0.00	0	0.00	0
03/05/10	0.00	0	0.00	0	0.00	0
03/10/10	0.00	0	0.00	0	0.00	0
03/19/10	0.00	0	0.00	0	0.00	0
03/25/10	0.00	0	0.00	0	0.00	0
04/01/10	0.00	0	0.00	0	0.00	0
04/09/10	0.00	0	0.00	0	0.00	0
04/16/10	0.00	0	0.00	0	0.00	0
04/19/10	0.00	0	0.00	0	0.00	0
04/28/10	0.00	0	0.00	0	0.00	0
05/07/10	0.00	0	0.00	0	0.00	0
05/14/10	0.00	0	0.00	0	0.00	0
05/21/10	0.00	0	0.00	0	0.00	0
05/27/10	0.00	0	0.00	0	0.00	0
07/30/10	0.00	0	0.00	0	0.00	0
08/13/10	0.00	0	0.00	0	0.00	0
08/18/10	0.00	0	0.00	0	0.00	0
08/27/10	0.00	0	0.00	0	0.00	0
09/01/10	0.00	200**	0.00	0	0.00	0
09/17/10	0.00	0	0.00	0	0.00	0
09/23/10	0.00	0	0.00	0	0.00	0
10/01/10	0.00	0	0.00	0	0.00	0
10/07/10	0.00	0	0.00	0	0.00	0
10/15/10	0.00	0	0.00	0	0.00	0
10/21/10	0.00	0	0.00	0	0.00	0
10/29/10	0.00	0	0.00	0	0.00	0
11/03/10	0.00	0	0.00	0	0.00	0
11/12/10	0.00	0	0.00	0	0.00	0
11/23/10	0.00	0	0.00	0	0.00	0
12/08/10	0.00	0	0.00	0	0.00	0
12/17/10	0.00	0	0.00	0	0.00	0
12/22/10	0.00	0	0.00	0	0.00	0
12/27/10	0.00	0	0.00	0	0.00	0
01/06/11	0.00	0	0.00	500**	0.00	0
01/27/11	0.00	0	0.00	0	0.00	0
02/04/11	0.00	0	0.00	0	0.00	0
02/11/11	0.00	0	0.00	0	0.00	0
02/17/11	0.00	0	0.00	0	0.00	0
02/25/11	0.00	0	0.00	0	0.00	0
03/03/11	0.00	0	0.00	0	0.00	0

**Table 5-3
Free Product Measurements and Recovery**

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DATE	RW11		RW12		RW13	
	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)	THICKNESS (feet)	VOLUME RECOVERED (mL)
03/10/11	0.00	0	0.00	0	0.00	0
03/14/11	0.00	0	0.00	0	0.00	0
03/24/11	0.00	0	0.00	0	0.00	0
04/01/11	0.00	0	0.00	0	0.00	0
04/08/11	0.00	0	0.00	0	0.00	0
04/14/11	0.00	0	0.00	0	0.00	0
04/22/11	0.00	0	0.00	0	0.00	0

Notes:

mL = milliter

NM = not measured

Recovery wells RW02, TW03, RW05, and RW06 were omitted from the table due to no presence of free product since their installation.

* Includes mL in sorbent sock.

** No measurable standing free product, sorbent sock removed, and volume of free product estimated by saturation of sock.

Groundwater samples were also analyzed for permit-required parameters as a part of the ongoing treatability study. The elevated concentrations of the permit-required constituents depict a decreasing trend in concentrations and appear to be approaching baseline levels over time. In general, this decreasing trend is more remarkable for some parameters and less remarkable for others. Sodium and TDS have declined to background concentrations for all analyzed wells. In general, iron, ammonia, and sulfate appear to be declining, but at slower paces and, therefore, remain temporarily elevated above background levels. The expectation is that all permit-required parameters will return to normalcy over time. The elevated concentrations of iron, ammonia, and sulfate also indicate BIOX[®] is still present and working in the groundwater.

Based on the year-long treatability study findings, the injection of BIOX[®] reagent appears to be effective at reducing the occurrence of free product and concentrations of petroleum constituents in groundwater. And although free product is still present, a significant reduction in groundwater impacts has occurred. It is expected that the decreasing trends will continue since monitoring data indicate that 1 year after the injection event, BIOX[®] is still present in the groundwater.

6.0 SUMMARY

A SA was performed at Site 351-2 at NAVSTA Mayport during which soil samples were field screened with an OVA-FID, and soil and groundwater samples were analyzed by mobile and fixed-base laboratories for GAG and KAG constituents per Chapter 62-770, F.A.C. The investigation was focused on the central and eastern portion of a walkway between Buildings 351 and 1388. On December 16, 2003, a release from a fuel line that connected to a day tank occurred and spilled No. 2 fuel oil onto the grassy median area. Stormwater runoff from Building 351 flows away from the site and is channeled into ditches that flow north towards the St. Johns River. No supply wells are within ½ mile of the site. An initial SR was conducted for the Navy in 2004 by Aerostar Environmental Services, Inc.

The field portion of the investigation began by collecting 139 soil samples from 53 soil boring locations and field screened for organic vapor content with an OVA-FID. Screening results indicated vapor headspace readings from 20 of the samples exceeding 10 ppm with 15 of the samples exceeding the 50 ppm “excessively contaminated soil” criteria per Chapter 62-770, F.A.C. Soil vapor readings were only recorded in the area where the release is documented to have occurred. Based on the results of the field screening with the OVA, six soil samples were collected and submitted to a mobile laboratory for BTEX, MTBE, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene analyses. The soil samples submitted to the mobile laboratory were collected from the fringe areas of the impacted soil at a depth of 3 feet bls. No constituents were reported at concentrations exceeding instrument detection limits.

Based on OVA screening results, mobile laboratory analytical results, and field observations, three soil samples were collected and submitted to a fixed-base laboratory. The samples were collected to meet the FDEP regulatory requirement of collecting a high, medium, and low petroleum-contaminated sample. The samples were collected at a depth of 3 feet bls and analyzed for GAG/KAG constituents (VOC, PAH, and TRPH) per Table B of Chapter 62-770, F.A.C. Two of the three samples contained constituents that were greater than the SCTLs, and no constituents were detected at concentrations exceeding SCTLs in the third sample. Seven additional soil samples were collected and submitted to a fixed-base laboratory to characterize the extent of petroleum-impacted soil in preparation for a SR. No constituents exceeded the FDEP SCTLs for any of the seven samples. The extent of soil contamination at the site was delineated during the SA.

The results from the soil investigation at the site were used to perform a SR. Petroleum-impacted soils at Site 351-2 were excavated on January 3 through 6, 2007, by Fueling Components, Inc. of Jacksonville, Florida and supervised by a Tetra Tech representative. The excavation was irregular shaped covering approximately 12 feet by 25 feet by 5 feet to a depth of 6 feet. Approximately 76 tons of soil were excavated and removed for disposal at a soil incineration facility. Several areas of petroleum-impacted

soils could not be excavated during the SR due to the presence of underground utilities and the close proximity of buildings.

Eighteen groundwater samples from 17 borings were collected using DPT methods and analyzed by a mobile laboratory. Seventeen of the samples were collected at a depth of 5 to 9 feet bls, and one sample was collected at a depth of 16 to 20 feet bls. The boring locations were based on the results of the soil screening and analytical results. One groundwater sample was also collected from an existing monitoring well located on the northern side of Building 1388 (SWMU 17). A total of 19 groundwater samples were collected and submitted to a mobile laboratory for GAG/KAG constituent (VOC, PAH, and TRPH) analyses. Eleven of the 19 samples contained constituents that were detected at concentrations exceeding FDEP GCTLs, and no GCTLs were exceeded in eight of the groundwater samples.

Based on the results for the DPT groundwater investigation, five permanent and three temporary monitoring wells were installed at the site. Groundwater samples were collected from the monitoring wells and submitted to a fixed-base laboratory for analyses of GAG/KAG constituents. Three of the eight samples contained constituents that exceeded GCTLs, and five of the eight samples were non-detect or just above laboratory detection limits. One monitoring well was installed near the source area to depth of 40 feet bls to delineate the vertical extent of groundwater contamination at the site. No constituents were detected at concentrations that exceeded GCTLs for the sample collected in this well.

The SA conducted at Site 351-2 delineated the horizontal and vertical extent of soil and groundwater contamination at the site resulting from the release of 650 gallons of No. 2 fuel oil from a fuel supply line. Based on the screening and analytical result from the soil samples collected during the investigation, a SR was conducted that removed the majority of petroleum-impacted soils at the site. Petroleum-impacted soil adjacent and beneath underground utilities and adjacent to building foundations could not be excavated without damaging the utilities or buildings and was left in place. Groundwater contamination was identified during the SA in the surficial aquifer at the site. BTEX, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and TRPH were all detected at concentrations greater than FDEP GCTLs at the site following the initial discharge.

A treatability study was conducted to determine the effectiveness of treating the contaminated groundwater with BIOX[®], which combines controlled chemical oxidation and enhanced biodegradation of contaminants in soil and groundwater. The reagent was injected, and one year of post-injection sampling was conducted, with reductions in contaminant levels.

One year of post-injection sampling was conducted. Laboratory results of groundwater samples collected for analyses from the eight monitoring wells indicate elevated TRPH in monitoring wells

MPT-351-2-MW05S and MPT-351-2-MW06S at levels that slightly exceed FDEP GCTLs. The groundwater analytical results depict minimal impacts. Free product thicknesses of less than 1 inch have been reported at the site.

7.0 RECOMMENDATIONS

Although levels of petroleum constituent concentrations appear to have decreased significantly since the completion of the BIOX[®] treatability study, the results of the SA indicated that petroleum constituents remain at the site in groundwater at concentrations exceeding FDEP GCTLs. Tetra Tech recommends a second injection of BIOX[®] be implemented to reduce the remaining impacts. If the second injection is not effective in removing the presence of free product and reducing groundwater concentrations below NADCs, a Remedial Action Plan should be prepared to address the presence of free product, groundwater impacts, and residual soil contamination at the site per Chapter 62-770.700, F.A.C.

The analytical results suggest that the BIOX[®] reagent is an effective remediation strategy and may be considered for future sites of petroleum contamination.

REFERENCES

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Driscoll, Fletcher G., 1986. "Groundwater and Wells", St. Paul, Minnesota.

FDEP (Florida Department of Environmental Protection). Standard Operating Procedure DEP-001/92.

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Spechler, R. M., 1994. "Saltwater Intrusion and Quality of Water in the Floridan Aquifer System, Northeastern Florida": U.S. Geological Survey Water-Resources Investigations Report 92-4174.

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USACE (United States Army Corps of Engineers), 1992. Contamination Assessment Report, Site 1330, Naval Station Mayport, Florida.

USDA (United States Department of Agriculture Soil Conservation Services), 1978. Soil Survey of City of Jacksonville Duval, County Florida.

USEPA (United States Environmental Protection Agency), 1997. Standard Operating Procedures.

USGS (United States Geologic Survey), 1992. USGS Mayport, Florida Quadrangle 7.5 Minute Series, Topographic Quadrangle Maps of Florida: scale 1:24,000.

APPENDIX A
SAR SUMMARY SHEET

CONTAMINATION ASSESSMENT REPORT SUMMARY SHEET

Facility Name: Site 351-2 Reimbursement Site:

Location: NAVSTA Mayport , Mayport, FL State Contract Site:

EDI #: _____ FAC I.D.# _____ Other: Non-Prog.

Date Reviewed: _____ Local Government: _____

(1) Source of Spill: Break in piping system of AST Date of Spill: Unknown

(2) Type of Product:	Gasoline Group	Gallons Lost	Kerosene Group	Gallons Lost
<input type="checkbox"/> Leaded		_____	<input type="checkbox"/> Kerosene	_____
<input type="checkbox"/> Unleaded Regular		_____	<input type="checkbox"/> Diesel	_____
<input type="checkbox"/> Unleaded Premium		_____	<input type="checkbox"/> JP-4 Jet Fuel	_____
<input type="checkbox"/> Gasohol		_____	<input checked="" type="checkbox"/> Heating Fuel	<u>unknown</u>
<input type="checkbox"/> Undetermined		_____	<input type="checkbox"/> Unknown	_____

(3) Description of IRA: Soi removal Free product Removal: _____ (gals)
Line break. Soil Removal: Approx 100 (cubic yds)
 Soil Incineration: _____ (cubic yds)

(4) Free Product still present (yes/no) yes Maximum apparent product thickness: N/A (feet)

(5) Maximum Groundwater contamination levels (ppb):
 Total VOA: 265.6 benzene: 87.5 EDB: <.02
 lead: .003 MTBE: 3.27 other: _____

(6) Brief lithologic description: Medium to fine sand. No significant lithologic variations across site.

(7) Areal and vertical extent of soils contamination defined (yes/no) Yes

Highest current soil concentration (OVA: 2300 ppm) or (EPA method 5030/8020: _____ ppb)

(8) Lower aquifer contaminated? (yes/no) No Depth of vertical contamination: N/A.

(9) Date of last complete round of groundwater sampling: Jan/Feb 06 Date of last soil sampling: March 2006

(10) QAPP approved? (yes/no) Date: NA

(11) Direction (e.g. NNW) of surficial groundwater flow: N (Fig. 3-1 on page _____)

(12) Average depth to groundwater: 5.0 (ft)

(13) Observed range of seasonal groundwater fluctuations: 0.15 (ft) (Based on water level data collected during the CAR investigation)

(14) Estimated rate of groundwater flow: 0.043 (ft/day)

(15) Hydraulic gradient across site: 0.003 (ft/ft)

(16) Aquifer characteristics:	Values	Units	Method
Hydraulic conductivity	<u>4.34</u>	<u>ft/day</u>	<u>Kasenow & Pare, 1995</u>
Storage coefficient	<u>-</u>	<u>ft/ft</u>	<u>-</u>
Aquifer thickness	<u>40</u>	<u>ft</u>	<u>Literature</u>
Effective soil porosity	<u>30</u>	<u>%</u>	<u>Literature</u>
Transmissivity	<u>10</u>	<u>gal/day/ft</u>	<u>Specific Capacity Tests</u>

(17) Other remarks: None

APPENDIX B
JOHNSON CONTROLS HILL SPILL RESPONSE FORM

Johnson Controls
HILL

Date: December 23, 2003
File No. 2301-0136

Mr. Tommy Surrency
Facilities Support Contract Manager
Department of the Navy
Naval Facilities Engineering Command

Subject: Contract No. N62467-00-D-2451

Reference: Annex 4
Para 4.2.4.2a
Title Post Spill Requirements

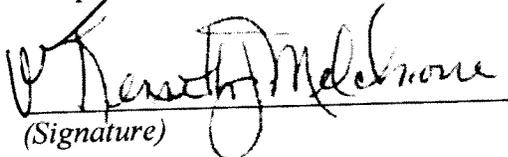
Contract deliverable is forwarded pursuant to cited contract reference. Enclosed is our Spill/Clean-Up Report Form, Table 4-10, Annex 4 and Site Specific Safety and Health Plan from a December 16, 2003, 650 gallon diesel fuel spill at bldg 351/1388, NS Mayport. Our Mr. Bob Lacy provided an advance copy of the Table 4-10 report to Mr. Pat McGugan and Mr. Dave Kiebler on December 17, 2003 by email. The clean-up of the spill was accomplished on work order 275011.

Should you require any further information in this matter, please contact me at your convenience.

Name: Kenneth J. Melchiorre P.E.

Title: Site Manager, NAS Jacksonville

Telephone: (904) 778-3868 ext. 12


(Signature)

Cc:

Mr. David Kelly
NAS Jacksonville
P.O. Box 30, Bldg. 103
Jacksonville, FL 32212-0139

Mr. Pat McGugan
NS Mayport
P.O. Box 2807, Bldg. 1966
Mayport, FL 32228-0157

Mr. Frank Janosick
Ms. Kathy Kramer
JC-H Contracts Manager
Mr. Robert Stewart
JC-H Utilities Supervisor (Bob Lacy, w/ enclosures)

Johnson Controls HILL

Environment

Spill / Clean Up Report Form

Spill Date: 12/16/03	Time of Spill: 1150	Time JC-H SCRCD Received call: 1150
Time OSOT Leader w/OSOT Member Arrived On Site (enter time here):		1205
Location		
<input type="checkbox"/> NAS Jacksonville	<input checked="" type="checkbox"/> NAVSTA Mayport	<input type="checkbox"/> Other:
Building Number: 351/1388	Area / Bldg. :	FTC
Substance:	Fuel Oil	
Amount Spilled:	Approx. 650 gallons	Amount Recovered: 100 gallons
Source / Cause of Spill (explain here): Fuel supply line from AST N1388 to Boiler in Bldg. 351 broke off in fuel piping sump located north side of Bldg. 351. Piping sump overflowed and spilled fuel in surrounding area. Fuel also backed up into secondary piping containment and into 2 nd piping sump.		
Rate of Spilling:	Unknown	
Anticipated Movement of Spill:	Into ground	
Injuries: Be Specific:	None	
Approximate Temperature:	65 deg.	Weather Condition: Sunny
Immediate Dangers to Personnel or Environment: Fuel oil entering St. Johns and Ocean.		
Spill Contact Surface Water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Spill Enter Storm Drain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Spill Contained on Impervious Surface?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Type of Surface:	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Secondary Containment <input checked="" type="checkbox"/> Soil Other:	
Spill Extend Beyond Station Boundaries?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
COTR Contacted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Time/Date: 12/16/03 @ 1226
Station Fire Department Contacted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Time/Date: 12/16/03 @ 1153
Station Environmental Contacted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Time/Date: 12/16/03 @ 1230
Additional Comments/Information: Fire Department had responded and secured area when JCH arrived.		
Person Completing Report		
Name: Julie Kaiser	Title: Sr. Environ. Coordinator	Phone: 247-2225
Signature:	Date: 12/17/03	
Additional Post Report Information		
Environmental Damages:		
Amount of Disposal Material: 7-55gl drums	Hazardous Waste: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Spill Residue Disposal Source: PWC Part B	Location: 1966	
Resources		
Number of OSOT Members: 7	Total clean-up Time: 30-manhours	
Equipment Used:		
Additional Information/Remarks: Cleanup of spill is not complete.		

Johnson Controls
FILE

Annex 4-Environmental
Ref. Process: 12-02.51

**OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN**

A. SITE DESCRIPTION:

1. Date: 12/16/03 2. Location: FTC / 351 / 1388
3. Material Spilled: Fuel Oil (No. 2) 4. Size of Spill: 15' x 5' ^{≈ 650 gal}

5. Hazard Class (a thru e):

(a) Fire (b) Reactive (c) Pressure Release (d) Acute Health
(e) Chronic Health

6. Quantity Estimated: 650 gal 7. Area Affected: 15' x 5' x est 2-3'

8. Cause of Release (Be Specific): Fuel Supply line valve shut + initially believed to have caused spill
Piping Sump @ NE side of Bldg 351 opened + fuel supply line found broken, overflow drained into 2nd piping sump (green middle sump). Assumed fuel in secondary line.

2 piping sump

9. Weather Conditions: Sunny Temperature (F): 65 - 70 deg F

Wind Direction: N/NE

10. Topography/Terrain: Soil

B. ON-SCENE OPERATIONS TEAM (OSOT):

Title	Name	Time on Scene	Function / Assignment
Safety Officer	Jim Bryant	1330	Safety Officer / ACCESS Ctl.
OSOT Leader	Julia Kaiser	1200	
OSOT Team Member	Chris Atchinson	1330	
OSOT Team Member	Mike Thurlow	1330	
OSOT Team Member	Scott Brown	1500	
OSOT Team Member			
OSOT Team Member			

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Annex 4-Environmental
Ref. Process: 12-02.51

**OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN**

C. INITIAL ENTRANCE TO AFFECTED SITE (Specific Health and Safety Plan):

Initial Entrance Objective: The objective of the initial entrance to the contaminated area is To describe actions, and tasks to be accomplished (i.e. identify contaminate, clean-up area, monitoring conditions, etc.):

Deploy Boom @ break wall. Recover fuel in
tidal pool. Remove fuel oil from 2 piping
sumps + 3rd non-spill related storm drain

D. ON SITE CONTROL: Jim Bryant OSOT Team Member
has been designated to coordinate access control and security on site. A safe perimeter has been established at (distance or description of the controlled area):

21

(No Unauthorized personnel should be in this area)

by FDP

1. Exclusion Zone:

a. Time the Zone is Secured off: 1200 a.m. p.m.

b. Entrance Control Point: Yellow Tape

c. Location and Marker Type: Yellow Tape

2. Contamination Reduction Zone (If necessary):

a. Time the Zone is Secured off: N/A a.m. p.m.

b. Entrance Control Point: _____

c. Location and Marker Type: _____

3. Support Zone:

a. FD/JCH Command Post Location (If established): Bldg 12

b. Time JCH Command Post Established: 1200 a.m. p.m.

4. Substances Involved:

a. Substance Known? Yes No

b. MSDS: Yes No

c. Substance Description: No. 2 Fuel Oil

Johnson Controls
HILL

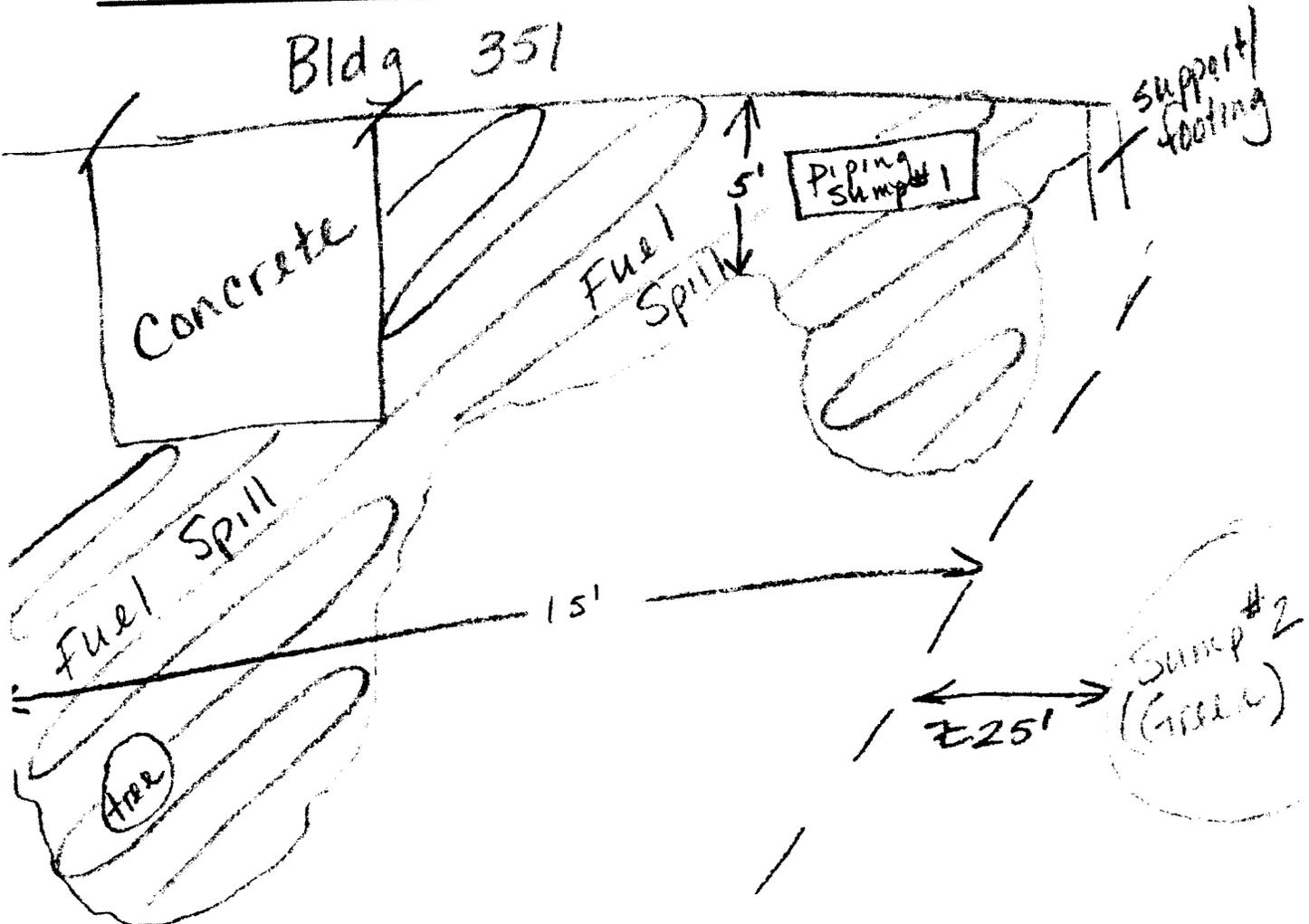
Annex 4-Environmental
Ref. Process: 12-02.51

**OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN**

E. HAZARDS:

- | | | | |
|-------------------|---|-----------------------------|----------------------------|
| a. Flammable | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Flash Point: <u>130°</u> F |
| b. Explosive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| c. Water Reactive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| d. Corrosive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| e. Acid | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| f. Base | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| g. Toxic | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| h. Inhalation | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| i. Skin | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |

F. SITE PLAN (Sketch of Area):



Johnson Controls
TITLE

Annex 4-Environmental
Ref. Process: 12-02.51

**OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN**

G. DECON SITE PLAN (Sketch of Area):



MSDS (PPE TYVEK)

Decon Officer: NIA

Decon Equipment: NIA

Description of Decon: Remove PPE + Place into 55-gal drum

H. PERSONAL PROTECTION EQUIPMENT (PPE)- (LEVEL D FOR THIS FORM):

- a. Exclusion Zone (Spill Area): AT A MINIMUM, PPE FOR LEVEL D IS: BOOTS, GLOVES, and TYVEK SUIT. Additional Level D PPE if needed: Hard Hat/Face Protection
- b. Contamination Zone (DECON AREA): NIA
- c. Reduction Zone: NIA

I. INSTALLATION RESTORATION (IR) SITE:

- 1. Is the Site an Installation Restoration Site? Yes No
- 2. If answer is YES, what is the known IR site contaminant? _____
- 3. MSDS: Yes No

*IR in Area
not in specific
spill location*

Johnson Controls HILL	Annex 4-Environmental Ref. Process: 12-02.51
OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION SITE SPECIFIC HEALTH AND SAFETY PLAN	

4. IR SITE HAZARDS:

- | | | | |
|-------------------|------------------------------|-----------------------------|----------------------|
| a. Flammable | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Flash Point: _____ F |
| b. Explosive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| c. Water Reactive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| d. Corrosive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| e. Acid | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| f. Base | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| g. Toxic | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| h. Inhalation | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| i. Skin | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |

J. COMMUNICATION:

1. Contact Information

Name	Work Phone	Cell/Beeper Number	Home Phone
Rick Hicks, Safety Manager	542-3962	318-1799	221-8423
Ken Melchiorre, Environmental Manager	778-3868	318-2188	886-9964
Wade Musgrave, Environmental Coordinator	778-3868	707-4416	880-4646
Julie Kaiser, Sr. Environmental Coordinator	270-6761	707-4415	306-0547
Bob Lacy, Environmental Training Officer	778-3868	813-1989	246-7100
Fire Department/Ambulance (Jacksonville)	911 or 542-3333		
Fire Department/Ambulance (Mayport)	911 or 270-5333		
PWC CDO		509-5125	
David Kelly, COTR (NAS Jacksonville)	542-4558 x 520		
Pat McGugan, COTR (NAVSTA Mayport)	270-5189		
"Emergency Treatment Facility"			
NAS Jacksonville: Naval Hospital	911 if an emergency		
NAVSTA Mayport: Medical Clinic	911 if an emergency		

Johnson Controls
CHILL

Annex 4-Environmental
Ref. Process: 12-02.51

**OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN**

- K. SAFETY BRIEF HELD? Yes No *Reviewed Fuel Oil Hazards w/C. Atkinson*
- a. Confined Space? Yes No (If yes, follow JC-H confined space entry procedures)
 - b. Heat stress can be a factor when temperatures are > 70° F and humidity is > 50%.
 - c. Is a dig locate required? Yes No (trenches > 4 feet must have slope sides or shoring installed) *Did not dig any soil*
 - d. Does the clean up site have adequate oxygen? Yes No (If not, level B or A PPE is required) *Use JC-H form 3010-600 if levels C, B, or A are required*

Oxygen Level Detection Equipment Calibration Information:

Equip. _____ MFR: _____ Model No.: _____

Date of Calibration: _____ Name of Calibrator: _____

- e. Where is the closest eye wash station? *351*
- f. What communication means is available? Cell Phone Radio Land Line
- g. Discuss the possible use of respirators. *NIA*
- h. Ensure newly arriving JC-H OSOT members are briefed on the spill site clean up scenario.
- i. If in doubt, call the JC-H Environmental Manager for assistance.

L. DISPOSAL METHOD:

- a. HW: Yes No *Flash @ 130° F per MSDS*
- b. Size of Disposal Containers: Gallons: *55* Other: _____
- c. Number of Containers: *6 liquid, 1 solid*
- d. Container Pick-Up Notification (NASJAX Only) Time/Date: *12/18* POC: *KAISER*

Site and/or Area Clean-up Completed at (Specify Time of Day): *0715* a.m. p.m.

OSOT Leader: *[Signature]* Date: *12/17/03*
(Signature required)

APPENDIX C
SOIL BORING LOGS AND LITHOLOGIC DESCRIPTIONS



BORING LOG

351-2

351-2

PROJECT NAME:

SITE 1388

BORING NUMBER:

MPT-1388-MW040

PROJECT NUMBER:

112600103

DATE:

1/18/06

DRILLING COMPANY:

PARTRIDGE

GEOLOGIST:

P. LAVERGNE

DRILLING RIG:

HSA

DRILLER:

M. NICHOLSON

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		U S C S *	Remarks	PID/FID Reading (ppm)				
					Soil Density/Consistency or Rock Hardness	Color			Material Classification	Sample	Sampler BZ	Borehole**	Driller BZ**
	0-1'	/				DRK BAN FINE SAND W/SILT						0	0
	1-3'	/				BAN FINE SAND W/SHELL						0	0
	3-5'	/				BAN FINE SAND W/SHELL						0	0
	5-7'	/				BAN FINE SAND W/SHELL						0	0
	7-8'	/				BAN FINE SAND W/SHELL						0	0
	8-10'	/				GRY FINE SAND						0	0
	10-12'	/				GRY FINE SAND						0	0
	12-14'	/				GRY FINE SAND						0	0
	14-16'	/				GRY FINE SAND						0	0
	16-18'	/				GRY FINE SAND						0	0
	18-20'	/				GRY FINE SAND						0	0
	20-22'	/				GRY FINE SAND						0	0
	22-24'	/				GRY FINE SAND						0	0
	24-26'	/				GRY FINE SAND						0	0
	26-28'	/				GRY FINE SAND						0	0
	28-30'	/				GRY FINE SAND						0	0
	30-32'	/				GRY FINE SAND						0	0
	32-34'	/				GRY FINE SAND						0	0
	34-36'	/				GRY FINE SAND						0	0
	36-38'	/				GRY FINE SAND						0	0
	38-40'	/				GRY FINE SAND						0	0

* When rock coring, enter rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks:

Drilling Area

Background (ppm):

0

Converted to Well:

Yes



No

Well I.D. #: MPT-1388-MW040

APPENDIX D
WELL CONSTRUCTION DIAGRAMS



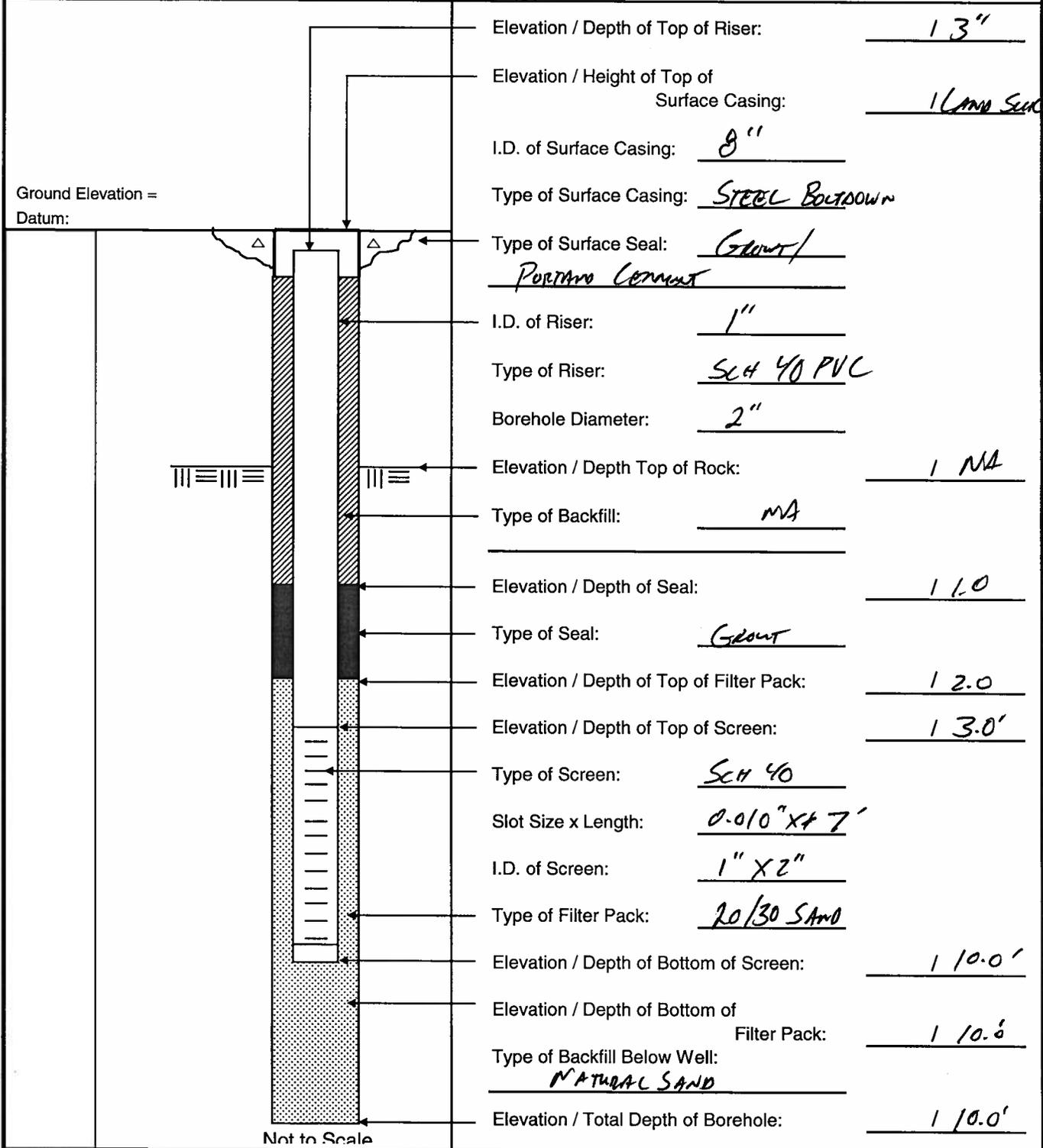
Tetra Tech NUS, Inc.

WELL No.:

351-2
NPT-1388-MW055'

351-2 MONITORING WELL SHEET

PROJECT: Site 1388 DRILLING Co.: PARTRIDGE BORING No.: MW055B
 PROJECT No.: 112600103 DRILLER: M. Nicolson DATE COMPLETED: 1/19/06
 SITE: 1388 DRILLING METHOD: Hand Auger NORTHING: _____
 GEOLOGIST: P. Levenette DEV. METHOD: Pump EASTING: _____



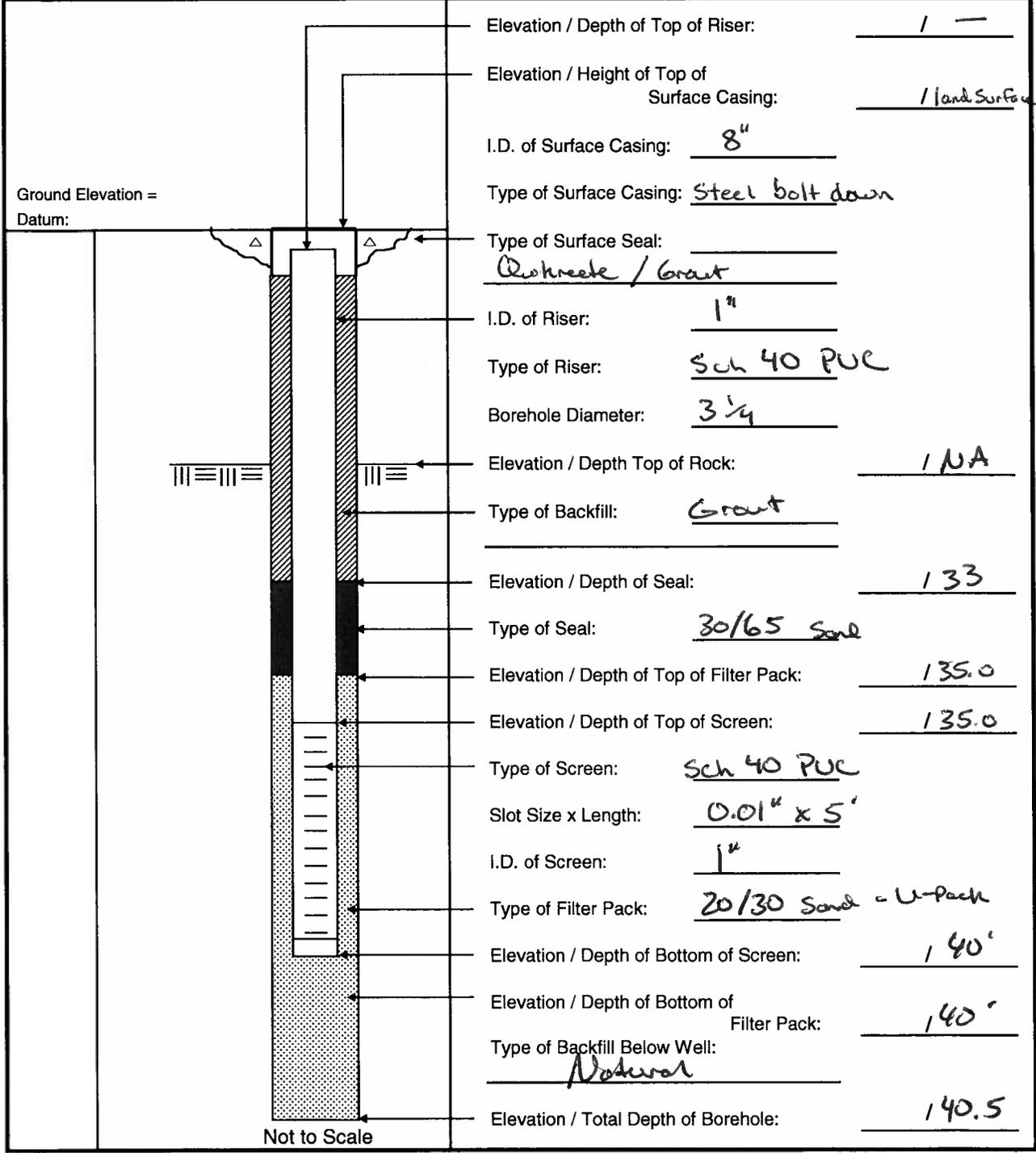


Tetra Tech NUS, Inc.

WELL No.: 351-2 - MW04D

MONITORING WELL SHEET

PROJECT: Site 351-2 DRILLING Co.: Partridge BORING No.: MW04D
 PROJECT No.: 112600103 DRILLER: M. Nicholson DATE COMPLETED: 1-18-06
 SITE: 351-2 DRILLING METHOD: HSA NORTHING: _____
 GEOLOGIST: P. Leverette DEV. METHOD: peristaltic EASTING: _____



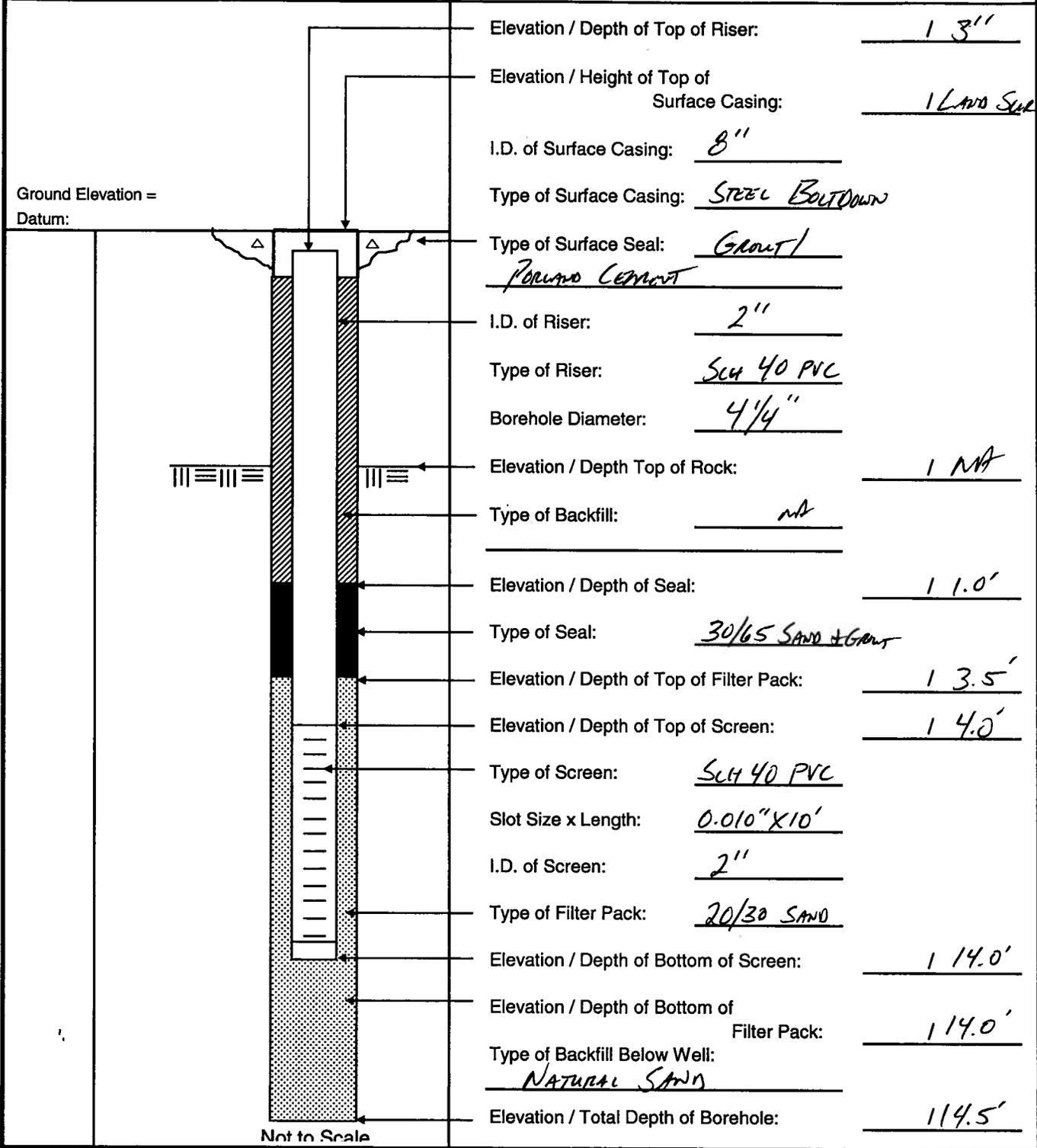


Tetra Tech NUS, Inc.

WELL No.: 351-2
ADPT-1388-MW035

351-2 **MONITORING WELL SHEET**

PROJECT: SITE 1388 DRILLING Co.: PROTRIDGE BORING No.: MW035
 PROJECT No.: 112600103 DRILLER: M. Nicholson DATE COMPLETED: 11/17/06
 SITE: 1388 DRILLING METHOD: HSA NORTHING: _____
 GEOLOGIST: P. LEVERETTE DEV. METHOD: Pump EASTING: _____



Elevation / Depth of Top of Riser: 1 3"
 Elevation / Height of Top of Surface Casing: 1 LAND SURFACE
 I.D. of Surface Casing: 8"
 Type of Surface Casing: STEEL BOLTDOWN
 Type of Surface Seal: GRAOUT / PORTLAND CEMENT
 I.D. of Riser: 2"
 Type of Riser: SCH 40 PVC
 Borehole Diameter: 4 1/4"
 Elevation / Depth Top of Rock: 1 NA
 Type of Backfill: NA
 Elevation / Depth of Seal: 1 1.0'
 Type of Seal: 30/65 SAND + GRAUT
 Elevation / Depth of Top of Filter Pack: 1 3.5'
 Elevation / Depth of Top of Screen: 1 4.0'
 Type of Screen: SCH 40 PVC
 Slot Size x Length: 0.010" X 10'
 I.D. of Screen: 2"
 Type of Filter Pack: 20/30 SAND
 Elevation / Depth of Bottom of Screen: 1 14.0'
 Elevation / Depth of Bottom of Filter Pack: 1 14.0'
 Type of Backfill Below Well: NATURAL SAND
 Elevation / Total Depth of Borehole: 114.5'



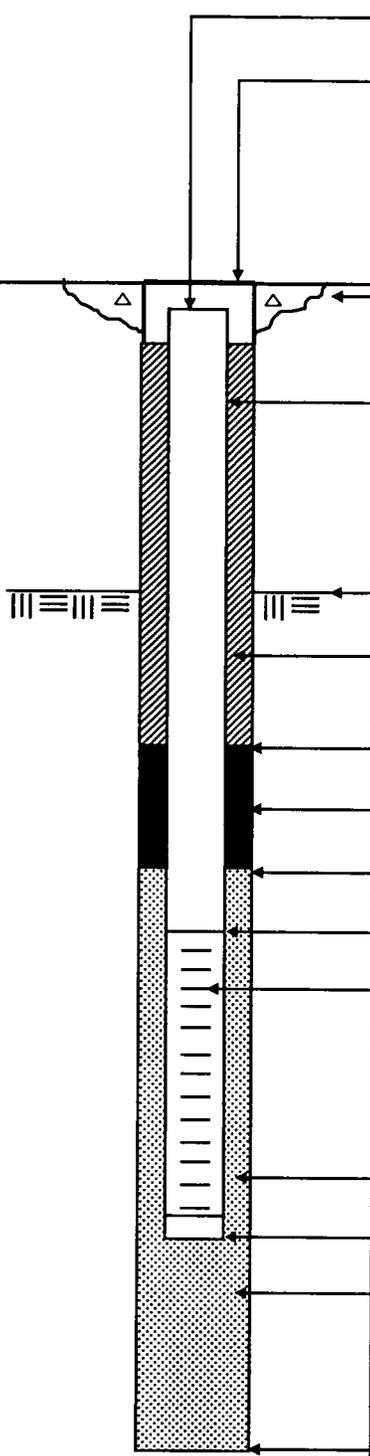
Tetra Tech NUS, Inc.

WELL No.: 351-2
MPT-1388-MW025

351-2 MONITORING WELL SHEET

PROJECT: SITE 1388 DRILLING Co.: PARTRIDGE BORING No.: MW025
 PROJECT No.: 112600103 DRILLER: M. NICHOLSON DATE COMPLETED: 1/17/06
 SITE: 1388 DRILLING METHOD: HSA NORTHING: _____
 GEOLOGIST: P. LEVETT DEV. METHOD: PUMP EASTING: _____

Ground Elevation =
Datum:



Elevation / Depth of Top of Riser: 13'
 Elevation / Height of Top of Surface Casing: 1 LAND SURFACE
 I.D. of Surface Casing: 8"
 Type of Surface Casing: STEEL BELLDOWN
 Type of Surface Seal: GROUT / PORTLAND CEMENT
 I.D. of Riser: 2"
 Type of Riser: SCH 40 PVC
 Borehole Diameter: 4 1/4"
 Elevation / Depth Top of Rock: 1 MA
 Type of Backfill: NA
 Elevation / Depth of Seal: 11.0'
 Type of Seal: 30/65 SAND & GROUT
 Elevation / Depth of Top of Filter Pack: 13.5'
 Elevation / Depth of Top of Screen: 14.0'
 Type of Screen: SCH 40 PVC
 Slot Size x Length: 0.010" x 10'
 I.D. of Screen: 4" @ 2"
 Type of Filter Pack: 20/30 SAND
 Elevation / Depth of Bottom of Screen: 114.0'
 Elevation / Depth of Bottom of Filter Pack: 114.0'
 Type of Backfill Below Well: NATURAL SAND
 Elevation / Total Depth of Borehole: 114.5'

Not to Scale

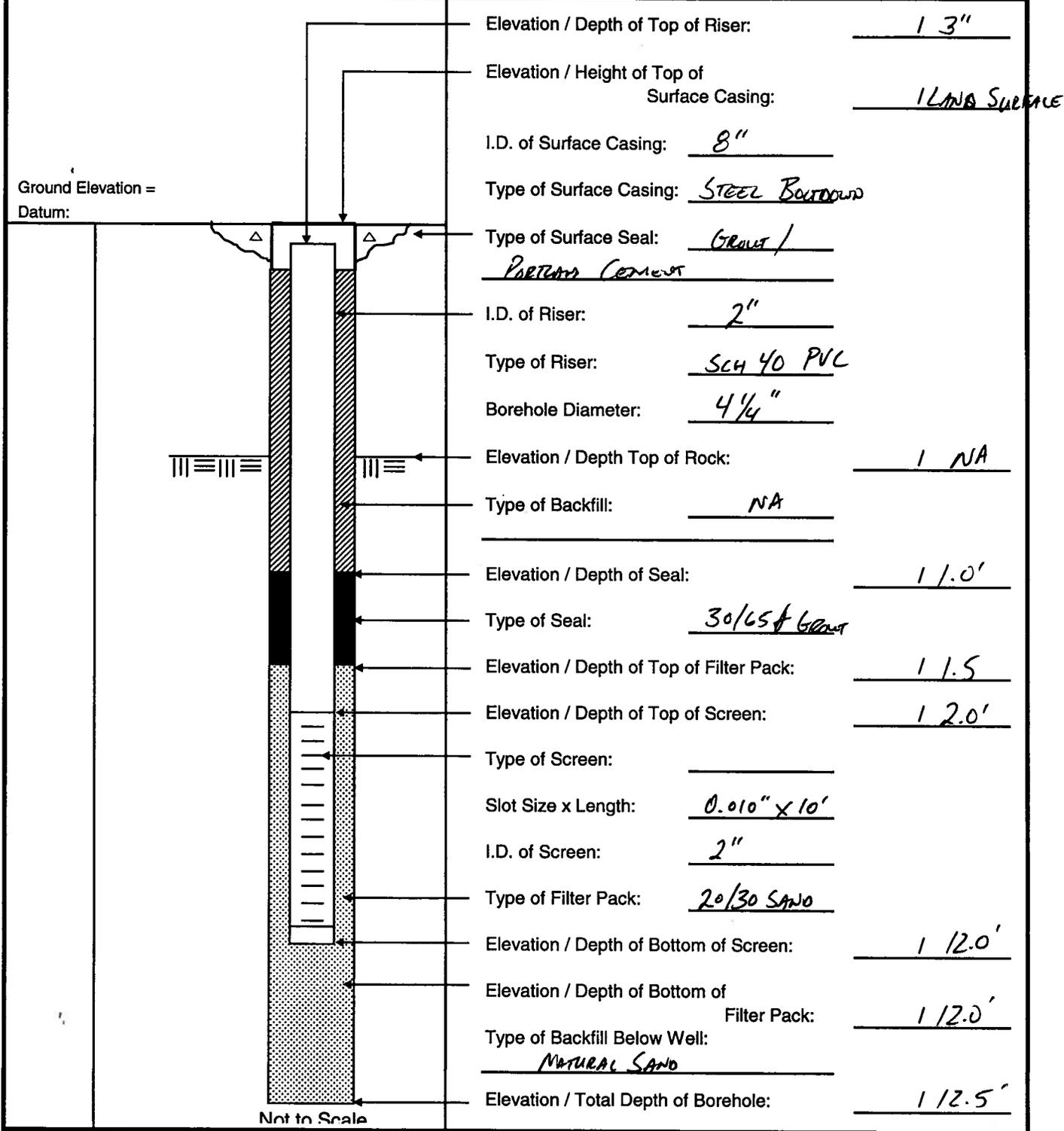


Tetra Tech NUS, Inc.

WELL No.: 351-2
MPT-1388-MW01.5'

351-2 MONITORING WELL SHEET

PROJECT: SITE 1388 DRILLING Co.: PARTRIDGE BORING No.: MW01.5
 PROJECT No.: 112600105 DRILLER: M. NICHOLSON DATE COMPLETED: 1/12/06
 SITE: 1388 DRILLING METHOD: HSA NORTHING: _____
 GEOLOGIST: P. LEVENETTE DEV. METHOD: PUMP EASTING: _____



Elevation / Depth of Top of Riser: 1'3"
 Elevation / Height of Top of Surface Casing: 1'LAND SURFACE
 I.D. of Surface Casing: 8"
 Type of Surface Casing: STEEL BORED PILE
 Type of Surface Seal: GROUT / PORTLAND CEMENT
 I.D. of Riser: 2"
 Type of Riser: SCH 40 PVC
 Borehole Diameter: 4 1/4"
 Elevation / Depth Top of Rock: 1'NA
 Type of Backfill: NA
 Elevation / Depth of Seal: 1'1.0'
 Type of Seal: 30/65 GROUT
 Elevation / Depth of Top of Filter Pack: 1'1.5'
 Elevation / Depth of Top of Screen: 1'2.0'
 Type of Screen: _____
 Slot Size x Length: 0.010" x 10'
 I.D. of Screen: 2"
 Type of Filter Pack: 20/30 SAND
 Elevation / Depth of Bottom of Screen: 1'12.0'
 Elevation / Depth of Bottom of Filter Pack: 1'12.0'
 Type of Backfill Below Well: NATURAL SAND
 Elevation / Total Depth of Borehole: 1'12.5'

Ground Elevation = Datum:

Not to Scale

APPENDIX E
GROUNDWATER FIELD DATA SHEETS

Tetra Tech NUS / FDEP Groundwater Sampling Sheet

SITE NAME: NAVSTA MAYPORT	SITE LOCATION: BUILDING 1388
WELL NO: MW-01S	SAMPLE ID: MPT-1388-MW01S-0106 DATE: 01/18/2006

PURGING DATA

WELL DIAMETER (in): 2"	TOTAL WELL DEPTH (ft): 11.65	STATIC DEPTH TO WATER (ft): 3.92	WELL CAPACITY (gal/ft): 0.16								
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) 4.7 Liters											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) _____ Liters											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6.65	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6.65	PURGING INITIATED AT: 1148	PURGING ENDED AT: 1208	TOTAL VOLUME PURGED (Liters): 6.0							
TIME	VOLUME PURGED (gal) (L)	CUMUL. VOLUME PURGED (gal) (L)	PURGE RATE (gpm) (mLpm)	DEPTH TO WATER (ft)	pH	TEMP. (°C)	COND. (µmhos) (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR
1148	-	-	300	3.92	-	-	-	-	-	CLEAR	NONE
1153	1.5	1.5	300	3.96	7.61	19.37	1266	0.29	8.8	"	"
1158	1.5	3.0	300	3.96	7.60	19.50	1274	0.15	8.3	"	"
1203	1.5	4.5	300	3.96	7.59	19.52	1293	0.12	8.6	"	"
1208	1.5	6.0	300	3.96	7.57	19.46	1299	0.11	8.2	"	"
SAMPLE TIME: 1210											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: TINS/ TERRY COTTENOIR				SAMPLER(S) SIGNATURES: <i>Terry Cottenoir</i>			SAMPLING INITIATED AT: 1210		SAMPLING ENDED AT: 1230		
PUMP OR TUBING DEPTH IN WELL (feet): 6.65				SAMPLE PUMP FLOW RATE (mL per minute): 200/5M			TUBING MATERIAL CODE: Teflon				
FIELD DECONTAMINATION: Y <input checked="" type="radio"/> N				FIELD-FILTERED: Y <input checked="" type="radio"/> N			DUPLICATE: Y <input checked="" type="radio"/> N				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (mL)	FINAL pH					
PP	1	AG	1 L	NONE	NONE	-	PAH/8270C		VT APP (C)		
PP	2	AG	1 L	H2SO4	NONE	-	TRPH/FLPRO		VT APP (C)		
PP	1	PE	250mL	HNO3	NONE	-	Pb		APP		
PP	2	CG	40mL	NONE	NONE	<2	EDB/8011		SM		
PP	3	CG	40mL	HCl	NONE	<2	VOL/8260B		SM		
REMARKS:											

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

Tetra Tech NUS / FDEP Groundwater Sampling Sheet

SITE NAME: NAUSTA MAYPORT	SITE LOCATION: BUILDING 1388
WELL NO: MW-02S	SAMPLE ID: MPT-1388-MW02S-0106 DATE: 01/19/2006

PURGING DATA

WELL DIAMETER (in): 2"	TOTAL WELL DEPTH (ft): 13.80	STATIC DEPTH TO WATER (ft): 5.12	WELL CAPACITY (gal/ft): 0.16								
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) 5.3 Liters											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) Liters											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8.80	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8.80	PURGING INITIATED AT: 1422	PURGING ENDED AT: 1442	TOTAL VOLUME PURGED (Liters): 6.0							
TIME	VOLUME PURGED (gal) (L)	CUMUL. VOLUME PURGED (gal) (L)	PURGE RATE (gpm) (mLpm)	DEPTH TO WATER (ft)	pH	TEMP. (°C)	COND. (µmhos/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR
1422	-	-	300	5.12	-	-	-	-	-	CLEAR	NONE
1427	1.5	1.5	300	5.14	7.37	19.94	549	1.81	5.0	"	"
1432	1.5	3.0	300	5.14	7.28	19.87	554	1.52	5.8	"	"
1437	1.5	4.5	300	5.14	7.25	19.77	561	1.15	5.3	"	"
1442	1.5	6.0	300	5.14	7.24	19.82	563	1.05	4.8	"	"
SAMPLE TIME 1445											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: TINUS/ TERRY COTTENOIR				SAMPLER(S) SIGNATURES <i>Terry Cottenoir</i>			SAMPLING INITIATED AT: 1445		SAMPLING ENDED AT: 1500	
PUMP OR TUBING DEPTH IN WELL (feet): 8.80				SAMPLE PUMP FLOW RATE (mL per minute): 200/sm			TUBING MATERIAL CODE: Teflon			
FIELD DECONTAMINATION: Y <input checked="" type="radio"/> N <input type="radio"/>				FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/>			DUPLICATE: Y <input checked="" type="radio"/> N <input type="radio"/>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (mL)	FINAL pH				
PP	1	AG	1L	NONE	NONE	-	PAH/8270C		VT	
PP	2	AG	1L	H2SO4	NONE	-	TRPH/FLPRO		VT	
PP	1	PE	250mL	HNO3	NONE	-	Pb		APP	
PP	2	CG	40 mL	NONE	NONE	~2	EDB/8011		SM	
PP	3	CG	40 mL	HCl	NONE	~2	VOC/8260B		SM	
REMARKS:										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump										
EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)										

Tetra Tech NUS / FDEP Groundwater Sampling Sheet

SITE NAME: NAVSTA MAYPORT	SITE LOCATION: BUILDING 1388
WELL NO: MW-03S	SAMPLE ID: MPT-1388-MW03S-0106 DATE: 01/19/06

PURGING DATA

WELL DIAMETER (in): 2"	TOTAL WELL DEPTH (ft): 14.05	STATIC DEPTH TO WATER (ft): 5.15	WELL CAPACITY (gal/ft): 0.16								
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) 5.4 Liters											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) Liters											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9.05	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9.05	PURGING INITIATED AT: 1332	PURGING ENDED AT: 1352	TOTAL VOLUME PURGED (Liters): 6.0							
TIME	VOLUME PURGED (gal) (L)	CUMUL. VOLUME PURGED (gal) (L)	PURGE RATE (gpm) (mLpm)	DEPTH TO WATER (ft)	pH	TEMP. (°C)	COND. (µmhos/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR
1332	-	-	300	5.15	-	-	-	-	-	CLEAR	NONE
1337	1.5	1.5	300	5.17	6.60	20.23	782	0.56	17	"	"
1342	1.5	3.0	300	5.17	6.58	20.29	788	0.35	12	"	"
1347	1.5	4.5	300	5.17	6.59	20.43	790	0.23	10	"	"
1352	1.5	6.0	300	5.17	6.59	20.33	787	0.16	7.9	"	"
SAMPLE TIME 1355											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: TINUS/ TERRY COTTENOR				SAMPLER(S) SIGNATURES <i>Terry Cottendor</i>				SAMPLING INITIATED AT: 1355		SAMPLING ENDED AT: 1415	
PUMP OR TUBING DEPTH IN WELL (feet): 9.05				SAMPLE PUMP FLOW RATE (mL per minute): 200/3M				TUBING MATERIAL CODE: Teflon			
FIELD DECONTAMINATION: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				DUPLICATE: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (mL)	FINAL pH					
PP	1	AG	1L	NONE	NONE	-	PAH/8290C		VT		
PP	2	AG	1L	H2SO4	NONE	-	TRPH/FLPRO		VT		
PP	1	PE	250 mL	HNO3	NONE	-	Pb		APP		
PP	2	CG	40 mL	NONE	NONE	<2	EDB/8011		SM		
PP	3	CG	40 mL	HCl	NONE	<2	VOC/8260B		SM		
REMARKS:											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump											
EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)											

Tetra Tech NUS / FDEP Groundwater Sampling Sheet

SITE NAME: NAVSTA MAYPORT	SITE LOCATION: BUILDING 1388
WELL NO: MN-04D	SAMPLE ID: MPT-1388-MN04D-0106 DATE: 1/20/06

PURGING DATA

WELL DIAMETER (in): 1"	TOTAL WELL DEPTH (ft): 39.45	STATIC DEPTH TO WATER (ft): 5.42	WELL CAPACITY (gal/ft): 0.04
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)			
Liters			
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)			
1.2 Liters			
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 36.95	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 36.95	PURGING INITIATED AT: 1048	PURGING ENDED AT:
			TOTAL VOLUME PURGED (Liters):

TIME	VOLUME PURGED (gal) (L)	CUMUL. VOLUME PURGED (gal) (L)	PURGE RATE (gpm) (mL/min)	DEPTH TO WATER (ft)	pH	TEMP. (°C)	COND. (µmhos/cm) (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR
1048	-	-	300	5.42	-	-	-	-	-	CLOUDY	NONE
1053	1.5	1.5	300	5.45	7.64	22.57	874	0.41	24	CLOUDY	NONE
1058	1.5	3.0	300	5.45	7.66	22.57	893	0.24	12	CLEAR	NONE
1103	1.5	4.5	300	5.45	7.67	22.59	917	0.27	6.7	"	"
1108	1.5	6.0	300	5.45	7.68	22.61	921	0.25	4.3	"	"
SAMPLE TIME 1110											

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: TINUS/ TERRY COTTENOIR	SAMPLER(S) SIGNATURES <i>Terry Cottenoir</i>	SAMPLING INITIATED AT: 1110	SAMPLING ENDED AT: 1130
PUMP OR TUBING DEPTH IN WELL (feet): 36.95	SAMPLE PUMP FLOW RATE (mL per minute): 200/5M	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: Y <input checked="" type="radio"/> N	FIELD-FILTERED: Y <input checked="" type="radio"/> N	DUPLICATE: Y <input checked="" type="radio"/> N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (mL)	FINAL pH		
PP	1	AG	1 L	NONE	NONE	-	PAH / 8290C	VT
PP	2	AG	1 L	H2SO4	NONE	-	TRPH / FLORO	VT
PP	1	PE	250 mL	HNO3	NONE	-	Pb	APP
PP	2	CG	40 mL	NONE	NONE	<2	EDB / 8011	SM
PP	3	CG	40 mL	HCl	NONE	<2	VOL / 8260 B	SM

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
SAMPLING/PURGING: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump
EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

DEP-SOP-001/01
FS 2200 Groundwater Sampling
Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: NS MAYPORT	SITE LOCATION: BUILDING 351
WELL NO: MPT-1388-MW05S	SAMPLE ID: MPT-351-2-MW05-0206
DATE: 2/9/06	

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 0.5 feet to 10.5 feet	STATIC DEPTH TO WATER (feet): 6.03	PURGE PUMP TYPE OR BAILER: PERISTALTIC
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable 0.1788 gal x 3.78546 = (0.7L) = (10.5 feet - 6.03 feet) X 0.04 gallons/foot = .1788 gallons				
EQUIPMENT VOLUME PURGE: EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = gallons + (gallons/foot X feet) + gallons = gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 5.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet): 5.5		PURGING INITIATED AT: 1229	PURGING ENDED AT: 1249	TOTAL VOLUME PURGED (gallons): 4.0 L					
TIME	VOLUME PURGED (gallons)(L)	CUMUL. VOLUME PURGED (gallons)(L)	(MLPM) PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1229	-	-	200	6.03	-	-	-	-	-	CLEAR	NONE
1234	1.0	1.0	200	6.08	6.79	20.81	737	2.21	32.1	CLEAR	NONE
1239	1.0	2.0	200	6.08	6.82	20.94	777	1.19	14.3	CLEAR	NONE
1244	1.0	3.0	200	6.08	6.83	21.04	783	0.77	8.9	CLEAR	NONE
1249	1.0	4.0	200	6.08	6.87	21.09	782	0.52	6.3	CLEAR	NONE
SAMPLE TIME 1250											
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0008; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: TERRY COTTENOIR / ITNUS		SAMPLER(S) SIGNATURES: <i>Terry Cottenoir</i>		SAMPLING INITIATED AT: 1250	SAMPLING ENDED AT: 1310
PUMP OR TUBING DEPTH IN WELL (feet): 5.5		SAMPLE PUMP FLOW RATE (mL per minute): 200/SM		TUBING MATERIAL CODE: TEFLON	
FIELD DECONTAMINATION: Y <input checked="" type="radio"/> N		FIELD-FILTERED: Y <input checked="" type="radio"/> N		FILTER SIZE: _____ µm	
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION		DUPLICATE: Y <input checked="" type="radio"/> N	

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
							PP	2
PP	3	CG	40 mL	HCl	-	7.2	EDB/8091	SM
PP	1	PE	250 mL	HNO3	-	-	Pb	APP
PP	2	AG	1 L	H2SO4	-	-	TRPH/FLPRO	VT
PP	2	AG	1 L	NONE	-	-	PAH/8270C	VT

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)



Project Site Name: NAVSTA Mayport - Building 351
 Project No.: 112G00103

Domestic Well Data
 Monitoring Well Data
 Other Well Type: _____
 QA Sample Type: _____

Sample ID No.: TMW-23
 Sample Location: TMW-23
 Sampled By: M. PETERSON / T. COTTENOR
 C.O.C. No.: _____
 Type of Sample:
 Low Concentration
 High Concentration

SAMPLING DATA

Date: <u>12/29/05</u>	Color	pH	S.C.	Temp.	Turbidity	DO	Other
Time: <u>1100</u>	Visual	Standard	mS/cm	°C	NTU	mg/l	
Method: Low Flow Peristaltic	<u>CLEAR</u>	<u>7.04</u>	<u>0.906</u>	<u>21.20</u>	<u>1.1</u>	<u>0.90</u>	

PURGE DATA

Date: 12/29/05
 Method: Low Flow Peristaltic
 Monitor Reading (ppm): 1.7
 Well Casing Diameter:
 Well Casing Material:
 Total Well Depth (TD):
 Static Water Level (WL):
 One Casing Volume(gal/L):
 Start Purge (hrs): 1038
 End Purge (hrs): 1058
 Total Purge Time (min): 20
 Total Vol. Purged (gal): 10

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Laboratory	Collected
<u>GAG / KAG</u>				

OBSERVATIONS / NOTES

DID NOT USE STRAW METHOD FOR VOCs SAMPLES DUE TO INSUFFICIENT WATER COLUMN.
 NOTICED SLIGHT SHEEN ON PURGE WATER.
 SHALLOW SOIL SAMPLE MONITOR READING: 1.5 ppm

Laboratory:

phone:
fax:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tony Cottenu



Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

CTO 386

Project Site Name: NAVSTA Mayport - Building 351
Project No.: 112G00103

Sample ID No.: TMW-24
Sample Location: TMW-24
Sampled By: M. PETERSON / T. COTTENWORTH
C.O.C. No.: _____
Type of Sample:
[X] Low Concentration
[] High Concentration

- Domestic Well Data
- Monitoring Well Data
- Other Well Type: _____
- QA Sample Type: _____

SAMPLING DATA

Date:	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Other
<u>12/29/05</u>	<u>CLEAR</u>	<u>7.57</u>	<u>0.573</u>	<u>20.36</u>	<u>0.57</u>	<u>1.71</u>	
Time: <u>1248</u>							
Method: Low Flow Peristaltic							

PURGE DATA

Date: 12/29/05
 Method: Low Flow Peristaltic
 Monitor Reading (ppm): _____
 Well Casing Diameter: _____
 Well Casing Material: _____
 Total Well Depth (TD): _____
 Static Water Level (WL): _____
 One Casing Volume(gal/L): _____
 Start Purge (hrs): 1220
 End Purge (hrs): 1245
 Total Purge Time (min): 25
 Total Vol. Purged (gal/L): 7.5

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Laboratory	Collected
<u>GAL/KAG</u>				

OBSERVATIONS / NOTES

DID NOT USE STRAW METHOD FOR VOL SAMPLES DUE TO INSUFFICIENT WATER COLUMN

Laboratory:

phone:
fax:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Terry Cottenworth

APPENDIX F
MOBILE LABORATORY ANALYTICAL RESULTS



KB LABS, INC.

Final Data Report
 Project Number 05-167
 MS Mayport CTO 386
 Jacksonville, FL

Prepared for: Tetra Tech NUS

Well ID	Analysis Date	Matrix	Dilution Factor	MTBE	Benzene	Toluene	Ethylbenzene	m,p-Xylene	o-Xylene	Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene
MPT-351-OF-SB-01-03	8/10/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-SB-02-03	8/10/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-SB-05-03	8/10/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-SB-09-03	8/10/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-SB-10-03	8/10/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-SB-14-03	8/11/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-TMW-01	8/10/05	Water	1,10	26.4	57.2	21.5	68.4	240	160	190	200	160
MPT-351-OF-TMW-02	8/10/05	Water	20	< 100	110	< 20	80	190	26	260	200	140
MPT-351-OF-TMW-07	8/10/05	Water	1	< 5.0	< 1.0	2.3	< 1.0	1.1	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-Rinseate	8/10/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-08	8/10/05	Water	1	< 5.0	< 1.0	1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-09	8/10/05	Water	10	< 50	18	180	92	360	260	320	250	180
MPT-351-OF-TMW-10	8/10/05	Water	1,10	< 5.0	40.9	19.9	77.3	180	190	220	200	170
MPT-351-OF-TMW-11	8/10/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-12	8/10/05	Water	1	8.0	8.7	2.2	1.8	20.0	2.8	42.0	39.0	52.6
MPT-351-OF-TMW-13	8/10/05	Water	1	< 5.0	< 1.0	1.2	< 1.0	1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-17	8/10/05	Water	1,10	45.9	97	1.6	37.2	180	65.1	210	140	110



KB LABS, INC.

Final Data Report
 Project Number 05-167
 MS Mayport CTO 386
 Jacksonville, FL

Prepared for: Tetra Tech NUS

Well ID	Analysis Date	Matrix	Dilution Factor	MTBE	Benzene	Toluene	Ethylbenzene	m,p-Xylene	o-Xylene	Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene
MPT-351-OF-TMW-18	8/11/05	Water	1	< 5.0	< 1.0	< 1.0	7.9	10.9	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-19	8/11/05	Water	1	51.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-20	8/11/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
SWMU-17-05-S	8/11/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-21	8/11/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-14	8/11/05	Water	10	< 10	< 10	110	140	250	350	380	310	210
MPT-351-OF-TMW-06	8/11/05	Water	10	< 10	170	< 10	190	720	< 10	560	550	370
MPT-351-OF-TMW-04	8/11/05	Water	100	100	150	120	140	460	140	620	890	590
MPT-351-OF-TMW-06-20	8/12/05	Water	1	< 5.0	< 1.0	< 1.0	11.8	50.0	< 1.0	50.5	98.8	63.6
MPT-351-OF-TMW-19 Dup	8/11/05	Water	1	120	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0

APPENDIX G
FIXED-BASE LABORATORY ANALYTICAL RESULTS

CLIENT : Tetra Tech NUS
ADDRESS: Foster Plaza 7
661 Andersen Dr.
Pittsburgh, PA 15220-2745

REPORT # : JAX54762
DATE SUBMITTED: December 29, 2005
DATE REPORTED : January 6, 2006

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ATTENTION: Mr. Mark Peterson

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

REFERENCE: CTO 386

12/29/05

~~JAX54762-1 : TMW-22 @ 09:30~~
JAX54762-2 : TMW-23 @ 11:00
JAX54762-3 : TMW-24 @ 12:48
JAX54762-4 : TMW-25 @ 14:15

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. This data has been produced in accordance with NELAC Standards (June, 2003). This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

PROJECT MANAGER

Christina M. Tompkins

ENCO LABORATORIES

REPORT # : JAX54762
DATE REPORTED: January 6, 2006
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RESULTS OF ANALYSIS

**EPA METHOD 8011 -
EDB & DBCP by GC/ECD**

	<u>TMW-22</u>	<u>TMW-23</u>	<u>Units</u>
Ethylene Dibromide	0.020 U	0.020 U	ug/L
Dibromochloropropane	0.020 U	0.020 U	ug/L
Date Prepared	01/04/06	01/04/06	
Date Analyzed	01/04/06 20:16	01/04/06 20:34	

**EPA METHOD 8260 -
VOLATILE ORGANICS**

	<u>TMW-22</u>	<u>TMW-23</u>	<u>Units</u>
Methyl tert-butyl ether	1. U	10	ug/L
Benzene	1. U	31.	ug/L
Toluene	1. U	1. U	ug/L
Chlorobenzene	1. U	1. U	ug/L
Ethylbenzene	1. U	1. U	ug/L
m-Xylene & p-Xylene	2. U	2.	ug/L
o-Xylene	1. U	1. U	ug/L
1,3-Dichlorobenzene	1. U	1. U	ug/L
1,4-Dichlorobenzene	1. U	1. U	ug/L
1,2-Dichlorobenzene	1. U	1. U	ug/L

<u>Surrogate:</u>	<u>% RECOV</u>	<u>% RECOV</u>	<u>LIMITS</u>
Dibromofluoromethane	111	107	67-139
D8-Toluene	98	101	80-115
Bromofluorobenzene	100	97	66-131
Date Analyzed	12/30/05 15:58	12/30/05 17:45	

U = Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

EPA METHOD 8260 -
8260 Halocarbons

	<u>TMW-22</u>	<u>TMW-23</u>	<u>Units</u>
Dichlorodifluoromethane	2. U	2. U	ug/L
Chloromethane	1. U	1. U	ug/L
Vinyl Chloride	1. U	1. U	ug/L
Bromomethane	2. U	2. U	ug/L
Chloroethane	2. U	2. U	ug/L
Trichlorofluoromethane	1. U	1. U	ug/L
1,1-Dichloroethene	1. U	1. U	ug/L
Methylene Chloride	5. U	5. U	ug/L
t-1,2-Dichloroethene	1. U	1. U	ug/L
1,1-Dichloroethane	1. U	1. U	ug/L
c-1,2-Dichloroethene	1. U	1. U	ug/L
Chloroform	1. U	1. U	ug/L
1,1,1-Trichloroethane	1. U	1. U	ug/L
Carbon tetrachloride	1. U	1. U	ug/L
1,2-Dichloroethane	1. U	1. U	ug/L
Trichloroethene	1. U	1. U	ug/L
1,2-Dichloropropane	1. U	1. U	ug/L
Bromodichloromethane	0.6 U	0.6 U	ug/L
c-1,3-Dichloropropene	0.2 U	0.2 U	ug/L
t-1,3-Dichloropropene	0.2 U	0.2 U	ug/L
1,1,2-Trichloroethane	1. U	1. U	ug/L
Tetrachloroethene	2. U	2. U	ug/L
Dibromochloromethane	0.4 U	0.4 U	ug/L
Chlorobenzene	1. U	1. U	ug/L
Bromoform	1. U	1. U	ug/L
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U	ug/L
1,3-Dichlorobenzene	1. U	1. U	ug/L
1,4-Dichlorobenzene	1. U	1. U	ug/L
1,2-Dichlorobenzene	1. U	1. U	ug/L

<u>Surrogate:</u>	<u>% RECOV</u>	<u>% RECOV</u>	<u>LIMITS</u>
Dibromofluoromethane	111	107	67-139
D8-Toluene	98	101	80-115
Bromofluorobenzene	100	97	66-131
Date Analyzed	12/30/05 15:58	12/30/05 17:45	

U = Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

EPA METHOD 8270 -
PAH Compounds by SIM

	<u>TMW-22</u>	<u>TMW-23</u>	<u>Units</u>
Naphthalene	0.5 U	9.	ug/L
2-Methylnaphthalene	0.5 U	6.	ug/L
1-Methylnaphthalene	0.5 U	8.	ug/L
Acenaphthylene	0.1 U	0.1 U	ug/L
Acenaphthene	0.1 U	1.	ug/L
Fluorene	0.1 U	2.	ug/L
Phenanthrene	0.1 U	0.6	ug/L
Anthracene	0.1 U	0.1 U	ug/L
Fluoranthene	0.1 U	0.1 U	ug/L
Pyrene	0.1 U	0.1 U	ug/L
Chrysene	0.1 U	0.1 U	ug/L
Benzo (a) anthracene	0.1 U	0.1 U	ug/L
Benzo (b) fluoranthene	0.1 U	0.1 U	ug/L
Benzo (k) fluoranthene	0.1 U	0.1 U	ug/L
Benzo (a) pyrene	0.1 U	0.1 U	ug/L
Indeno (1,2,3-cd) pyrene	0.1 U	0.1 U	ug/L
Dibenzo (a,h) anthracene	0.1 U	0.1 U	ug/L
Benzo (g,h,i) perylene	0.1 U	0.1 U	ug/L

<u>Surrogate:</u>	<u>% RECOV</u>	<u>% RECOV</u>	<u>LIMITS</u>
p-Terphenyl	91	80	10-157
Date Prepared	12/30/05	12/30/05	
Date Analyzed	12/30/05 12:39	12/30/05 12:57	

<u>TOTAL METALS</u>	<u>METHOD</u>	<u>TMW-22</u>	<u>TMW-23</u>	<u>Units</u>
Lead	6010	0.010 U	0.010 U	mg/L
Date Analyzed		01/04/06 16:38	01/04/06 17:04	

U = Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

EPA METHOD FLPRO -
PETROL. RESIDUAL ORG.

	<u>TMW-22</u>	<u>TMW-23</u>	<u>Units</u>
Hydrocarbons (C8-C40)	2.	6.	mg/L
<u>Surrogate:</u>	<u>% RECOV</u>	<u>% RECOV</u>	<u>LIMITS</u>
o-Terphenyl	94	100	33-133
Nonatriacontane	93	87	22-137
Date Prepared	12/30/05	12/30/05	
Date Analyzed	12/30/05 13:12	12/30/05 13:35	

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RESULTS OF ANALYSIS

EPA METHOD 8011 -
EDB & DBCP by GC/ECD

	<u>TMW-24</u>	<u>TMW-25</u>	<u>Units</u>
Ethylene Dibromide	0.020 U	0.020 U	ug/L
Dibromochloropropane	0.020 U	0.020 U	ug/L
Date Prepared	01/04/06	01/04/06	
Date Analyzed	01/04/06 20:51	01/04/06 21:08	

EPA METHOD 8260 -
VOLATILE ORGANICS

	<u>TMW-24</u>	<u>TMW-25</u>	<u>Units</u>
Methyl tert-butyl ether	1. U	1. U	ug/L
Benzene	1. U	1. U	ug/L
Toluene	1. U	1. U	ug/L
Chlorobenzene	1. U	1. U	ug/L
Ethylbenzene	1. U	1. U	ug/L
m-Xylene & p-Xylene	2. U	2. U	ug/L
o-Xylene	1. U	1. U	ug/L
1,3-Dichlorobenzene	1. U	1. U	ug/L
1,4-Dichlorobenzene	1. U	1. U	ug/L
1,2-Dichlorobenzene	1. U	1. U	ug/L

<u>Surrogate:</u>	<u>% RECOV</u>	<u>% RECOV</u>	<u>LIMITS</u>
Dibromofluoromethane	110	110	67-139
D8-Toluene	100	104	80-115
Bromofluorobenzene	97	97	66-131
Date Analyzed	12/30/05 16:34	12/30/05 17:09	

U = Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

EPA METHOD 8260 -
8260 Halocarbons

	<u>TMW-24</u>	<u>TMW-25</u>	<u>Units</u>
Dichlorodifluoromethane	2. U	2. U	ug/L
Chloromethane	1. U	1. U	ug/L
Vinyl Chloride	1. U	1. U	ug/L
Bromomethane	2. U	2. U	ug/L
Chloroethane	2. U	2. U	ug/L
Trichlorofluoromethane	1. U	1. U	ug/L
1,1-Dichloroethene	1. U	1. U	ug/L
Methylene Chloride	5. U	5. U	ug/L
t-1,2-Dichloroethene	1. U	1. U	ug/L
1,1-Dichloroethane	1. U	1. U	ug/L
c-1,2-Dichloroethene	1. U	1. U	ug/L
Chloroform	1. U	1. U	ug/L
1,1,1-Trichloroethane	1. U	1. U	ug/L
Carbon tetrachloride	1. U	1. U	ug/L
1,2-Dichloroethane	1. U	1. U	ug/L
Trichloroethene	1. U	1. U	ug/L
1,2-Dichloropropane	1. U	1. U	ug/L
Bromodichloromethane	0.6 U	0.6 U	ug/L
c-1,3-Dichloropropene	0.2 U	0.2 U	ug/L
t-1,3-Dichloropropene	0.2 U	0.2 U	ug/L
1,1,2-Trichloroethane	1. U	1. U	ug/L
Tetrachloroethene	2. U	2. U	ug/L
Dibromochloromethane	0.4 U	0.4 U	ug/L
Chlorobenzene	1. U	1. U	ug/L
Bromoform	1. U	1. U	ug/L
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U	ug/L
1,3-Dichlorobenzene	1. U	1. U	ug/L
1,4-Dichlorobenzene	1. U	1. U	ug/L
1,2-Dichlorobenzene	1. U	1. U	ug/L

<u>Surrogate:</u>	<u>% RECOV</u>	<u>% RECOV</u>	<u>LIMITS</u>
Dibromofluoromethane	110	110	67-139
D8-Toluene	100	104	80-115
Bromofluorobenzene	97	97	66-131
Date Analyzed	12/30/05 16:34	12/30/05 17:09	

U = Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

EPA METHOD 8270 -
PAH Compounds by SIM

	<u>TMW-24</u>	<u>TMW-25</u>	<u>Units</u>
Naphthalene	0.5 U	0.5 U	ug/L
2-Methylnaphthalene	0.5 U	0.5 U	ug/L
1-Methylnaphthalene	0.5 U	0.5 U	ug/L
Acenaphthylene	0.1 U	0.1 U	ug/L
Acenaphthene	0.1 U	0.1 U	ug/L
Fluorene	0.1 U	0.1 U	ug/L
Phenanthrene	0.1 U	0.1 U	ug/L
Anthracene	0.1 U	0.1 U	ug/L
Fluoranthene	0.1 U	0.1 U	ug/L
Pyrene	0.1 U	0.1 U	ug/L
Chrysene	0.1 U	0.1 U	ug/L
Benzo (a) anthracene	0.1 U	0.1 U	ug/L
Benzo (b) fluoranthene	0.1 U	0.1 U	ug/L
Benzo (k) fluoranthene	0.1 U	0.1 U	ug/L
Benzo (a) pyrene	0.1 U	0.1 U	ug/L
Indeno (1,2,3-cd) pyrene	0.1 U	0.1 U	ug/L
Dibenzo (a,h) anthracene	0.1 U	0.1 U	ug/L
Benzo (g,h,i) perylene	0.1 U	0.1 U	ug/L

<u>Surrogate:</u>	<u>% RECOV</u>	<u>% RECOV</u>	<u>LIMITS</u>
p-Terphenyl	79	88	10-157
Date Prepared	12/30/05	12/30/05	
Date Analyzed	12/30/05 13:14	12/30/05 13:32	

<u>TOTAL METALS</u>	<u>METHOD</u>	<u>TMW-24</u>	<u>TMW-25</u>	<u>Units</u>
Lead	6010	0.010 U	0.010 U	mg/L
Date Analyzed		01/04/06 17:09	01/04/06 17:17	

U = Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

EPA METHOD FLPRO -
PETROL. RESIDUAL ORG.

	<u>TMW-24</u>	<u>TMW-25</u>	<u>Units</u>
Hydrocarbons (C8-C40)	0.2 U	0.2 U	mg/L

Surrogate:

	<u>% RECOV</u>	<u>% RECOV</u>	<u>LIMITS</u>
o-Terphenyl	81	97	33-133
Nonatriacontane	80	98	22-137
Date Prepared	12/30/05	12/30/05	
Date Analyzed	12/30/05 13:57	12/30/05 14:20	

U = Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

EPA METHOD 8011 -
EDB & DBCP by GC/ECD

	<u>LAB BLANK</u>	<u>Units</u>
Ethylene Dibromide	0.020 U	ug/L
Dibromochloropropane	0.020 U	ug/L
Date Prepared	01/04/06	
Date Analyzed	01/04/06 18:49	

EPA METHOD 8260 -
VOLATILE ORGANICS

	<u>LAB BLANK</u>	<u>Units</u>
Methyl tert-butyl ether	1. U	ug/L
Benzene	1. U	ug/L
Toluene	1. U	ug/L
Chlorobenzene	1. U	ug/L
Ethylbenzene	1. U	ug/L
m-Xylene & p-Xylene	2. U	ug/L
o-Xylene	1. U	ug/L
1,3-Dichlorobenzene	1. U	ug/L
1,4-Dichlorobenzene	1. U	ug/L
1,2-Dichlorobenzene	1. U	ug/L

Surrogate:

	<u>% RECOV</u>	<u>LIMITS</u>
Dibromofluoromethane	108	67-139
D8-Toluene	101	80-115
Bromofluorobenzene	103	66-131
Date Analyzed	12/30/05 11:16	

U = Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

EPA METHOD 8260 -
8260 Halocarbons

	<u>LAB BLANK</u>	<u>Units</u>
Dichlorodifluoromethane	2. U	ug/L
Chloromethane	1. U	ug/L
Vinyl Chloride	1. U	ug/L
Bromomethane	2. U	ug/L
Chloroethane	2. U	ug/L
Trichlorofluoromethane	1. U	ug/L
1,1-Dichloroethene	1. U	ug/L
Methylene Chloride	5. U	ug/L
t-1,2-Dichloroethene	1. U	ug/L
1,1-Dichloroethane	1. U	ug/L
c-1,2-Dichloroethene	1. U	ug/L
Chloroform	1. U	ug/L
1,1,1-Trichloroethane	1. U	ug/L
Carbon tetrachloride	1. U	ug/L
1,2-Dichloroethane	1. U	ug/L
Trichloroethene	1. U	ug/L
1,2-Dichloropropane	1. U	ug/L
Bromodichloromethane	0.6 U	ug/L
c-1,3-Dichloropropene	0.2 U	ug/L
t-1,3-Dichloropropene	0.2 U	ug/L
1,1,2-Trichloroethane	1. U	ug/L
Tetrachloroethene	2. U	ug/L
Dibromochloromethane	0.4 U	ug/L
Chlorobenzene	1. U	ug/L
Bromoform	1. U	ug/L
1,1,2,2-Tetrachloroethane	0.2 U	ug/L
1,3-Dichlorobenzene	1. U	ug/L
1,4-Dichlorobenzene	1. U	ug/L
1,2-Dichlorobenzene	1. U	ug/L
<u>Surrogate:</u>	<u>% RECOV</u>	<u>LIMITS</u>
Dibromofluoromethane	108	67-139
D8-Toluene	101	80-115
Bromofluorobenzene	103	66-131
Date Analyzed	12/30/05 11:16	

U = Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

EPA METHOD 8270 -
PAH Compounds by SIM

	<u>LAB BLANK</u>	<u>Units</u>
Naphthalene	0.5 U	ug/L
2-Methylnaphthalene	0.5 U	ug/L
1-Methylnaphthalene	0.5 U	ug/L
Acenaphthylene	0.1 U	ug/L
Acenaphthene	0.1 U	ug/L
Fluorene	0.1 U	ug/L
Phenanthrene	0.1 U	ug/L
Anthracene	0.1 U	ug/L
Fluoranthene	0.1 U	ug/L
Pyrene	0.1 U	ug/L
Chrysene	0.1 U	ug/L
Benzo (a) anthracene	0.1 U	ug/L
Benzo (b) fluoranthene	0.1 U	ug/L
Benzo (k) fluoranthene	0.1 U	ug/L
Benzo (a) pyrene	0.1 U	ug/L
Indeno (1,2,3-cd) pyrene	0.1 U	ug/L
Dibenzo (a,h) anthracene	0.1 U	ug/L
Benzo (g,h,i) perylene	0.1 U	ug/L

<u>Surrogate:</u>	<u>% RECOV</u>	<u>LIMITS</u>
p-Terphenyl	86	10-157
Date Prepared	12/30/05	
Date Analyzed	12/30/05 12:04	

<u>TOTAL METALS</u>	<u>METHOD</u>	<u>LAB BLANK</u>	<u>Units</u>
Lead	6010	0.010 U	mg/L
Date Analyzed		01/04/06 16:24	

U = Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

EPA METHOD FLPRO -
PETROL. RESIDUAL ORG.

	<u>LAB BLANK</u>	<u>Units</u>
Hydrocarbons (C8-C40)	0.2 U	mg/L

Surrogate:

	<u>% RECOV</u>	<u>LIMITS</u>
o-Terphenyl	116	33-133
Nonatriacontane	112	22-137
Date Prepared	12/30/05	
Date Analyzed	12/30/05 11:20	

U = Compound was analyzed for but not detected to the level shown.

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LABORATORY CERTIFICATIONS

Laboratory Certification: NELAC:E82277

All analyses reported with this project were analyzed by the facility indicated unless identified below.

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QUALITY CONTROL DATA

<u>Parameter</u>	<u>% RECOVERY</u> <u>LCS/MS/MSD</u>	<u>LCS</u> <u>LIMITS</u>	<u>MS/MSD</u> <u>LIMITS</u>	<u>RPD</u> <u>MS/MSD</u>	<u>RPD</u> <u>LIMITS</u>
<u>EPA Method 8011</u>					
Ethylene Dibromide	100/100/ 96	69-137	57-130	4	18
Dibromochloropropane	109/108/108	63-151	60-130	<1	20
<u>EPA Method 8260</u>					
1,1-Dichloroethene	73/102/ 88	58-149	31-145	15	19
Benzene	82/107/ 84	62-135	64-138	*24	10
Trichloroethene	70/ 91/ 70	66-136	47-150	*26	12
Toluene	78/102/ 80	72-126	74-124	*24	13
Chlorobenzene	76/ 99/ 78	77-124	81-125	*24	11
<u>EPA Method 8270</u>					
Naphthalene	70/ 91/ 92	33-98	35-97	1	28
Acenaphthene	68/ 86/ 84	41-104	43-102	2	22
Benzo (a) pyrene	61/ 77/ 78	38-125	37-127	1	19
Benzo (g,h,i) perylene	58/ 83/ 84	10-159	10-173	1	35
<u>TOTAL METALS</u>					
Lead, 6010	107/106/106	82-117	68-126	<1	19
<u>PETROL. RESIDUAL ORG.</u>					
Hydrocarbons (C8-C40)	113/ 98/103	46-126	48-118	5	30

* = One or more of the associated values failed to meet laboratory established limits for precision.
 < = Less Than
 MS = Matrix Spike
 MSD = Matrix Spike Duplicate
 LCS = Laboratory Control Standard
 RPD = Relative Percent Difference



ENVIRONMENTAL CONSERVATION LABORATORIES

QSARF # _____

4810 Executive Park Court, Suite 211
 Jacksonville, Florida 32216-6069
 Ph. (904) 296-3007 • Fax (904) 296-6210

10775 Central Port Drive
 Orlando, Florida 32824
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1015 Passport Way
 Cary, North Carolina 27513
 Ph. (919) 677-1669 • Fax (919) 677-9846

ENCO CompQAP No.: 960038G/0

CHAIN OF CUSTODY RECORD

PROJECT REFERENCE					PROJECT NO.	PO. NUMBER	MATRIX TYPE										REQUIRED ANALYSIS			PAGE	OF											
CTD 386							SURFACE WATER GROUND WATER WASTEWATER DRINKING WATER SOIL/SOLID/SEDIMENT NONAQUEOUS LIQUID (oil, solvent, etc.) AIR SLUDGE OTHER										5 Vials - GAG/KAG 3 Amber - GAG/KAG Plastic GAG/KAG			PRESERVE			<input type="checkbox"/> STANDARD REPORT DELIVERY <input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge)		Date Due: _____							
PROJECT LOC. (State)		SAMPLER(S) NAME			PHONE	FAX																	CLIENT NAME					CLIENT PROJECT MANAGER				
FL		Mark Peterson			636-6125	636-6165																	Tetra Tech					Mark Peterson				
CLIENT ADDRESS (CITY, STATE, ZIP)																																
SAMPLE																																
STATION	DATE	TIME	GRAB	COMP	SAMPLE IDENTIFICATION										NUMBER OF CONTAINERS SUBMITTED			REMARKS														
1	12/29	9:30	X		Tmw-22										5	3	1	GAG/KAG-E														
2	12/29	11:00	X		Tmw-23										5	3	1	Gasolite Analytical Group														
3	12/29	12:48	X		Tmw-24										5	3	1	Newark Analytical Group														
4	12/29	14:15	X		Tmw-25										5	3	1	Need 8260 Results by Jan 9th '11 Reminder Analysis on standard Turnaround time.														
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																
13																																
14																																
SAMPLE KIT PREPARED BY:					DATE	TIME	RELINQUISHED BY: (SIGNATURE)					DATE	TIME	RECEIVED BY: (SIGNATURE)					DATE	TIME												
<input type="checkbox"/> JACKSONVILLE <input type="checkbox"/> ORLANDO																																
RELINQUISHED BY: (SIGNATURE)					DATE	TIME	RECEIVED BY: (SIGNATURE)					DATE	TIME	RELINQUISHED BY: (SIGNATURE)					DATE	TIME												
					12/29	15:24																										
RECEIVED BY: (SIGNATURE)					DATE	TIME	RELINQUISHED BY: (SIGNATURE)					DATE	TIME	RECEIVED BY: (SIGNATURE)					DATE	TIME												
RECEIVED FOR LABORATORY BY: (SIGNATURE)					DATE	TIME	CUSTODY INTACT	ENCO LOG NO.	REMARKS																							
					12/29/05	15:24	<input checked="" type="checkbox"/>	AX54762	Received on Wet Ice 2.7°C 4.1°C																							

Environmental Conservation Laboratories, Inc.

4810 Executive Park Court, Suite 211

Jacksonville FL, 32216-6069

Phone: 904.296.3007 FAX: 904.296.6210



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February 04, 2006

Tetra Tech NUS (BR006)

Attn: Mark Peterson

8640 Philips Highway Suite 16

Jacksonville, FL 32256

**RE: Project Number: 112G00103, Project Name/Desc: CTO#386
ENCO Workorder: B600441**

Dear Mark Peterson,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on 1/20/06 4:45:00PM.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

This data has been produced in accordance with NELAC standards (June, 2003). This report shall not be reproduced except in full, without the written approval of the Laboratory.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Chris Tompkins". The signature is written in a cursive style with a large initial 'C'.

Chris Tompkins

Project Manager

Enclosure(s)



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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: MPT-351-2-MW01S-0106

Lab ID: B600441-01

Sampled: 01/18/06 12:10

Received: 01/20/06 16:45

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	07/17/06	01/25/06 15:30	1/27/2006 02:37
EPA 8011	02/01/06	01/30/06 07:36	1/31/2006 13:57
EPA 8260B	02/01/06	01/30/06 15:01	1/30/2006 21:10
EPA 8270C	01/25/06	01/23/06 07:30	1/29/2006 22:42
FLPRO	01/25/06	01/23/06 07:59	1/23/2006 20:36

Client ID: MPT-351-2-EB01-0106

Lab ID: B600441-02

Sampled: 01/19/06 11:50

Received: 01/20/06 16:45

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	02/02/06	01/30/06 15:01	1/30/2006 21:39

Client ID: MPT-351-2-MW03S-0106

Lab ID: B600441-03

Sampled: 01/19/06 13:55

Received: 01/20/06 16:45

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	07/18/06	01/25/06 15:30	1/27/2006 03:36
EPA 8011	02/02/06	01/30/06 07:36	1/31/2006 14:15
EPA 8260B	02/02/06	01/30/06 15:01	1/30/2006 22:08
EPA 8270C	01/26/06	01/24/06 08:56	2/2/2006 22:33
FLPRO	01/26/06	01/23/06 07:59	1/23/2006 20:58



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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: MPT-351-2-MW02S-0106

Lab ID: B600441-04

Sampled: 01/19/06 14:45

Received: 01/20/06 16:45

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	07/18/06	01/25/06 15:30	1/27/2006 03:44
EPA 8011	02/02/06	01/30/06 07:36	1/31/2006 14:33
EPA 8260B	02/02/06	01/30/06 15:01	1/30/2006 22:37
EPA 8270C	01/26/06	01/24/06 08:56	2/2/2006 22:50
FLPRO	01/26/06	01/24/06 12:49	1/25/2006 17:50

Client ID: MPT-351-2-MW04D-0106

Lab ID: B600441-05

Sampled: 01/20/06 11:10

Received: 01/20/06 16:45

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	07/19/06	01/25/06 15:30	1/27/2006 04:12
EPA 8011	02/03/06	01/30/06 07:36	1/31/2006 14:51
EPA 8260B	02/03/06	01/30/06 15:01	1/30/2006 23:06
EPA 8270C	01/27/06	01/24/06 08:56	2/2/2006 23:08
FLPRO	01/27/06	01/24/06 12:49	1/25/2006 18:12



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SUMMARY TABLE - SAMPLE DETECTS ONLY

Client ID: **MPT-351-2-MW01S-0106**

Lab ID: **B600441-01**

Analyte	Results/Qual	MRL	Units	Method
Methyl-tert-Butyl Ether	3.27	1.00	ug/L	EPA 8260B
C8-C40	0.536	0.170	mg/L	FLPRO
Acenaphthene	0.14	0.10	ug/L	EPA 8270C

Client ID: **MPT-351-2-EB01-0106**

Lab ID: **B600441-02**

Analyte	Results/Qual	MRL	Units	Method
Chloroform	0.990 I	1.00	ug/L	EPA 8260B
Methylene chloride	4.78 O-01, B	2.00	ug/L	EPA 8260B
Toluene	0.400 I	1.00	ug/L	EPA 8260B

Client ID: **MPT-351-2-MW03S-0106**

Lab ID: **B600441-03**

Analyte	Results/Qual	MRL	Units	Method
Benzene	42.8	1.00	ug/L	EPA 8260B
Ethylbenzene	37.8	1.00	ug/L	EPA 8260B
m,p-Xylenes	163	2.00	ug/L	EPA 8260B
o-Xylene	22.0	1.00	ug/L	EPA 8260B
Toluene	1.50	1.00	ug/L	EPA 8260B
C8-C40	3.55	0.170	mg/L	FLPRO
1-Methylnaphthalene	75.5 D	5.00	ug/L	EPA 8270C
2-Methylnaphthalene	122 D	5.00	ug/L	EPA 8270C
Acenaphthene	2.40	0.10	ug/L	EPA 8270C
Anthracene	0.08 I	0.10	ug/L	EPA 8270C
Fluoranthene	0.05 I	0.10	ug/L	EPA 8270C
Fluorene	5.32	0.10	ug/L	EPA 8270C
Naphthalene	102 D	5.00	ug/L	EPA 8270C
Phenanthrene	5.06	0.10	ug/L	EPA 8270C
Pyrene	0.56	0.10	ug/L	EPA 8270C
Lead	0.002 I	0.01	mg/L	EPA 6010B

Client ID: **MPT-351-2-MW02S-0106**

Lab ID: **B600441-04**

Analyte	Results/Qual	MRL	Units	Method
Ethylbenzene	0.310 I	1.00	ug/L	EPA 8260B
m,p-Xylenes	1.15 I	2.00	ug/L	EPA 8260B
Naphthalene	0.05 I	0.10	ug/L	EPA 8270C

Client ID: **MPT-351-2-MW04D-0106**

Lab ID: **B600441-05**

Analyte	Results/Qual	MRL	Units	Method
Ethylbenzene	0.620 I	1.00	ug/L	EPA 8260B
m,p-Xylenes	3.27	2.00	ug/L	EPA 8260B
o-Xylene	0.690 I	1.00	ug/L	EPA 8260B
C8-C40	0.604	0.170	mg/L	FLPRO
1-Methylnaphthalene	10.1	0.10	ug/L	EPA 8270C
2-Methylnaphthalene	13.5	0.10	ug/L	EPA 8270C



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SUMMARY TABLE - SAMPLE DETECTS ONLY

Client ID: **MPT-351-2-MW04D-0106**

Lab ID: **B600441-05**

Analyte	Results/Qual	MRL	Units	Method
Acenaphthene	0.75	0.10	ug/L	EPA 8270C
Fluorene	2.05	0.10	ug/L	EPA 8270C
Naphthalene	1.85	0.10	ug/L	EPA 8270C
Phenanthrene	2.68	0.10	ug/L	EPA 8270C
Pyrene	0.45	0.10	ug/L	EPA 8270C



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW01S-0106
Lab #: B600441-01
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: jdb
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A30023

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1-Trichloroethane	71-55-6	0.300 U	0.300	1.00	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.200 U	0.200	0.200	ug/L
1,1,2-Trichloroethane	79-00-5	0.300 U	0.300	1.00	ug/L
1,1-Dichloroethane	75-34-3	0.200 U	0.200	1.00	ug/L
1,1-Dichloroethene	75-35-4	0.200 U	0.200	1.00	ug/L
1,2-Dichlorobenzene	95-50-1	0.200 U	0.200	1.00	ug/L
1,2-Dichloroethane	107-06-2	0.100 U	0.100	1.00	ug/L
1,2-Dichloropropane	78-87-5	0.400 U	0.400	1.00	ug/L
1,3-Dichlorobenzene	541-73-1	0.200 U	0.200	1.00	ug/L
1,4-Dichlorobenzene	106-46-7	0.100 U	0.100	1.00	ug/L
Benzene	71-43-2	0.200 U	0.200	1.00	ug/L
Bromodichloromethane	75-27-4	0.200 U	0.200	0.400	ug/L
Bromoform	75-25-2	0.200 U	0.200	1.00	ug/L
Bromomethane	74-83-9	0.600 U	0.600	1.00	ug/L
Carbon tetrachloride	56-23-5	0.300 U	0.300	1.00	ug/L
Chlorobenzene	108-90-7	0.200 U	0.200	1.00	ug/L
Chloroethane	75-00-3	0.300 U	0.300	1.00	ug/L
Chloroform	67-66-3	0.200 U	0.200	1.00	ug/L
Chloromethane	74-87-3	0.300 U	0.300	1.00	ug/L
cis-1,2-Dichloroethene	156-59-4	0.200 U	0.200	1.00	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.100 U	0.100	0.200	ug/L
Dibromochloromethane	124-48-1	0.200 U	0.200	0.200	ug/L
Dichlorodifluoromethane	75-71-8	0.300 U	0.300	1.00	ug/L
Ethylbenzene	100-41-4	0.300 U	0.300	1.00	ug/L
m,p-Xylenes	108-38-3/106-42-3	0.300 U	0.300	2.00	ug/L
Methylene chloride	75-09-2	2.00 U, B	2.00	2.00	ug/L
Methyl-tert-Butyl Ether	1634-04-4	3.27	0.200	1.00	ug/L
o-Xylene	95-47-6	0.200 U	0.200	1.00	ug/L
Tetrachloroethene	127-18-4	0.300 U	0.300	1.00	ug/L
Toluene	108-88-3	0.200 U	0.200	1.00	ug/L
trans-1,2-Dichloroethene	156-60-5	0.200 U	0.200	1.00	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.200 U	0.200	0.200	ug/L
Trichloroethene	79-01-6	0.300 U	0.300	1.00	ug/L
Trichlorofluoromethane	75-69-4	0.300 U	0.300	1.00	ug/L
Vinyl chloride	75-01-4	0.400 U	0.400	1.00	ug/L



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW01S-0106
Lab #: B600441-01
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: jdb
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A30023

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Surrogate Recovery					
		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	45.6	50.0	91 %	60-130
4-Bromofluorobenzene	460-00-4	45.6	50.0	91 %	60-130
Dibromofluoromethane	1868-53-7	61.7	50.0	123 %	66-131
Dibromofluoromethane	1868-53-7	61.7	50.0	123 %	66-131
Toluene-d8	2037-26-5	50.4	50.0	101 %	67-139
Toluene-d8	2037-26-5	50.4	50.0	101 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW01S-0106
Lab #: B600441-01
Prep. Method: EPA 3510C
Analyzed: 01/23/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6A23002

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: mg/L
Dilution Factor: 1

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
C8-C40	NA	0.536	0.094	0.170	mg/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0635	0.100	64 %	22-137
o-Terphenyl	84-15-1	0.0418	0.0500	84 %	33-133



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW01S-0106
Lab #: B600441-01
Prep. Method: EPA 3520C
Analyzed: 01/31/06 By: rw
Anal. Method: EPA 8011
Anal. Batch:
QC Batch: 6A30006

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Semivolatile Organic Compounds by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2-Dibromoethane	106-93-4	0.01 U	0.01	0.02	ug/L

Surrogate Recovery	Result	Spike Level	% Recovery	% Recovery Limits
1,3-Dichlorobenzene	541-73-1	1.13	1.00	113 % 30-170



ANALYTICAL REPORT

Sample ID: MPT-351-2-MW01S-0106
 Lab #: B600441-01
 Prep. Method: EPA 3510C_MS
 Analyzed: 01/29/06 By: jj
 Anal. Method: EPA 8270C
 Anal. Batch:
 QC Batch: 6A23001

Project: CTO#386
 Work Order #: B600441
 Matrix: Water
 Unit: ug/L
 Dilution Factor: 1

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.02 U	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	0.02 U	0.02	0.10	ug/L
Acenaphthene	83-32-9	0.14	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	0.02 U	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.01 U	0.01	0.10	ug/L
Fluorene	86-73-7	0.02 U	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	0.02 U	0.02	0.10	ug/L
Phenanthrene	85-01-8	0.02 U	0.02	0.10	ug/L
Pyrene	129-00-0	0.02 U	0.02	0.10	ug/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	3.73	5.00	75 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW01S-0106
Lab #: B600441-01

Project: CTO#386
Work Order #: B600441
Matrix: Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	MDL	MRL	Units	Analysis Method	Prep Method	Analytical Batch
Lead	7439-92-1	0.002 U	0.002	0.01	mg/L	EPA 6010B	EPA 3005A	6A23015



ANALYTICAL REPORT

Sample ID: MPT-351-2-EB01-0106
Lab #: B600441-02
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: jdb
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A30023

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1-Trichloroethane	71-55-6	0.300 U	0.300	1.00	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.200 U	0.200	0.200	ug/L
1,1,2-Trichloroethane	79-00-5	0.300 U	0.300	1.00	ug/L
1,1-Dichloroethane	75-34-3	0.200 U	0.200	1.00	ug/L
1,1-Dichloroethene	75-35-4	0.200 U	0.200	1.00	ug/L
1,2-Dichlorobenzene	95-50-1	0.200 U	0.200	1.00	ug/L
1,2-Dichloroethane	107-06-2	0.100 U	0.100	1.00	ug/L
1,2-Dichloropropane	78-87-5	0.400 U	0.400	1.00	ug/L
1,3-Dichlorobenzene	541-73-1	0.200 U	0.200	1.00	ug/L
1,4-Dichlorobenzene	106-46-7	0.100 U	0.100	1.00	ug/L
Benzene	71-43-2	0.200 U	0.200	1.00	ug/L
Bromodichloromethane	75-27-4	0.200 U	0.200	0.400	ug/L
Bromoform	75-25-2	0.200 U	0.200	1.00	ug/L
Bromomethane	74-83-9	0.600 U	0.600	1.00	ug/L
Carbon tetrachloride	56-23-5	0.300 U	0.300	1.00	ug/L
Chlorobenzene	108-90-7	0.200 U	0.200	1.00	ug/L
Chloroethane	75-00-3	0.300 U	0.300	1.00	ug/L
Chloroform	67-66-3	0.990 I	0.200	1.00	ug/L
Chloromethane	74-87-3	0.300 U	0.300	1.00	ug/L
cis-1,2-Dichloroethene	156-59-4	0.200 U	0.200	1.00	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.100 U	0.100	0.200	ug/L
Dibromochloromethane	124-48-1	0.200 U	0.200	0.200	ug/L
Dichlorodifluoromethane	75-71-8	0.300 U	0.300	1.00	ug/L
Ethylbenzene	100-41-4	0.300 U	0.300	1.00	ug/L
m,p-Xylenes	108-38-3/106-42-3	0.300 U	0.300	2.00	ug/L
Methylene chloride	75-09-2	4.78 O-01, B	2.00	2.00	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.200 U	0.200	1.00	ug/L
o-Xylene	95-47-6	0.200 U	0.200	1.00	ug/L
Tetrachloroethene	127-18-4	0.300 U	0.300	1.00	ug/L
Toluene	108-88-3	0.400 I	0.200	1.00	ug/L
trans-1,2-Dichloroethene	156-60-5	0.200 U	0.200	1.00	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.200 U	0.200	0.200	ug/L
Trichloroethene	79-01-6	0.300 U	0.300	1.00	ug/L
Trichlorofluoromethane	75-69-4	0.300 U	0.300	1.00	ug/L
Vinyl chloride	75-01-4	0.400 U	0.400	1.00	ug/L



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ANALYTICAL REPORT

Sample ID: MPT-351-2-EB01-0106
Lab #: B600441-02
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: jdb
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A30023

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	45.2	50.0	90 %	60-130
4-Bromofluorobenzene	460-00-4	45.2	50.0	90 %	60-130
Dibromofluoromethane	1868-53-7	61.7	50.0	123 %	66-131
Dibromofluoromethane	1868-53-7	61.7	50.0	123 %	66-131
Toluene-d8	2037-26-5	51.3	50.0	103 %	67-139
Toluene-d8	2037-26-5	51.3	50.0	103 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW03S-0106
Lab #: B600441-03
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: jdb
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A30023

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1-Trichloroethane	71-55-6	0.300 U	0.300	1.00	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.200 U	0.200	0.200	ug/L
1,1,2-Trichloroethane	79-00-5	0.300 U	0.300	1.00	ug/L
1,1-Dichloroethane	75-34-3	0.200 U	0.200	1.00	ug/L
1,1-Dichloroethene	75-35-4	0.200 U	0.200	1.00	ug/L
1,2-Dichlorobenzene	95-50-1	0.200 U	0.200	1.00	ug/L
1,2-Dichloroethane	107-06-2	0.100 U	0.100	1.00	ug/L
1,2-Dichloropropane	78-87-5	0.400 U	0.400	1.00	ug/L
1,3-Dichlorobenzene	541-73-1	0.200 U	0.200	1.00	ug/L
1,4-Dichlorobenzene	106-46-7	0.100 U	0.100	1.00	ug/L
Benzene	71-43-2	42.8	0.200	1.00	ug/L
Bromodichloromethane	75-27-4	0.200 U	0.200	0.400	ug/L
Bromoform	75-25-2	0.200 U	0.200	1.00	ug/L
Bromomethane	74-83-9	0.600 U	0.600	1.00	ug/L
Carbon tetrachloride	56-23-5	0.300 U	0.300	1.00	ug/L
Chlorobenzene	108-90-7	0.200 U	0.200	1.00	ug/L
Chloroethane	75-00-3	0.300 U	0.300	1.00	ug/L
Chloroform	67-66-3	0.200 U	0.200	1.00	ug/L
Chloromethane	74-87-3	0.300 U	0.300	1.00	ug/L
cis-1,2-Dichloroethene	156-59-4	0.200 U	0.200	1.00	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.100 U	0.100	0.200	ug/L
Dibromochloromethane	124-48-1	0.200 U	0.200	0.200	ug/L
Dichlorodifluoromethane	75-71-8	0.300 U	0.300	1.00	ug/L
Ethylbenzene	100-41-4	37.8	0.300	1.00	ug/L
m,p-Xylenes	108-38-3/106-42-3	163	0.300	2.00	ug/L
Methylene chloride	75-09-2	2.00 U, B	2.00	2.00	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.200 U	0.200	1.00	ug/L
o-Xylene	95-47-6	22.0	0.200	1.00	ug/L
Tetrachloroethene	127-18-4	0.300 U	0.300	1.00	ug/L
Toluene	108-88-3	1.50	0.200	1.00	ug/L
trans-1,2-Dichloroethene	156-60-5	0.200 U	0.200	1.00	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.200 U	0.200	0.200	ug/L
Trichloroethene	79-01-6	0.300 U	0.300	1.00	ug/L
Trichlorofluoromethane	75-69-4	0.300 U	0.300	1.00	ug/L
Vinyl chloride	75-01-4	0.400 U	0.400	1.00	ug/L



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW03S-0106
Lab #: B600441-03
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: jdb
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A30023

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Surrogate Recovery					
		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	48.5	50.0	97 %	60-130
4-Bromofluorobenzene	460-00-4	48.5	50.0	97 %	60-130
Dibromofluoromethane	1868-53-7	60.0	50.0	120 %	66-131
Dibromofluoromethane	1868-53-7	60.0	50.0	120 %	66-131
Toluene-d8	2037-26-5	51.3	50.0	103 %	67-139
Toluene-d8	2037-26-5	51.3	50.0	103 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW03S-0106
Lab #: B600441-03
Prep. Method: EPA 3510C
Analyzed: 01/23/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6A23002

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: mg/L
Dilution Factor: 1

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
C8-C40	NA	3.55	0.094	0.170	mg/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0564	0.100	56 %	22-137
o-Terphenyl	84-15-1	0.0387	0.0500	77 %	33-133



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW03S-0106
Lab #: B600441-03
Prep. Method: EPA 3520C
Analyzed: 01/31/06 By: rw
Anal. Method: EPA 8011
Anal. Batch:
QC Batch: 6A30006

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Semivolatile Organic Compounds by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2-Dibromoethane	106-93-4	0.01 U	0.01	0.02	ug/L

Surrogate Recovery	Result	Spike Level	% Recovery	% Recovery Limits
1,3-Dichlorobenzene	541-73-1	1.62	1.00	162 % 30-170



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW03S-0106
 Lab #: B600441-03
 Prep. Method: EPA 3510C_MS
 Analyzed: 02/03/06 By: jj
 Anal. Method: EPA 8270C
 Anal. Batch:
 QC Batch: 6A24005

Project: CTO#386
 Work Order #: B600441
 Matrix: Water
 Unit: ug/L
 Dilution Factor: 50

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	75.5 D	1.05	5.00	ug/L
2-Methylnaphthalene	91-57-6	122 D	1.05	5.00	ug/L
Acenaphthene	83-32-9	2.40	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	0.08 I	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.05 I	0.01	0.10	ug/L
Fluorene	86-73-7	5.32	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	102 D	1.15	5.00	ug/L
Phenanthrene	85-01-8	5.06	0.02	0.10	ug/L
Pyrene	129-00-0	0.56	0.02	0.10	ug/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	2.99	5.00	60 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW03S-0106
Lab #: B600441-03

Project: CTO#386
Work Order #: B600441
Matrix: Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	MDL	MRL	Units	Analysis Method	Prep Method	Analytical Batch
Lead	7439-92-1	0.002 I	0.002	0.01	mg/L	EPA 6010B	EPA 3005A	6A23015



ANALYTICAL REPORT

Sample ID: MPT-351-2-MW02S-0106
Lab #: B600441-04
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: jdb
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A30023

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1-Trichloroethane	71-55-6	0.300 U	0.300	1.00	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.200 U	0.200	0.200	ug/L
1,1,2-Trichloroethane	79-00-5	0.300 U	0.300	1.00	ug/L
1,1-Dichloroethane	75-34-3	0.200 U	0.200	1.00	ug/L
1,1-Dichloroethene	75-35-4	0.200 U	0.200	1.00	ug/L
1,2-Dichlorobenzene	95-50-1	0.200 U	0.200	1.00	ug/L
1,2-Dichloroethane	107-06-2	0.100 U	0.100	1.00	ug/L
1,2-Dichloropropane	78-87-5	0.400 U	0.400	1.00	ug/L
1,3-Dichlorobenzene	541-73-1	0.200 U	0.200	1.00	ug/L
1,4-Dichlorobenzene	106-46-7	0.100 U	0.100	1.00	ug/L
Benzene	71-43-2	0.200 U	0.200	1.00	ug/L
Bromodichloromethane	75-27-4	0.200 U	0.200	0.400	ug/L
Bromoform	75-25-2	0.200 U	0.200	1.00	ug/L
Bromomethane	74-83-9	0.600 U	0.600	1.00	ug/L
Carbon tetrachloride	56-23-5	0.300 U	0.300	1.00	ug/L
Chlorobenzene	108-90-7	0.200 U	0.200	1.00	ug/L
Chloroethane	75-00-3	0.300 U	0.300	1.00	ug/L
Chloroform	67-66-3	0.200 U	0.200	1.00	ug/L
Chloromethane	74-87-3	0.300 U	0.300	1.00	ug/L
cis-1,2-Dichloroethene	156-59-4	0.200 U	0.200	1.00	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.100 U	0.100	0.200	ug/L
Dibromochloromethane	124-48-1	0.200 U	0.200	0.200	ug/L
Dichlorodifluoromethane	75-71-8	0.300 U	0.300	1.00	ug/L
Ethylbenzene	100-41-4	0.310 I	0.300	1.00	ug/L
m,p-Xylenes	108-38-3/106-42-3	1.15 I	0.300	2.00	ug/L
Methylene chloride	75-09-2	2.00 U, B	2.00	2.00	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.200 U	0.200	1.00	ug/L
o-Xylene	95-47-6	0.200 U	0.200	1.00	ug/L
Tetrachloroethene	127-18-4	0.300 U	0.300	1.00	ug/L
Toluene	108-88-3	0.200 U	0.200	1.00	ug/L
trans-1,2-Dichloroethene	156-60-5	0.200 U	0.200	1.00	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.200 U	0.200	0.200	ug/L
Trichloroethene	79-01-6	0.300 U	0.300	1.00	ug/L
Trichlorofluoromethane	75-69-4	0.300 U	0.300	1.00	ug/L
Vinyl chloride	75-01-4	0.400 U	0.400	1.00	ug/L



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW02S-0106
Lab #: B600441-04
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: jdb
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A30023

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	47.5	50.0	95 %	60-130
4-Bromofluorobenzene	460-00-4	47.5	50.0	95 %	60-130
Dibromofluoromethane	1868-53-7	57.4	50.0	115 %	66-131
Dibromofluoromethane	1868-53-7	57.4	50.0	115 %	66-131
Toluene-d8	2037-26-5	49.8	50.0	100 %	67-139
Toluene-d8	2037-26-5	49.8	50.0	100 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW02S-0106
Lab #: B600441-04
Prep. Method: EPA 3510C
Analyzed: 01/25/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6A17009

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: mg/L
Dilution Factor: 1

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
C8-C40	NA	0.094 U	0.094	0.170	mg/L

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0794	0.100	79 %	22-137
o-Terphenyl	84-15-1	0.0390	0.0500	78 %	33-133



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW02S-0106
Lab #: B600441-04
Prep. Method: EPA 3520C
Analyzed: 01/31/06 By: rw
Anal. Method: EPA 8011
Anal. Batch:
QC Batch: 6A30006

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Semivolatile Organic Compounds by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2-Dibromoethane	106-93-4	0.01 U	0.01	0.02	ug/L

Surrogate Recovery	Result	Spike Level	% Recovery	% Recovery Limits
1,3-Dichlorobenzene	541-73-1	1.08	1.00	108 % 30-170



ANALYTICAL REPORT

Sample ID: MPT-351-2-MW02S-0106
 Lab #: B600441-04
 Prep. Method: EPA 3510C_MS
 Analyzed: 02/02/06 By: jj
 Anal. Method: EPA 8270C
 Anal. Batch:
 QC Batch: 6A24005

Project: CTO#386
 Work Order #: B600441
 Matrix: Water
 Unit: ug/L
 Dilution Factor: 1

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.02 U	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	0.02 U	0.02	0.10	ug/L
Acenaphthene	83-32-9	0.02 U	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	0.02 U	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.01 U	0.01	0.10	ug/L
Fluorene	86-73-7	0.02 U	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	0.05 I	0.02	0.10	ug/L
Phenanthrene	85-01-8	0.02 U	0.02	0.10	ug/L
Pyrene	129-00-0	0.02 U	0.02	0.10	ug/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	4.46	5.00	89 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW02S-0106
Lab #: B600441-04

Project: CTO#386
Work Order #: B600441
Matrix: Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	MDL	MRL	Units	Analysis Method	Prep Method	Analytical Batch
Lead	7439-92-1	0.002 U	0.002	0.01	mg/L	EPA 6010B	EPA 3005A	6A23015



ANALYTICAL REPORT

Sample ID: MPT-351-2-MW04D-0106
Lab #: B600441-05
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: jdb
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A30023

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1-Trichloroethane	71-55-6	0.300 U	0.300	1.00	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.200 U	0.200	0.200	ug/L
1,1,2-Trichloroethane	79-00-5	0.300 U	0.300	1.00	ug/L
1,1-Dichloroethane	75-34-3	0.200 U	0.200	1.00	ug/L
1,1-Dichloroethene	75-35-4	0.200 U	0.200	1.00	ug/L
1,2-Dichlorobenzene	95-50-1	0.200 U	0.200	1.00	ug/L
1,2-Dichloroethane	107-06-2	0.100 U	0.100	1.00	ug/L
1,2-Dichloropropane	78-87-5	0.400 U	0.400	1.00	ug/L
1,3-Dichlorobenzene	541-73-1	0.200 U	0.200	1.00	ug/L
1,4-Dichlorobenzene	106-46-7	0.100 U	0.100	1.00	ug/L
Benzene	71-43-2	0.200 U	0.200	1.00	ug/L
Bromodichloromethane	75-27-4	0.200 U	0.200	0.400	ug/L
Bromoform	75-25-2	0.200 U	0.200	1.00	ug/L
Bromomethane	74-83-9	0.600 U	0.600	1.00	ug/L
Carbon tetrachloride	56-23-5	0.300 U	0.300	1.00	ug/L
Chlorobenzene	108-90-7	0.200 U	0.200	1.00	ug/L
Chloroethane	75-00-3	0.300 U	0.300	1.00	ug/L
Chloroform	67-66-3	0.200 U	0.200	1.00	ug/L
Chloromethane	74-87-3	0.300 U	0.300	1.00	ug/L
cis-1,2-Dichloroethene	156-59-4	0.200 U	0.200	1.00	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.100 U	0.100	0.200	ug/L
Dibromochloromethane	124-48-1	0.200 U	0.200	0.200	ug/L
Dichlorodifluoromethane	75-71-8	0.300 U	0.300	1.00	ug/L
Ethylbenzene	100-41-4	0.620 I	0.300	1.00	ug/L
m,p-Xylenes	108-38-3/106-42-3	3.27	0.300	2.00	ug/L
Methylene chloride	75-09-2	2.00 U, B	2.00	2.00	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.200 U	0.200	1.00	ug/L
o-Xylene	95-47-6	0.690 I	0.200	1.00	ug/L
Tetrachloroethene	127-18-4	0.300 U	0.300	1.00	ug/L
Toluene	108-88-3	0.200 U	0.200	1.00	ug/L
trans-1,2-Dichloroethene	156-60-5	0.200 U	0.200	1.00	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.200 U	0.200	0.200	ug/L
Trichloroethene	79-01-6	0.300 U	0.300	1.00	ug/L
Trichlorofluoromethane	75-69-4	0.300 U	0.300	1.00	ug/L
Vinyl chloride	75-01-4	0.400 U	0.400	1.00	ug/L



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW04D-0106
Lab #: B600441-05
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: jdb
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A30023

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	47.8	50.0	96 %	60-130
4-Bromofluorobenzene	460-00-4	47.8	50.0	96 %	60-130
Dibromofluoromethane	1868-53-7	60.7	50.0	121 %	66-131
Dibromofluoromethane	1868-53-7	60.7	50.0	121 %	66-131
Toluene-d8	2037-26-5	50.0	50.0	100 %	67-139
Toluene-d8	2037-26-5	50.0	50.0	100 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW04D-0106
Lab #: B600441-05
Prep. Method: EPA 3510C
Analyzed: 01/25/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6A17009

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: mg/L
Dilution Factor: 1

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
C8-C40	NA	0.604	0.094	0.170	mg/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0807	0.100	81 %	22-137
o-Terphenyl	84-15-1	0.0365	0.0500	73 %	33-133



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW04D-0106
Lab #: B600441-05
Prep. Method: EPA 3520C
Analyzed: 01/31/06 By: rw
Anal. Method: EPA 8011
Anal. Batch:
QC Batch: 6A30006

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Semivolatile Organic Compounds by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2-Dibromoethane	106-93-4	0.01 U	0.01	0.02	ug/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
1,3-Dichlorobenzene	541-73-1	1.20	1.00	120 %	30-170



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW04D-0106
Lab #: B600441-05
Prep. Method: EPA 3510C_MS
Analyzed: 02/02/06 By: jj
Anal. Method: EPA 8270C
Anal. Batch:
QC Batch: 6A24005

Project: CTO#386
Work Order #: B600441
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	10.1	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	13.5	0.02	0.10	ug/L
Acenaphthene	83-32-9	0.75	0.02	0.10	ug/L
Acenaphthylene	208-96-8	0.01 U	0.01	0.10	ug/L
Anthracene	120-12-7	0.02 U	0.02	0.10	ug/L
Benzo(a)anthracene	56-55-3	0.01 U	0.01	0.10	ug/L
Benzo(a)pyrene	50-32-8	0.01 U	0.01	0.10	ug/L
Benzo(b)fluoranthene	205-99-2	0.03 U	0.03	0.10	ug/L
Benzo(g,h,i)perylene	191-24-2	0.03 U	0.03	0.10	ug/L
Benzo(k)fluoranthene	207-08-9	0.02 U	0.02	0.10	ug/L
Chrysene	218-01-9	0.02 U	0.02	0.10	ug/L
Dibenzo(a,h)anthracene	53-70-3	0.02 U	0.02	0.10	ug/L
Fluoranthene	206-44-0	0.01 U	0.01	0.10	ug/L
Fluorene	86-73-7	2.05	0.02	0.10	ug/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.02 U	0.02	0.10	ug/L
Naphthalene	91-20-3	1.85	0.02	0.10	ug/L
Phenanthrene	85-01-8	2.68	0.02	0.10	ug/L
Pyrene	129-00-0	0.45	0.02	0.10	ug/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	2.95	5.00	59 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-351-2-MW04D-0106
Lab #: B600441-05

Project: CTO#386
Work Order #: B600441
Matrix: Water

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	MDL	MRL	Units	Analysis Method	Prep Method	Analytical Batch
Lead	7439-92-1	0.002 U	0.002	0.01	mg/L	EPA 6010B	EPA 3005A	6A23015



QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Volatile Organic Compounds by GCMS - Quality Control

Batch 6A30023 - EPA 5030B_MS

Blank (6A30023-BLK1)

Prepared & Analyzed: 25-Jan-06

Dichlorodifluoromethane	0.300 U	1.00	ug/L							
Chloromethane	0.300 U	1.00	ug/L							
Vinyl chloride	0.400 U	1.00	ug/L							
Bromomethane	0.600 U	1.00	ug/L							
Chloroethane	0.300 U	1.00	ug/L							
Trichlorofluoromethane	0.300 U	1.00	ug/L							
1,1-Dichloroethene	0.200 U	1.00	ug/L							
Methylene chloride	2.01 O-01	2.00	ug/L							O-01
Methyl-tert-Butyl Ether	0.200 U	1.00	ug/L							
trans-1,2-Dichloroethene	0.200 U	1.00	ug/L							
1,1-Dichloroethane	0.200 U	1.00	ug/L							
cis-1,2-Dichloroethene	0.200 U	1.00	ug/L							
Chloroform	0.200 U	1.00	ug/L							
1,1,1-Trichloroethane	0.300 U	1.00	ug/L							
Carbon tetrachloride	0.300 U	1.00	ug/L							
1,2-Dichloroethane	0.100 U	1.00	ug/L							
Benzene	0.200 U	1.00	ug/L							
Trichloroethene	0.300 U	1.00	ug/L							
1,2-Dichloropropane	0.400 U	1.00	ug/L							
Bromodichloromethane	0.200 U	0.400	ug/L							
cis-1,3-Dichloropropene	0.100 U	0.200	ug/L							
Toluene	0.200 U	1.00	ug/L							
trans-1,3-Dichloropropene	0.200 U	0.200	ug/L							
1,1,2-Trichloroethane	0.300 U	1.00	ug/L							
Tetrachloroethene	0.300 U	1.00	ug/L							
Dibromochloromethane	0.200 U	0.200	ug/L							
Chlorobenzene	0.200 U	1.00	ug/L							
Ethylbenzene	0.300 U	1.00	ug/L							
m,p-Xylenes	0.300 U	2.00	ug/L							
o-Xylene	0.200 U	1.00	ug/L							
Bromoform	0.200 U	1.00	ug/L							
1,1,2,2-Tetrachloroethane	0.200 U	0.200	ug/L							
1,3-Dichlorobenzene	0.200 U	1.00	ug/L							
1,4-Dichlorobenzene	0.100 U	1.00	ug/L							
1,2-Dichlorobenzene	0.200 U	1.00	ug/L							
Surrogate: Dibromofluoromethane	53.2		ug/L	50.0		106	66-131			
Surrogate: Dibromofluoromethane	53.2		ug/L	50.0		106	66-131			
Surrogate: Toluene-d8	48.0		ug/L	50.0		96	67-139			
Surrogate: Toluene-d8	48.0		ug/L	50.0		96	67-139			
Surrogate: 4-Bromofluorobenzene	47.2		ug/L	50.0		94	60-130			



QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Volatile Organic Compounds by GCMS - Quality Control

Batch 6A30023 - EPA 5030B_MS

Blank (6A30023-BLK1) Continued

Prepared & Analyzed: 25-Jan-06

Surrogate: 4-Bromofluorobenzene	47.2		ug/L	50.0		94	60-130			
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Blank (6A30023-BLK2)

Prepared & Analyzed: 30-Jan-06

Dichlorodifluoromethane	0.300 U	1.00	ug/L							
Chloromethane	0.300 U	1.00	ug/L							
Vinyl chloride	0.400 U	1.00	ug/L							
Bromomethane	0.600 U	1.00	ug/L							
Chloroethane	0.300 U	1.00	ug/L							
Trichlorofluoromethane	0.300 U	1.00	ug/L							
1,1-Dichloroethene	0.200 U	1.00	ug/L							
Methylene chloride	2.00 U	2.00	ug/L							
Methyl-tert-Butyl Ether	0.200 U	1.00	ug/L							
trans-1,2-Dichloroethene	0.200 U	1.00	ug/L							
1,1-Dichloroethane	0.200 U	1.00	ug/L							
cis-1,2-Dichloroethene	0.200 U	1.00	ug/L							
Chloroform	0.200 U	1.00	ug/L							
1,1,1-Trichloroethane	0.300 U	1.00	ug/L							
Carbon tetrachloride	0.300 U	1.00	ug/L							
1,2-Dichloroethane	0.100 U	1.00	ug/L							
Benzene	0.200 U	1.00	ug/L							
Trichloroethene	0.300 U	1.00	ug/L							
1,2-Dichloropropane	0.400 U	1.00	ug/L							
Bromodichloromethane	0.200 U	0.400	ug/L							
cis-1,3-Dichloropropene	0.100 U	0.200	ug/L							
Toluene	0.200 U	1.00	ug/L							
trans-1,3-Dichloropropene	0.200 U	0.200	ug/L							
1,1,2-Trichloroethane	0.300 U	1.00	ug/L							
Tetrachloroethene	0.300 U	1.00	ug/L							
Dibromochloromethane	0.200 U	0.200	ug/L							
Chlorobenzene	0.200 U	1.00	ug/L							
Ethylbenzene	0.300 U	1.00	ug/L							
m,p-Xylenes	0.300 U	2.00	ug/L							
o-Xylene	0.200 U	1.00	ug/L							
Bromoform	0.200 U	1.00	ug/L							
1,1,2,2-Tetrachloroethane	0.200 U	0.200	ug/L							
1,3-Dichlorobenzene	0.200 U	1.00	ug/L							
1,4-Dichlorobenzene	0.100 U	1.00	ug/L							
1,2-Dichlorobenzene	0.200 U	1.00	ug/L							
Surrogate: Dibromofluoromethane	59.4		ug/L	50.0		119	66-131			
Surrogate: Dibromofluoromethane	59.4		ug/L	50.0		119	66-131			
Surrogate: Toluene-d8	49.2		ug/L	50.0		98	67-139			



QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Volatile Organic Compounds by GCMS - Quality Control

Batch 6A30023 - EPA 5030B_MS

Blank (6A30023-BLK2) Continued

Prepared & Analyzed: 30-Jan-06

Surrogate: Toluene-d8	49.2		ug/L	50.0		98	67-139			
Surrogate: 4-Bromofluorobenzene	45.7		ug/L	50.0		91	60-130			
Surrogate: 4-Bromofluorobenzene	45.7		ug/L	50.0		91	60-130			

Blank (6A30023-BLK3)

Prepared: 30-Jan-06 Analyzed: 31-Jan-06

Dichlorodifluoromethane	0.300 U	1.00	ug/L							
Chloromethane	0.300 U	1.00	ug/L							
Vinyl chloride	0.400 U	1.00	ug/L							
Bromomethane	0.600 U	1.00	ug/L							
Chloroethane	0.300 U	1.00	ug/L							
Trichlorofluoromethane	0.300 U	1.00	ug/L							
1,1-Dichloroethene	0.200 U	1.00	ug/L							
Methylene chloride	2.00 U	2.00	ug/L							
Methyl-tert-Butyl Ether	0.200 U	1.00	ug/L							
trans-1,2-Dichloroethene	0.200 U	1.00	ug/L							
1,1-Dichloroethane	0.200 U	1.00	ug/L							
cis-1,2-Dichloroethene	0.200 U	1.00	ug/L							
Chloroform	0.200 U	1.00	ug/L							
1,1,1-Trichloroethane	0.300 U	1.00	ug/L							
Carbon tetrachloride	0.300 U	1.00	ug/L							
1,2-Dichloroethane	0.100 U	1.00	ug/L							
Benzene	0.200 U	1.00	ug/L							
Trichloroethene	0.300 U	1.00	ug/L							
1,2-Dichloropropane	0.400 U	1.00	ug/L							
Bromodichloromethane	0.200 U	0.400	ug/L							
cis-1,3-Dichloropropene	0.100 U	0.200	ug/L							
Toluene	0.200 U	1.00	ug/L							
trans-1,3-Dichloropropene	0.200 U	0.200	ug/L							
1,1,2-Trichloroethane	0.300 U	1.00	ug/L							
Tetrachloroethene	0.300 U	1.00	ug/L							
Dibromochloromethane	0.200 U	0.200	ug/L							
Chlorobenzene	0.200 U	1.00	ug/L							
Ethylbenzene	0.300 U	1.00	ug/L							
m,p-Xylenes	0.300 U	2.00	ug/L							
o-Xylene	0.200 U	1.00	ug/L							
Bromoform	0.200 U	1.00	ug/L							
1,1,2,2-Tetrachloroethane	0.200 U	0.200	ug/L							
1,3-Dichlorobenzene	0.200 U	1.00	ug/L							
1,4-Dichlorobenzene	0.100 U	1.00	ug/L							
1,2-Dichlorobenzene	0.200 U	1.00	ug/L							
Surrogate: Dibromofluoromethane	56.1		ug/L	50.0		112	66-131			



QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Volatile Organic Compounds by GCMS - Quality Control										
<i>Batch 6A30023 - EPA 5030B_MS</i>										
Blank (6A30023-BLK3) Continued				Prepared: 30-Jan-06 Analyzed: 31-Jan-06						
<i>Surrogate: Dibromofluoromethane</i>	56.1		ug/L	50.0		112	66-131			
<i>Surrogate: Toluene-d8</i>	49.4		ug/L	50.0		99	67-139			
<i>Surrogate: Toluene-d8</i>	49.4		ug/L	50.0		99	67-139			
<i>Surrogate: 4-Bromofluorobenzene</i>	43.4		ug/L	50.0		87	60-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	43.4		ug/L	50.0		87	60-130			
Blank (6A30023-BLK4)				Prepared: 25-Jan-06 Analyzed: 01-Feb-06						
Methyl-tert-Butyl Ether	0.200 U	1.00	ug/L							
Benzene	0.200 U	1.00	ug/L							
Toluene	0.200 U	1.00	ug/L							
Ethylbenzene	0.300 U	1.00	ug/L							
m,p-Xylenes	0.300 U	2.00	ug/L							
o-Xylene	0.200 U	1.00	ug/L							
<i>Surrogate: Dibromofluoromethane</i>	58.8		ug/L	50.0		118	66-131			
<i>Surrogate: Toluene-d8</i>	49.6		ug/L	50.0		99	67-139			
<i>Surrogate: 4-Bromofluorobenzene</i>	46.7		ug/L	50.0		93	60-130			
LCS (6A30023-BS1)				Prepared & Analyzed: 25-Jan-06						
1,1-Dichloroethene	21.1	1.00	ug/L	20.0		106	0-200			
Benzene	20.4	1.00	ug/L	20.0		102	62-135			
Trichloroethene	19.1	1.00	ug/L	20.0		96	66-136			
Toluene	16.9	1.00	ug/L	20.0		84	74-126			
Chlorobenzene	19.2	1.00	ug/L	20.0		96	77-124			
<i>Surrogate: Dibromofluoromethane</i>	52.7		ug/L	50.0		105	66-131			
<i>Surrogate: Dibromofluoromethane</i>	52.7		ug/L	50.0		105	66-131			
<i>Surrogate: Toluene-d8</i>	49.6		ug/L	50.0		99	67-139			
<i>Surrogate: Toluene-d8</i>	49.6		ug/L	50.0		99	67-139			
<i>Surrogate: 4-Bromofluorobenzene</i>	50.6		ug/L	50.0		101	60-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	50.6		ug/L	50.0		101	60-130			
Matrix Spike (6A30023-MS1)				Source: B600232-03		Prepared & Analyzed: 25-Jan-06				
1,1-Dichloroethene	18.9	1.00	ug/L	20.0	0.200 U	94	0-200			
Benzene	19.1	1.00	ug/L	20.0	0.220	94	64-138			
Trichloroethene	17.5	1.00	ug/L	20.0	0.300 U	88	47-150			
Toluene	15.6	1.00	ug/L	20.0	0.320	76	72-124			
Chlorobenzene	18.0	1.00	ug/L	20.0	0.210	89	81-125			
<i>Surrogate: Dibromofluoromethane</i>	53.2		ug/L	50.0		106	66-131			
<i>Surrogate: Dibromofluoromethane</i>	53.2		ug/L	50.0		106	66-131			
<i>Surrogate: Toluene-d8</i>	49.5		ug/L	50.0		99	67-139			
<i>Surrogate: Toluene-d8</i>	49.5		ug/L	50.0		99	67-139			
<i>Surrogate: 4-Bromofluorobenzene</i>	49.6		ug/L	50.0		99	60-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	49.6		ug/L	50.0		99	60-130			
Matrix Spike Dup (6A30023-MSD1)				Source: B600232-03		Prepared & Analyzed: 25-Jan-06				
1,1-Dichloroethene	20.0	1.00	ug/L	20.0	0.200 U	100	0-200	6	200	

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Volatile Organic Compounds by GCMS - Quality Control

Batch 6A30023 - EPA 5030B_MS

Matrix Spike Dup (6A30023-MSD1) Continued		Source: B600232-03		Prepared & Analyzed: 25-Jan-06						
Benzene	18.0	1.00	ug/L	20.0	0.220	89	64-138	6	10	
Trichloroethene	17.5	1.00	ug/L	20.0	0.300 U	88	47-150	0	11	
Toluene	15.8	1.00	ug/L	20.0	0.320	77	72-124	1	13	
Chlorobenzene	18.2	1.00	ug/L	20.0	0.210	90	81-125	1	11	
Surrogate: Dibromofluoromethane	54.0		ug/L	50.0		108	66-131			
Surrogate: Dibromofluoromethane	54.0		ug/L	50.0		108	66-131			
Surrogate: Toluene-d8	47.3		ug/L	50.0		95	67-139			
Surrogate: Toluene-d8	47.3		ug/L	50.0		95	67-139			
Surrogate: 4-Bromofluorobenzene	50.4		ug/L	50.0		101	60-130			
Surrogate: 4-Bromofluorobenzene	50.4		ug/L	50.0		101	60-130			

FL Petroleum Range Organics - Quality Control

Batch 6A17009 - EPA 3510C

Blank (6A17009-BLK1)		Prepared: 17-Jan-06 Analyzed: 19-Jan-06								
C8-C40	0.094 U	0.170	mg/L							
Surrogate: n-Nonatriacontane	0.0809		mg/L	0.100		81	22-137			
Surrogate: o-Terphenyl	0.0334		mg/L	0.0500		67	33-133			
Blank (6A17009-BLK2)		Prepared: 24-Jan-06 Analyzed: 25-Jan-06								
C8-C40	0.094 U	0.170	mg/L							
Surrogate: n-Nonatriacontane	0.0913		mg/L	0.100		91	22-137			
Surrogate: o-Terphenyl	0.0408		mg/L	0.0500		82	33-133			
LCS (6A17009-BS1)		Prepared: 17-Jan-06 Analyzed: 18-Jan-06								
C8-C40	1.71	0.170	mg/L	1.70		101	46-126			
Surrogate: n-Nonatriacontane	0.0892		mg/L	0.100		89	14-145			
Surrogate: o-Terphenyl	0.0467		mg/L	0.0500		93	53-135			
LCS (6A17009-BS2)		Prepared: 24-Jan-06 Analyzed: 25-Jan-06								
C8-C40	1.71	0.170	mg/L	1.70		101	46-126			
Surrogate: n-Nonatriacontane	0.0892		mg/L	0.100		89	14-145			
Surrogate: o-Terphenyl	0.0467		mg/L	0.0500		93	53-135			
Matrix Spike (6A17009-MS1)		Source: B600054-05		Prepared: 17-Jan-06 Analyzed: 18-Jan-06						
C8-C40	1.65	0.170	mg/L	1.70	0.094 U	97	48-118			
Surrogate: n-Nonatriacontane	0.0902		mg/L	0.100		90	71-139			
Surrogate: o-Terphenyl	0.0414		mg/L	0.0500		83	65-140			
Matrix Spike Dup (6A17009-MSD1)		Source: B600054-05		Prepared: 17-Jan-06 Analyzed: 18-Jan-06						
C8-C40	1.90	0.170	mg/L	1.70	0.094 U	112	48-118	14	30	
Surrogate: n-Nonatriacontane	0.0943		mg/L	0.100		94	71-139			
Surrogate: o-Terphenyl	0.0459		mg/L	0.0500		92	65-140			

Batch 6A23002 - EPA 3510C

Blank (6A23002-BLK1)		Prepared & Analyzed: 23-Jan-06								
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QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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FL Petroleum Range Organics - Quality Control

Batch 6A23002 - EPA 3510C

Blank (6A23002-BLK1) Continued

Prepared & Analyzed: 23-Jan-06

C8-C40	0.094 U	0.170	mg/L							
Surrogate: <i>n</i> -Nonatriacontane	0.0368		mg/L	0.100		37	22-137			
Surrogate: <i>o</i> -Terphenyl	0.0403		mg/L	0.0500		81	33-133			

LCS (6A23002-BS1)

Prepared & Analyzed: 23-Jan-06

C8-C40	1.52	0.170	mg/L	1.70		89	46-126			
Surrogate: <i>n</i> -Nonatriacontane	0.0513		mg/L	0.100		51	14-145			
Surrogate: <i>o</i> -Terphenyl	0.0466		mg/L	0.0500		93	53-135			

Matrix Spike (6A23002-MS1)

Source: B600231-04

Prepared & Analyzed: 23-Jan-06

C8-C40	1.61	0.170	mg/L	1.70	0.094 U	95	48-118			
Surrogate: <i>n</i> -Nonatriacontane	0.0671		mg/L	0.100		67	71-139			
Surrogate: <i>o</i> -Terphenyl	0.0457		mg/L	0.0500		91	65-140			

Matrix Spike Dup (6A23002-MSD1)

Source: B600231-04

Prepared & Analyzed: 23-Jan-06

C8-C40	1.64	0.170	mg/L	1.70	0.094 U	96	48-118	2	30	
Surrogate: <i>n</i> -Nonatriacontane	0.0722		mg/L	0.100		72	71-139			
Surrogate: <i>o</i> -Terphenyl	0.0439		mg/L	0.0500		88	65-140			

Semivolatile Organic Compounds by GC - Quality Control

Batch 6A30006 - EPA 3520C

Blank (6A30006-BLK1)

Prepared & Analyzed: 30-Jan-06

1,2-Dibromoethane	0.01 U	0.02	ug/L							
Surrogate: 1,3-Dichlorobenzene	1.06		ug/L	1.00		106	30-170			

LCS (6A30006-BS1)

Prepared: 30-Jan-06 Analyzed: 31-Jan-06

1,2-Dibromoethane	0.288	0.02	ug/L	0.250		115	69-137			
Surrogate: 1,3-Dichlorobenzene	1.27		ug/L	1.00		127	30-170			

Matrix Spike (6A30006-MS1)

Source: B600231-01

Prepared: 30-Jan-06 Analyzed: 31-Jan-06

1,2-Dibromoethane	0.251	0.02	ug/L	0.250	0.01 U	100	57-130			
Surrogate: 1,3-Dichlorobenzene	1.31		ug/L	1.00		131	30-170			

Matrix Spike Dup (6A30006-MSD1)

Source: B600231-01

Prepared: 30-Jan-06 Analyzed: 31-Jan-06

1,2-Dibromoethane	0.245	0.02	ug/L	0.250	0.01 U	98	57-130	2	18	
Surrogate: 1,3-Dichlorobenzene	1.30		ug/L	1.00		130	30-170			

Semivolatile Organic Compounds by GCMS SIM - Quality Control

Batch 6A23001 - EPA 3510C_MS

Blank (6A23001-BLK1)

Prepared: 23-Jan-06 Analyzed: 29-Jan-06

Naphthalene	0.02 U	0.10	ug/L							
2-Methylnaphthalene	0.02 U	0.10	ug/L							
1-Methylnaphthalene	0.02 U	0.10	ug/L							
Acenaphthylene	0.01 U	0.10	ug/L							
Acenaphthene	0.02 U	0.10	ug/L							

QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Semivolatile Organic Compounds by GCMS SIM - Quality Control

Batch 6A23001 - EPA 3510C_MS

Blank (6A23001-BLK1) Continued

Prepared: 23-Jan-06 Analyzed: 29-Jan-06

Benzo(a)anthracene	0.01 U	0.10	ug/L							
Benzo(b)fluoranthene	0.03 U	0.10	ug/L							
Benzo(k)fluoranthene	0.02 U	0.10	ug/L							
Fluorene	0.02 U	0.10	ug/L							
Benzo(g,h,i)perylene	0.03 U	0.10	ug/L							
Benzo(a)pyrene	0.01 U	0.10	ug/L							
Phenanthrene	0.02 U	0.10	ug/L							
Anthracene	0.02 U	0.10	ug/L							
Fluoranthene	0.01 U	0.10	ug/L							
Pyrene	0.02 U	0.10	ug/L							
Chrysene	0.02 U	0.10	ug/L							
Dibenzo(a,h)anthracene	0.02 U	0.10	ug/L							
Indeno(1,2,3-cd)pyrene	0.02 U	0.10	ug/L							

Surrogate: p-Terphenyl 3.76 ug/L 5.00 75 10-167

LCS (6A23001-BS1)

Prepared: 23-Jan-06 Analyzed: 29-Jan-06

Naphthalene	1.23	0.10	ug/L	2.00		62	33-98			
Acenaphthene	1.23	0.10	ug/L	2.00		62	41-104			
Benzo(g,h,i)perylene	1.11	0.10	ug/L	2.00		56	10-159			
Benzo(a)pyrene	1.20	0.10	ug/L	2.00		60	38-125			

Surrogate: p-Terphenyl 4.07 ug/L 5.00 81 10-167

Matrix Spike (6A23001-MS1)

Source: B600231-01

Prepared: 23-Jan-06 Analyzed: 29-Jan-06

Naphthalene	1.46	0.10	ug/L	2.00	0.02 U	73	35-97			
Acenaphthene	1.43	0.10	ug/L	2.00	0.02 U	72	43-102			
Benzo(g,h,i)perylene	1.41	0.10	ug/L	2.00	0.03 U	70	10-173			
Benzo(a)pyrene	1.34	0.10	ug/L	2.00	0.01 U	67	37-127			

Surrogate: p-Terphenyl 4.13 ug/L 5.00 83 10-167

Matrix Spike Dup (6A23001-MSD1)

Source: B600231-01

Prepared: 23-Jan-06 Analyzed: 29-Jan-06

Naphthalene	1.45	0.10	ug/L	2.00	0.02 U	72	35-97	0.7	28	
Acenaphthene	1.38	0.10	ug/L	2.00	0.02 U	69	43-102	4	22	
Benzo(g,h,i)perylene	1.45	0.10	ug/L	2.00	0.03 U	72	10-173	3	35	
Benzo(a)pyrene	1.27	0.10	ug/L	2.00	0.01 U	64	37-127	5	19	

Surrogate: p-Terphenyl 3.55 ug/L 5.00 71 10-167

Batch 6A24005 - EPA 3510C_MS

Blank (6A24005-BLK1)

Prepared: 24-Jan-06 Analyzed: 02-Feb-06

Naphthalene	0.02 U	0.10	ug/L							
2-Methylnaphthalene	0.02 U	0.10	ug/L							
1-Methylnaphthalene	0.02 U	0.10	ug/L							
Acenaphthylene	0.01 U	0.10	ug/L							
Acenaphthene	0.02 U	0.10	ug/L							



QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Semivolatile Organic Compounds by GCMS SIM - Quality Control

Batch 6A24005 - EPA 3510C_MS

Blank (6A24005-BLK1) Continued

Prepared: 24-Jan-06 Analyzed: 02-Feb-06

Benzo(a)anthracene	0.01 U	0.10	ug/L							
Benzo(b)fluoranthene	0.03 U	0.10	ug/L							
Benzo(k)fluoranthene	0.02 U	0.10	ug/L							
Fluorene	0.02 U	0.10	ug/L							
Benzo(g,h,i)perylene	0.03 U	0.10	ug/L							
Benzo(a)pyrene	0.01 U	0.10	ug/L							
Phenanthrene	0.02 U	0.10	ug/L							
Anthracene	0.02 U	0.10	ug/L							
Fluoranthene	0.01 U	0.10	ug/L							
Pyrene	0.02 U	0.10	ug/L							
Chrysene	0.02 U	0.10	ug/L							
Dibenzo(a,h)anthracene	0.02 U	0.10	ug/L							
Indeno(1,2,3-cd)pyrene	0.02 U	0.10	ug/L							

Surrogate: *p*-Terphenyl 5.01 ug/L 5.00 100 10-167

LCS (6A24005-BS1)

Prepared: 24-Jan-06 Analyzed: 02-Feb-06

Naphthalene	1.30	0.10	ug/L	2.00		65	33-98			
Acenaphthene	1.30	0.10	ug/L	2.00		65	41-104			
Benzo(g,h,i)perylene	0.90	0.10	ug/L	2.00		45	10-159			
Benzo(a)pyrene	1.34	0.10	ug/L	2.00		67	38-125			

Surrogate: *p*-Terphenyl 3.96 ug/L 5.00 79 10-167

Matrix Spike (6A24005-MS1)

Source: B600231-02

Prepared: 24-Jan-06 Analyzed: 02-Feb-06

Naphthalene	1.50	0.10	ug/L	2.00	0.02 U	75	35-97			
Acenaphthene	1.46	0.10	ug/L	2.00	0.02 U	73	43-102			
Benzo(g,h,i)perylene	0.97	0.10	ug/L	2.00	0.03 U	48	10-173			
Benzo(a)pyrene	1.46	0.10	ug/L	2.00	0.01 U	73	37-127			

Surrogate: *p*-Terphenyl 4.51 ug/L 5.00 90 10-167

Matrix Spike Dup (6A24005-MSD1)

Source: B600231-02

Prepared: 24-Jan-06 Analyzed: 02-Feb-06

Naphthalene	1.22	0.10	ug/L	2.00	0.02 U	61	35-97	21	28	
Acenaphthene	1.39	0.10	ug/L	2.00	0.02 U	70	43-102	5	22	
Benzo(g,h,i)perylene	0.98	0.10	ug/L	2.00	0.03 U	49	10-173	1	35	
Benzo(a)pyrene	1.43	0.10	ug/L	2.00	0.01 U	72	37-127	2	19	

Surrogate: *p*-Terphenyl 4.13 ug/L 5.00 83 10-167

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 6A23015 - EPA 3005A

Blank (6A23015-BLK1)

Prepared: 25-Jan-06 Analyzed: 27-Jan-06

Lead	0.002 U	0.01	mg/L							
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LCS (6A23015-BS1)

Prepared: 25-Jan-06 Analyzed: 27-Jan-06

Lead	1.02	0.01	mg/L	1.00		102	82-117			
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QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 6A23015 - EPA 3005A

Matrix Spike (6A23015-MS1) Source: **B600441-01** Prepared: 25-Jan-06 Analyzed: 27-Jan-06

Lead	0.988	0.01	mg/L	1.00	0.002 U	99	68-126
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Matrix Spike Dup (6A23015-MSD1) Source: **B600441-01** Prepared: 25-Jan-06 Analyzed: 27-Jan-06

Lead	0.999	0.01	mg/L	1.00	0.002 U	100	68-126	1	19
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Notes and Definitions

- U Analyte included in the analysis, but not detected
- S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
- O-01 This compound is a common laboratory contaminant.
- I Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- D Data reported from a dilution
- B Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Environmental Conservation Laboratories, Inc.

4810 Executive Park Court, Suite 211

Jacksonville FL, 32216-6069

Phone: 904.296.3007 FAX: 904.296.6210



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Thursday, March 30, 2006

Tetra Tech NUS (BR006)

Attn: Mark Peterson

8640 Philips Highway Suite 16

Jacksonville, FL 32256

**RE: Project Number: 112G00103, Project Name/Desc: Mayport-Bldg351-2 CTO#386
ENCO Workorder: B601780**

Dear Mark Peterson,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Wednesday, March 22, 2006.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

This data has been produced in accordance with NELAC standards (June, 2003). This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Chris Tompkins".

Chris Tompkins

Project Manager

Enclosure(s)



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SAMPLE SUMMARY/LABORATORY CHRONICAL

Client ID: MPT-351-2-SB-58-03-032206

Lab ID: B601780-01

Sampled: 03/22/06 10:15

Received: 03/22/06 15:05

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	04/05/06		03/24/06 09:30	3/28/2006 18:09
EPA 8270C	04/05/06	05/02/06	03/23/06 05:44	3/24/2006 14:41
FLPRO	04/05/06	05/02/06	03/23/06 05:40	3/24/2006 15:07

Client ID: MPT-351-2-SB-53-03-032206

Lab ID: B601780-02

Sampled: 03/22/06 10:35

Received: 03/22/06 15:05

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	04/05/06		03/24/06 09:30	3/28/2006 18:44
EPA 8270C	04/05/06	05/02/06	03/23/06 05:44	3/24/2006 14:59
FLPRO	04/05/06	05/02/06	03/23/06 05:40	3/24/2006 15:29

Client ID: MPT-351-2-SB-26-03-032206

Lab ID: B601780-03

Sampled: 03/22/06 11:05

Received: 03/22/06 15:05

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	04/05/06		03/24/06 09:30	3/28/2006 19:19
EPA 8270C	04/05/06	05/02/06	03/23/06 05:44	3/24/2006 15:20
FLPRO	04/05/06	05/02/06	03/23/06 05:40	3/24/2006 15:55

Client ID: MPT-351-2-SB-37-03-032206

Lab ID: B601780-04

Sampled: 03/22/06 11:20

Received: 03/22/06 15:05

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	04/05/06		03/24/06 09:30	3/28/2006 21:38
EPA 8270C	04/05/06	05/02/06	03/23/06 05:44	3/24/2006 15:37
FLPRO	04/05/06	05/02/06	03/23/06 05:40	3/24/2006 16:16

Client ID: MPT-351-2-SB-30-03-032206

Lab ID: B601780-05

Sampled: 03/22/06 11:35

Received: 03/22/06 15:05

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	04/05/06		03/24/06 09:30	3/28/2006 19:53
EPA 8270C	04/05/06	05/02/06	03/23/06 05:44	3/24/2006 16:17
FLPRO	04/05/06	05/02/06	03/23/06 05:40	3/24/2006 22:26

Client ID: MPT-351-2-SB-32-03-032206

Lab ID: B601780-06

Sampled: 03/22/06 12:05

Received: 03/22/06 15:05

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	04/05/06		03/24/06 09:30	3/28/2006 20:28
EPA 8270C	04/05/06	05/02/06	03/23/06 05:44	3/24/2006 16:34
FLPRO	04/05/06	05/02/06	03/23/06 05:40	3/24/2006 16:38

Client ID: MPT-351-2-SB-31-03-032206

Lab ID: B601780-07

Sampled: 03/22/06 11:45

Received: 03/22/06 15:05

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	04/05/06		03/24/06 09:30	3/28/2006 21:03
EPA 8270C	04/05/06	05/02/06	03/23/06 05:44	3/24/2006 16:52
FLPRO	04/05/06	05/02/06	03/23/06 05:40	3/24/2006 16:59

Client ID: MPT-351-Disposal-032206

Lab ID: B601780-08

Sampled: 03/22/06 13:00

Received: 03/22/06 15:05

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	09/18/06		03/23/06 12:18	3/24/2006 14:42



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SAMPLE DETECTION SUMMARY

Client ID: MPT-351-2-SB-58-03-032206	Lab ID: B601780-01			
Analyte	Results/Qual	MRL	Units	Method
Methylene Chloride	0.0332 O-01, B	0.0021	mg/kg dry	EPA 8260B
Trichlorofluoromethane	0.0009 I	0.0011	mg/kg dry	EPA 8260B
Acetone	0.0271 O-01, B	0.0053	mg/kg dry	EPA 8260B
Client ID: MPT-351-2-SB-53-03-032206	Lab ID: B601780-02			
Analyte	Results/Qual	MRL	Units	Method
Acetone	0.0190 O-01, B	0.0053	mg/kg dry	EPA 8260B
Methylene Chloride	0.0252 O-01, B	0.0021	mg/kg dry	EPA 8260B
Client ID: MPT-351-2-SB-26-03-032206	Lab ID: B601780-03			
Analyte	Results/Qual	MRL	Units	Method
Methylene Chloride	0.0243 O-01, B	0.0021	mg/kg dry	EPA 8260B
Acetone	0.0175 O-01, B	0.0052	mg/kg dry	EPA 8260B
Client ID: MPT-351-2-SB-37-03-032206	Lab ID: B601780-04			
Analyte	Results/Qual	MRL	Units	Method
Acetone	0.0278 O-01, D, B	0.0060	mg/kg dry	EPA 8260B
Methylene Chloride	0.0443 O-01, D, B	0.0024	mg/kg dry	EPA 8260B
Client ID: MPT-351-2-SB-30-03-032206	Lab ID: B601780-05			
Analyte	Results/Qual	MRL	Units	Method
Acetone	0.0147 O-01, B	0.0059	mg/kg dry	EPA 8260B
TPH (C8-C40)	171 D	66.6	mg/kg dry	FLPRO
Methylene Chloride	0.0315 O-01, B	0.0024	mg/kg dry	EPA 8260B
Client ID: MPT-351-2-SB-32-03-032206	Lab ID: B601780-06			
Analyte	Results/Qual	MRL	Units	Method
Methylene Chloride	0.0405 O-01, B	0.0021	mg/kg dry	EPA 8260B
Acetone	0.0188 O-01, B	0.0052	mg/kg dry	EPA 8260B
Client ID: MPT-351-2-SB-31-03-032206	Lab ID: B601780-07			
Analyte	Results/Qual	MRL	Units	Method
Methylene Chloride	0.0319 O-01, B	0.0024	mg/kg dry	EPA 8260B
Acetone	0.0199 O-01, B	0.0060	mg/kg dry	EPA 8260B
Client ID: MPT-351-Disposal-032206	Lab ID: B601780-08			
Analyte	Results/Qual	MRL	Units	Method
Cadmium	0.09 I, D	0.11	mg/kg dry	EPA 6010B
Chromium	2.3 D	1.1	mg/kg dry	EPA 6010B
Lead	3.0 D	1.1	mg/kg dry	EPA 6010B



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-58-03-032206
 Lab #: B601780-01
 Prep. Method: EPA 5035_MS
 Analyzed: 03/28/06 By: ds/
 Anal. Method: EPA 8260B
 Anal. Batch:
 QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 95.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.0002 U	0.0002	0.0003	mg/kg dry
1,1,1-Trichloroethane	71-55-6	0.0001 U	0.0001	0.0011	mg/kg dry
1,1,2,2-Tetrachloroethane	79-34-5	0.0002 U	0.0002	0.0002	mg/kg dry
1,1,2-Trichloroethane	79-00-5	0.0002 U	0.0002	0.0011	mg/kg dry
1,1-Dichloroethane	75-34-3	0.0002 U	0.0002	0.0011	mg/kg dry
1,1-Dichloroethene	75-35-4	0.0002 U	0.0002	0.0011	mg/kg dry
1,1-Dichloropropene	563-58-6	0.0002 U	0.0002	0.0011	mg/kg dry
1,2,3-Trichlorobenzene	87-61-6	0.0002 U	0.0002	0.0011	mg/kg dry
1,2,3-Trichloropropane	96-18-4	0.0003 U	0.0003	0.0011	mg/kg dry
1,2,4-Trichlorobenzene	120-82-1	0.0001 U	0.0001	0.0011	mg/kg dry
1,2,4-Trimethylbenzene	95-63-6	0.0002 U	0.0002	0.0011	mg/kg dry
1,2-Dibromo-3-chloropropane	96-12-8	0.0003 U	0.0003	0.0011	mg/kg dry
1,2-Dibromoethane	106-93-4	0.0002 U	0.0002	0.0011	mg/kg dry
1,2-Dichlorobenzene	95-50-1	0.0002 U	0.0002	0.0011	mg/kg dry
1,2-Dichloroethane	107-06-2	0.0001 U	0.0001	0.0011	mg/kg dry
1,2-Dichloropropane	78-87-5	0.0001 U	0.0001	0.0011	mg/kg dry
1,3,5-Trimethylbenzene	108-67-8	0.0002 U	0.0002	0.0011	mg/kg dry
1,3-Dichlorobenzene	541-73-1	0.0002 U	0.0002	0.0011	mg/kg dry
1,3-Dichloropropane	142-28-9	0.0002 U	0.0002	0.0011	mg/kg dry
1,4-Dichlorobenzene	106-46-7	0.0001 U	0.0001	0.0011	mg/kg dry
2,2-Dichloropropane	590-20-7	0.0009 U	0.0009	0.0011	mg/kg dry
2-Butanone	78-93-3	0.0014 U	0.0014	0.0053	mg/kg dry
2-Chloroethyl Vinyl Ether	110-75-8	0.0005 U	0.0005	0.0053	mg/kg dry
2-Chlorotoluene	95-49-8	0.0001 U	0.0001	0.0011	mg/kg dry
2-Hexanone	591-78-6	0.0008 U	0.0008	0.0053	mg/kg dry
4-Chlorotoluene	106-43-4	0.0001 U	0.0001	0.0011	mg/kg dry
4-Isopropyltoluene	99-87-6	0.0005 U	0.0005	0.0011	mg/kg dry
4-Methyl-2-pentanone	108-10-1	0.0009 U	0.0009	0.0053	mg/kg dry
Acetone	67-64-1	0.0271 O-01, B	0.0014	0.0053	mg/kg dry
Benzene	71-43-2	0.0001 U	0.0001	0.0011	mg/kg dry
Bromobenzene	108-86-1	0.0001 U	0.0001	0.0011	mg/kg dry
Bromochloromethane	74-97-5	0.0002 U	0.0002	0.0011	mg/kg dry
Bromodichloromethane	75-27-4	0.0001 U	0.0001	0.0004	mg/kg dry
Bromoform	75-25-2	0.0002 U	0.0002	0.0011	mg/kg dry
Bromomethane	74-83-9	0.0007 U	0.0007	0.0011	mg/kg dry
Carbon disulfide	75-15-0	0.0003 U	0.0003	0.0053	mg/kg dry



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-58-03-032206
 Lab #: B601780-01
 Prep. Method: EPA 5035_MS
 Analyzed: 03/28/06 By: ds/
 Anal. Method: EPA 8260B
 Anal. Batch:
 QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 95.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Carbon Tetrachloride	56-23-5	0.0002 U	0.0002	0.0011	mg/kg dry
Chlorobenzene	108-90-7	0.0001 U	0.0001	0.0011	mg/kg dry
Chloroethane	75-00-3	0.0004 U	0.0004	0.0011	mg/kg dry
Chloroform	67-66-3	0.0001 U	0.0001	0.0011	mg/kg dry
Chloromethane	74-87-3	0.0003 U	0.0003	0.0011	mg/kg dry
cis-1,2-Dichloroethene	156-59-2	0.0002 U	0.0002	0.0011	mg/kg dry
cis-1,3-Dichloropropene	10061-01-5	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromochloromethane	124-48-1	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromomethane	74-95-3	0.0002 U	0.0002	0.0011	mg/kg dry
Dichlorodifluoromethane	75-71-8	0.0003 U	0.0003	0.0011	mg/kg dry
Ethylbenzene	100-41-4	0.0002 U	0.0002	0.0011	mg/kg dry
Hexachlorobutadiene	87-68-3	0.0004 U	0.0004	0.0011	mg/kg dry
Isopropylbenzene	98-82-8	0.0002 U	0.0002	0.0011	mg/kg dry
m,p-Xylenes	108-38-3/106-42-3	0.0003 U	0.0003	0.0021	mg/kg dry
Methylene Chloride	75-09-2	0.0332 O-01, B	0.0005	0.0021	mg/kg dry
Methyl-tert-Butyl Ether	1634-04-4	0.0001 U	0.0001	0.0011	mg/kg dry
Naphthalene	91-20-3	0.0003 U	0.0003	0.0011	mg/kg dry
n-Butyl Benzene	104-51-8	0.0003 U	0.0003	0.0011	mg/kg dry
n-Propyl Benzene	103-65-1	0.0002 U	0.0002	0.0011	mg/kg dry
o-Xylene	95-47-6	0.0001 U	0.0001	0.0011	mg/kg dry
sec-Butylbenzene	135-98-8	0.0002 U	0.0002	0.0011	mg/kg dry
Styrene	100-42-5	0.0002 U	0.0002	0.0011	mg/kg dry
tert-Butylbenzene	98-06-6	0.0003 U	0.0003	0.0011	mg/kg dry
Tetrachloroethene	127-18-4	0.0008 U	0.0008	0.0011	mg/kg dry
Toluene	108-88-3	0.0002 U	0.0002	0.0011	mg/kg dry
trans-1,2-Dichloroethene	156-60-5	0.0003 U	0.0003	0.0011	mg/kg dry
trans-1,3-Dichloropropene	10061-02-6	0.0002 U	0.0002	0.0002	mg/kg dry
Trichloroethene	79-01-6	0.0001 U	0.0001	0.0011	mg/kg dry
Trichlorofluoromethane	75-69-4	0.0009 I	0.0004	0.0011	mg/kg dry
Vinyl chloride	75-01-4	0.0003 U	0.0003	0.0011	mg/kg dry

Surrogate Recovery	Result	Spike Level	% Recovery	% Recovery Limits	
4-Bromofluorobenzene	460-00-4	50.7	50.0	101 %	60-130
Dibromofluoromethane	1868-53-7	51.8	50.0	104 %	66-131
Toluene-d8	2037-26-5	51.2	50.0	102 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-58-03-032206
 Lab #: B601780-01
 Prep. Method: EPA 3545_MS
 Analyzed: 03/24/06 By: jj
 Anal. Method: EPA 8270C
 Anal. Batch:
 QC Batch: 6C22001

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 95.00

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0112 U	0.0112	0.0347	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0104 U	0.0104	0.0347	mg/kg dry
Acenaphthene	83-32-9	0.00764 U	0.00764	0.0347	mg/kg dry
Acenaphthylene	208-96-8	0.0112 U	0.0112	0.0347	mg/kg dry
Anthracene	120-12-7	0.00726 U	0.00726	0.0347	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00726 U	0.00726	0.0347	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00726 U	0.00726	0.0347	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00561 U	0.00561	0.0347	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0107 U	0.0107	0.0347	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00726 U	0.00726	0.0347	mg/kg dry
Chrysene	218-01-9	0.00768 U	0.00768	0.0347	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0118 U	0.0118	0.0347	mg/kg dry
Fluoranthene	206-44-0	0.00937 U	0.00937	0.0347	mg/kg dry
Fluorene	86-73-7	0.00663 U	0.00663	0.0347	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0122 U	0.0122	0.0347	mg/kg dry
Naphthalene	91-20-3	0.0128 U	0.0128	0.0347	mg/kg dry
Phenanthrene	85-01-8	0.00726 U	0.00726	0.0347	mg/kg dry
Pyrene	129-00-0	0.00937 U	0.00937	0.0347	mg/kg dry

Surrogate Recovery	Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.75	100 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-58-03-032206
Lab #: B601780-01
Prep. Method: EPA 3545
Analyzed: 03/24/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6C23001

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 95.00

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	5.91 U	5.91	5.96	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.60	3.51	131 %	29-145
o-Terphenyl	84-15-1	1.91	1.75	109 %	36-140



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-53-03-032206
Lab #: B601780-02
Prep. Method: EPA 5035_MS
Analyzed: 03/28/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 95.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.0002 U	0.0002	0.0003	mg/kg dry
1,1,1-Trichloroethane	71-55-6	0.0001 U	0.0001	0.0011	mg/kg dry
1,1,2,2-Tetrachloroethane	79-34-5	0.0002 U	0.0002	0.0002	mg/kg dry
1,1,2-Trichloroethane	79-00-5	0.0002 U	0.0002	0.0011	mg/kg dry
1,1-Dichloroethane	75-34-3	0.0002 U	0.0002	0.0011	mg/kg dry
1,1-Dichloroethene	75-35-4	0.0002 U	0.0002	0.0011	mg/kg dry
1,1-Dichloropropene	563-58-6	0.0002 U	0.0002	0.0011	mg/kg dry
1,2,3-Trichlorobenzene	87-61-6	0.0002 U	0.0002	0.0011	mg/kg dry
1,2,3-Trichloropropane	96-18-4	0.0003 U	0.0003	0.0011	mg/kg dry
1,2,4-Trichlorobenzene	120-82-1	0.0001 U	0.0001	0.0011	mg/kg dry
1,2,4-Trimethylbenzene	95-63-6	0.0002 U	0.0002	0.0011	mg/kg dry
1,2-Dibromo-3-chloropropane	96-12-8	0.0003 U	0.0003	0.0011	mg/kg dry
1,2-Dibromoethane	106-93-4	0.0002 U	0.0002	0.0011	mg/kg dry
1,2-Dichlorobenzene	95-50-1	0.0002 U	0.0002	0.0011	mg/kg dry
1,2-Dichloroethane	107-06-2	0.0001 U	0.0001	0.0011	mg/kg dry
1,2-Dichloropropane	78-87-5	0.0001 U	0.0001	0.0011	mg/kg dry
1,3,5-Trimethylbenzene	108-67-8	0.0002 U	0.0002	0.0011	mg/kg dry
1,3-Dichlorobenzene	541-73-1	0.0002 U	0.0002	0.0011	mg/kg dry
1,3-Dichloropropane	142-28-9	0.0002 U	0.0002	0.0011	mg/kg dry
1,4-Dichlorobenzene	106-46-7	0.0001 U	0.0001	0.0011	mg/kg dry
2,2-Dichloropropane	590-20-7	0.0009 U	0.0009	0.0011	mg/kg dry
2-Butanone	78-93-3	0.0014 U	0.0014	0.0053	mg/kg dry
2-Chloroethyl Vinyl Ether	110-75-8	0.0005 U	0.0005	0.0053	mg/kg dry
2-Chlorotoluene	95-49-8	0.0001 U	0.0001	0.0011	mg/kg dry
2-Hexanone	591-78-6	0.0008 U	0.0008	0.0053	mg/kg dry
4-Chlorotoluene	106-43-4	0.0001 U	0.0001	0.0011	mg/kg dry
4-Isopropyltoluene	99-87-6	0.0005 U	0.0005	0.0011	mg/kg dry
4-Methyl-2-pentanone	108-10-1	0.0009 U	0.0009	0.0053	mg/kg dry
Acetone	67-64-1	0.0190 O-01, B	0.0014	0.0053	mg/kg dry
Benzene	71-43-2	0.0001 U	0.0001	0.0011	mg/kg dry
Bromobenzene	108-86-1	0.0001 U	0.0001	0.0011	mg/kg dry
Bromochloromethane	74-97-5	0.0002 U	0.0002	0.0011	mg/kg dry
Bromodichloromethane	75-27-4	0.0001 U	0.0001	0.0004	mg/kg dry
Bromoform	75-25-2	0.0002 U	0.0002	0.0011	mg/kg dry
Bromomethane	74-83-9	0.0007 U	0.0007	0.0011	mg/kg dry
Carbon disulfide	75-15-0	0.0003 U	0.0003	0.0053	mg/kg dry



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-53-03-032206
 Lab #: B601780-02
 Prep. Method: EPA 5035_MS
 Analyzed: 03/28/06 By: ds/
 Anal. Method: EPA 8260B
 Anal. Batch:
 QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 95.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Carbon Tetrachloride	56-23-5	0.0002 U	0.0002	0.0011	mg/kg dry
Chlorobenzene	108-90-7	0.0001 U	0.0001	0.0011	mg/kg dry
Chloroethane	75-00-3	0.0004 U	0.0004	0.0011	mg/kg dry
Chloroform	67-66-3	0.0001 U	0.0001	0.0011	mg/kg dry
Chloromethane	74-87-3	0.0003 U	0.0003	0.0011	mg/kg dry
cis-1,2-Dichloroethene	156-59-2	0.0002 U	0.0002	0.0011	mg/kg dry
cis-1,3-Dichloropropene	10061-01-5	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromochloromethane	124-48-1	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromomethane	74-95-3	0.0002 U	0.0002	0.0011	mg/kg dry
Dichlorodifluoromethane	75-71-8	0.0003 U	0.0003	0.0011	mg/kg dry
Ethylbenzene	100-41-4	0.0002 U	0.0002	0.0011	mg/kg dry
Hexachlorobutadiene	87-68-3	0.0004 U	0.0004	0.0011	mg/kg dry
Isopropylbenzene	98-82-8	0.0002 U	0.0002	0.0011	mg/kg dry
m,p-Xylenes	108-38-3/106-42-3	0.0003 U	0.0003	0.0021	mg/kg dry
Methylene Chloride	75-09-2	0.0252 O-01, B	0.0005	0.0021	mg/kg dry
Methyl-tert-Butyl Ether	1634-04-4	0.0001 U	0.0001	0.0011	mg/kg dry
Naphthalene	91-20-3	0.0003 U	0.0003	0.0011	mg/kg dry
n-Butyl Benzene	104-51-8	0.0003 U	0.0003	0.0011	mg/kg dry
n-Propyl Benzene	103-65-1	0.0002 U	0.0002	0.0011	mg/kg dry
o-Xylene	95-47-6	0.0001 U	0.0001	0.0011	mg/kg dry
sec-Butylbenzene	135-98-8	0.0002 U	0.0002	0.0011	mg/kg dry
Styrene	100-42-5	0.0002 U	0.0002	0.0011	mg/kg dry
tert-Butylbenzene	98-06-6	0.0003 U	0.0003	0.0011	mg/kg dry
Tetrachloroethene	127-18-4	0.0008 U	0.0008	0.0011	mg/kg dry
Toluene	108-88-3	0.0002 U	0.0002	0.0011	mg/kg dry
trans-1,2-Dichloroethene	156-60-5	0.0003 U	0.0003	0.0011	mg/kg dry
trans-1,3-Dichloropropene	10061-02-6	0.0002 U	0.0002	0.0002	mg/kg dry
Trichloroethene	79-01-6	0.0001 U	0.0001	0.0011	mg/kg dry
Trichlorofluoromethane	75-69-4	0.0004 U	0.0004	0.0011	mg/kg dry
Vinyl chloride	75-01-4	0.0003 U	0.0003	0.0011	mg/kg dry

Surrogate Recovery	Result	Spike Level	% Recovery	% Recovery Limits	
4-Bromofluorobenzene	460-00-4	50.3	50.0	101 %	60-130
Dibromofluoromethane	1868-53-7	50.2	50.0	100 %	66-131
Toluene-d8	2037-26-5	50.6	50.0	101 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-53-03-032206
Lab #: B601780-02
Prep. Method: EPA 3545_MS
Analyzed: 03/24/06 By: jj
Anal. Method: EPA 8270C
Anal. Batch:
QC Batch: 6C22001

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 95.00

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0112 U	0.0112	0.0347	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0104 U	0.0104	0.0347	mg/kg dry
Acenaphthene	83-32-9	0.00764 U	0.00764	0.0347	mg/kg dry
Acenaphthylene	208-96-8	0.0112 U	0.0112	0.0347	mg/kg dry
Anthracene	120-12-7	0.00726 U	0.00726	0.0347	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00726 U	0.00726	0.0347	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00726 U	0.00726	0.0347	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00561 U	0.00561	0.0347	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0107 U	0.0107	0.0347	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00726 U	0.00726	0.0347	mg/kg dry
Chrysene	218-01-9	0.00768 U	0.00768	0.0347	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0118 U	0.0118	0.0347	mg/kg dry
Fluoranthene	206-44-0	0.00937 U	0.00937	0.0347	mg/kg dry
Fluorene	86-73-7	0.00663 U	0.00663	0.0347	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0122 U	0.0122	0.0347	mg/kg dry
Naphthalene	91-20-3	0.0128 U	0.0128	0.0347	mg/kg dry
Phenanthrene	85-01-8	0.00726 U	0.00726	0.0347	mg/kg dry
Pyrene	129-00-0	0.00937 U	0.00937	0.0347	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.75	1.75	100 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-53-03-032206
Lab #: B601780-02
Prep. Method: EPA 3545
Analyzed: 03/24/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6C23001

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 95.00

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	5.91 U	5.91	5.96	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.68	3.51	133 %	29-145
o-Terphenyl	84-15-1	1.91	1.75	109 %	36-140



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-26-03-032206
Lab #: B601780-03
Prep. Method: EPA 5035_MS
Analyzed: 03/28/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 96.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.0002 U	0.0002	0.0003	mg/kg dry
1,1,1-Trichloroethane	71-55-6	0.0001 U	0.0001	0.0010	mg/kg dry
1,1,2,2-Tetrachloroethane	79-34-5	0.0002 U	0.0002	0.0002	mg/kg dry
1,1,2-Trichloroethane	79-00-5	0.0002 U	0.0002	0.0010	mg/kg dry
1,1-Dichloroethane	75-34-3	0.0002 U	0.0002	0.0010	mg/kg dry
1,1-Dichloroethene	75-35-4	0.0002 U	0.0002	0.0010	mg/kg dry
1,1-Dichloropropene	563-58-6	0.0002 U	0.0002	0.0010	mg/kg dry
1,2,3-Trichlorobenzene	87-61-6	0.0002 U	0.0002	0.0010	mg/kg dry
1,2,3-Trichloropropane	96-18-4	0.0003 U	0.0003	0.0010	mg/kg dry
1,2,4-Trichlorobenzene	120-82-1	0.0001 U	0.0001	0.0010	mg/kg dry
1,2,4-Trimethylbenzene	95-63-6	0.0002 U	0.0002	0.0010	mg/kg dry
1,2-Dibromo-3-chloropropane	96-12-8	0.0003 U	0.0003	0.0010	mg/kg dry
1,2-Dibromoethane	106-93-4	0.0002 U	0.0002	0.0010	mg/kg dry
1,2-Dichlorobenzene	95-50-1	0.0002 U	0.0002	0.0010	mg/kg dry
1,2-Dichloroethane	107-06-2	0.0001 U	0.0001	0.0010	mg/kg dry
1,2-Dichloropropane	78-87-5	0.0001 U	0.0001	0.0010	mg/kg dry
1,3,5-Trimethylbenzene	108-67-8	0.0002 U	0.0002	0.0010	mg/kg dry
1,3-Dichlorobenzene	541-73-1	0.0002 U	0.0002	0.0010	mg/kg dry
1,3-Dichloropropane	142-28-9	0.0002 U	0.0002	0.0010	mg/kg dry
1,4-Dichlorobenzene	106-46-7	0.0001 U	0.0001	0.0010	mg/kg dry
2,2-Dichloropropane	590-20-7	0.0009 U	0.0009	0.0010	mg/kg dry
2-Butanone	78-93-3	0.0014 U	0.0014	0.0052	mg/kg dry
2-Chloroethyl Vinyl Ether	110-75-8	0.0005 U	0.0005	0.0052	mg/kg dry
2-Chlorotoluene	95-49-8	0.0001 U	0.0001	0.0010	mg/kg dry
2-Hexanone	591-78-6	0.0008 U	0.0008	0.0052	mg/kg dry
4-Chlorotoluene	106-43-4	0.0001 U	0.0001	0.0010	mg/kg dry
4-Isopropyltoluene	99-87-6	0.0005 U	0.0005	0.0010	mg/kg dry
4-Methyl-2-pentanone	108-10-1	0.0009 U	0.0009	0.0052	mg/kg dry
Acetone	67-64-1	0.0175 O-01, B	0.0014	0.0052	mg/kg dry
Benzene	71-43-2	0.0001 U	0.0001	0.0010	mg/kg dry
Bromobenzene	108-86-1	0.0001 U	0.0001	0.0010	mg/kg dry
Bromochloromethane	74-97-5	0.0002 U	0.0002	0.0010	mg/kg dry
Bromodichloromethane	75-27-4	0.0001 U	0.0001	0.0004	mg/kg dry
Bromoform	75-25-2	0.0002 U	0.0002	0.0010	mg/kg dry
Bromomethane	74-83-9	0.0007 U	0.0007	0.0010	mg/kg dry
Carbon disulfide	75-15-0	0.0003 U	0.0003	0.0052	mg/kg dry



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-26-03-032206
 Lab #: B601780-03
 Prep. Method: EPA 5035_MS
 Analyzed: 03/28/06 By: ds/
 Anal. Method: EPA 8260B
 Anal. Batch:
 QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 96.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Carbon Tetrachloride	56-23-5	0.0002 U	0.0002	0.0010	mg/kg dry
Chlorobenzene	108-90-7	0.0001 U	0.0001	0.0010	mg/kg dry
Chloroethane	75-00-3	0.0004 U	0.0004	0.0010	mg/kg dry
Chloroform	67-66-3	0.0001 U	0.0001	0.0010	mg/kg dry
Chloromethane	74-87-3	0.0003 U	0.0003	0.0010	mg/kg dry
cis-1,2-Dichloroethene	156-59-2	0.0002 U	0.0002	0.0010	mg/kg dry
cis-1,3-Dichloropropene	10061-01-5	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromochloromethane	124-48-1	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromomethane	74-95-3	0.0002 U	0.0002	0.0010	mg/kg dry
Dichlorodifluoromethane	75-71-8	0.0003 U	0.0003	0.0010	mg/kg dry
Ethylbenzene	100-41-4	0.0002 U	0.0002	0.0010	mg/kg dry
Hexachlorobutadiene	87-68-3	0.0004 U	0.0004	0.0010	mg/kg dry
Isopropylbenzene	98-82-8	0.0002 U	0.0002	0.0010	mg/kg dry
m,p-Xylenes	108-38-3/106-42-3	0.0003 U	0.0003	0.0021	mg/kg dry
Methylene Chloride	75-09-2	0.0243 O-01, B	0.0005	0.0021	mg/kg dry
Methyl-tert-Butyl Ether	1634-04-4	0.0001 U	0.0001	0.0010	mg/kg dry
Naphthalene	91-20-3	0.0003 U	0.0003	0.0010	mg/kg dry
n-Butyl Benzene	104-51-8	0.0003 U	0.0003	0.0010	mg/kg dry
n-Propyl Benzene	103-65-1	0.0002 U	0.0002	0.0010	mg/kg dry
o-Xylene	95-47-6	0.0001 U	0.0001	0.0010	mg/kg dry
sec-Butylbenzene	135-98-8	0.0002 U	0.0002	0.0010	mg/kg dry
Styrene	100-42-5	0.0002 U	0.0002	0.0010	mg/kg dry
tert-Butylbenzene	98-06-6	0.0003 U	0.0003	0.0010	mg/kg dry
Tetrachloroethene	127-18-4	0.0008 U	0.0008	0.0010	mg/kg dry
Toluene	108-88-3	0.0002 U	0.0002	0.0010	mg/kg dry
trans-1,2-Dichloroethene	156-60-5	0.0003 U	0.0003	0.0010	mg/kg dry
trans-1,3-Dichloropropene	10061-02-6	0.0002 U	0.0002	0.0002	mg/kg dry
Trichloroethene	79-01-6	0.0001 U	0.0001	0.0010	mg/kg dry
Trichlorofluoromethane	75-69-4	0.0004 U	0.0004	0.0010	mg/kg dry
Vinyl chloride	75-01-4	0.0003 U	0.0003	0.0010	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	49.8	50.0	100 %	60-130
Dibromofluoromethane	1868-53-7	50.6	50.0	101 %	66-131
Toluene-d8	2037-26-5	38.6	50.0	77 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-26-03-032206
 Lab #: B601780-03
 Prep. Method: EPA 3545_MS
 Analyzed: 03/24/06 By: jj
 Anal. Method: EPA 8270C
 Anal. Batch:
 QC Batch: 6C22001

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 96.00

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0110 U	0.0110	0.0344	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0103 U	0.0103	0.0344	mg/kg dry
Acenaphthene	83-32-9	0.00756 U	0.00756	0.0344	mg/kg dry
Acenaphthylene	208-96-8	0.0110 U	0.0110	0.0344	mg/kg dry
Anthracene	120-12-7	0.00719 U	0.00719	0.0344	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00719 U	0.00719	0.0344	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00719 U	0.00719	0.0344	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00555 U	0.00555	0.0344	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0106 U	0.0106	0.0344	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00719 U	0.00719	0.0344	mg/kg dry
Chrysene	218-01-9	0.00760 U	0.00760	0.0344	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0117 U	0.0117	0.0344	mg/kg dry
Fluoranthene	206-44-0	0.00927 U	0.00927	0.0344	mg/kg dry
Fluorene	86-73-7	0.00656 U	0.00656	0.0344	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0121 U	0.0121	0.0344	mg/kg dry
Naphthalene	91-20-3	0.0127 U	0.0127	0.0344	mg/kg dry
Phenanthrene	85-01-8	0.00719 U	0.00719	0.0344	mg/kg dry
Pyrene	129-00-0	0.00927 U	0.00927	0.0344	mg/kg dry

Surrogate Recovery	Result	Spike Level	% Recovery	% Recovery Limits	
p-Terphenyl	92-94-4	1.57	1.74	90 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-26-03-032206
Lab #: B601780-03
Prep. Method: EPA 3545
Analyzed: 03/24/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6C23001

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 96.00

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	5.84 U	5.84	5.90	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.51	3.47	130 %	29-145
o-Terphenyl	84-15-1	1.84	1.74	106 %	36-140



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-37-03-032206
Lab #: B601780-04
Prep. Method: EPA 5035_MS
Analyzed: 03/28/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 93.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.0002 U, D	0.0002	0.0004	mg/kg dry
1,1,1-Trichloroethane	71-55-6	0.0001 U, D	0.0001	0.0012	mg/kg dry
1,1,2,2-Tetrachloroethane	79-34-5	0.0002 U, D	0.0002	0.0002	mg/kg dry
1,1,2-Trichloroethane	79-00-5	0.0002 U, D	0.0002	0.0012	mg/kg dry
1,1-Dichloroethane	75-34-3	0.0002 U, D	0.0002	0.0012	mg/kg dry
1,1-Dichloroethene	75-35-4	0.0002 U, D	0.0002	0.0012	mg/kg dry
1,1-Dichloropropene	563-58-6	0.0002 U, D	0.0002	0.0012	mg/kg dry
1,2,3-Trichlorobenzene	87-61-6	0.0002 U, D	0.0002	0.0012	mg/kg dry
1,2,3-Trichloropropane	96-18-4	0.0004 U, D	0.0004	0.0012	mg/kg dry
1,2,4-Trichlorobenzene	120-82-1	0.0001 U, D	0.0001	0.0012	mg/kg dry
1,2,4-Trimethylbenzene	95-63-6	0.0002 U, D	0.0002	0.0012	mg/kg dry
1,2-Dibromo-3-chloropropane	96-12-8	0.0004 U, D	0.0004	0.0012	mg/kg dry
1,2-Dibromoethane	106-93-4	0.0002 U, D	0.0002	0.0012	mg/kg dry
1,2-Dichlorobenzene	95-50-1	0.0002 U, D	0.0002	0.0012	mg/kg dry
1,2-Dichloroethane	107-06-2	0.0001 U, D	0.0001	0.0012	mg/kg dry
1,2-Dichloropropane	78-87-5	0.0001 U, D	0.0001	0.0012	mg/kg dry
1,3,5-Trimethylbenzene	108-67-8	0.0002 U, D	0.0002	0.0012	mg/kg dry
1,3-Dichlorobenzene	541-73-1	0.0002 U, D	0.0002	0.0012	mg/kg dry
1,3-Dichloropropane	142-28-9	0.0002 U, D	0.0002	0.0012	mg/kg dry
1,4-Dichlorobenzene	106-46-7	0.0001 U, D	0.0001	0.0012	mg/kg dry
2,2-Dichloropropane	590-20-7	0.0011 U, D	0.0011	0.0012	mg/kg dry
2-Butanone	78-93-3	0.0016 U, D	0.0016	0.0060	mg/kg dry
2-Chloroethyl Vinyl Ether	110-75-8	0.0006 U, D	0.0006	0.0060	mg/kg dry
2-Chlorotoluene	95-49-8	0.0001 U, D	0.0001	0.0012	mg/kg dry
2-Hexanone	591-78-6	0.0010 U, D	0.0010	0.0060	mg/kg dry
4-Chlorotoluene	106-43-4	0.0001 U, D	0.0001	0.0012	mg/kg dry
4-Isopropyltoluene	99-87-6	0.0006 U, D	0.0006	0.0012	mg/kg dry
4-Methyl-2-pentanone	108-10-1	0.0011 U, D	0.0011	0.0060	mg/kg dry
Acetone	67-64-1	0.0278 O-01, D, B	0.0016	0.0060	mg/kg dry
Benzene	71-43-2	0.0001 U, D	0.0001	0.0012	mg/kg dry
Bromobenzene	108-86-1	0.0001 U, D	0.0001	0.0012	mg/kg dry
Bromochloromethane	74-97-5	0.0002 U, D	0.0002	0.0012	mg/kg dry
Bromodichloromethane	75-27-4	0.0001 U, D	0.0001	0.0005	mg/kg dry
Bromoform	75-25-2	0.0002 U, D	0.0002	0.0012	mg/kg dry
Bromomethane	74-83-9	0.0008 U, D	0.0008	0.0012	mg/kg dry
Carbon disulfide	75-15-0	0.0004 U, D	0.0004	0.0060	mg/kg dry



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-37-03-032206
 Lab #: B601780-04
 Prep. Method: EPA 5035_MS
 Analyzed: 03/28/06 By: ds/
 Anal. Method: EPA 8260B
 Anal. Batch:
 QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 93.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Carbon Tetrachloride	56-23-5	0.0002 U, D	0.0002	0.0012	mg/kg dry
Chlorobenzene	108-90-7	0.0001 U, D	0.0001	0.0012	mg/kg dry
Chloroethane	75-00-3	0.0005 U, D	0.0005	0.0012	mg/kg dry
Chloroform	67-66-3	0.0001 U, D	0.0001	0.0012	mg/kg dry
Chloromethane	74-87-3	0.0004 U, D	0.0004	0.0012	mg/kg dry
cis-1,2-Dichloroethene	156-59-2	0.0002 U, D	0.0002	0.0012	mg/kg dry
cis-1,3-Dichloropropene	10061-01-5	0.0002 U, D	0.0002	0.0002	mg/kg dry
Dibromochloromethane	124-48-1	0.0002 U, D	0.0002	0.0002	mg/kg dry
Dibromomethane	74-95-3	0.0002 U, D	0.0002	0.0012	mg/kg dry
Dichlorodifluoromethane	75-71-8	0.0004 U, D	0.0004	0.0012	mg/kg dry
Ethylbenzene	100-41-4	0.0002 U, D	0.0002	0.0012	mg/kg dry
Hexachlorobutadiene	87-68-3	0.0005 U, D	0.0005	0.0012	mg/kg dry
Isopropylbenzene	98-82-8	0.0002 U, D	0.0002	0.0012	mg/kg dry
m,p-Xylenes	108-38-3/106-42-3	0.0004 U, D	0.0004	0.0024	mg/kg dry
Methylene Chloride	75-09-2	0.0443 O-01, D, B	0.0006	0.0024	mg/kg dry
Methyl-tert-Butyl Ether	1634-04-4	0.0001 U, D	0.0001	0.0012	mg/kg dry
Naphthalene	91-20-3	0.0004 U, D	0.0004	0.0012	mg/kg dry
n-Butyl Benzene	104-51-8	0.0004 U, D	0.0004	0.0012	mg/kg dry
n-Propyl Benzene	103-65-1	0.0002 U, D	0.0002	0.0012	mg/kg dry
o-Xylene	95-47-6	0.0001 U, D	0.0001	0.0012	mg/kg dry
sec-Butylbenzene	135-98-8	0.0002 U, D	0.0002	0.0012	mg/kg dry
Styrene	100-42-5	0.0002 U, D	0.0002	0.0012	mg/kg dry
tert-Butylbenzene	98-06-6	0.0004 U, D	0.0004	0.0012	mg/kg dry
Tetrachloroethene	127-18-4	0.0010 U, D	0.0010	0.0012	mg/kg dry
Toluene	108-88-3	0.0002 U, D	0.0002	0.0012	mg/kg dry
trans-1,2-Dichloroethene	156-60-5	0.0004 U, D	0.0004	0.0012	mg/kg dry
trans-1,3-Dichloropropene	10061-02-6	0.0002 U, D	0.0002	0.0002	mg/kg dry
Trichloroethene	79-01-6	0.0001 U, D	0.0001	0.0012	mg/kg dry
Trichlorofluoromethane	75-69-4	0.0005 U, D	0.0005	0.0012	mg/kg dry
Vinyl chloride	75-01-4	0.0004 U, D	0.0004	0.0012	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	50.1	50.0	100 %	60-130
Dibromofluoromethane	1868-53-7	52.3	50.0	105 %	66-131
Toluene-d8	2037-26-5	50.9	50.0	102 %	67-139

ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-37-03-032206
 Lab #: B601780-04
 Prep. Method: EPA 3545_MS
 Analyzed: 03/24/06 By: jj
 Anal. Method: EPA 8270C
 Anal. Batch:
 QC Batch: 6C22001

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 93.00

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0114 U	0.0114	0.0355	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0106 U	0.0106	0.0355	mg/kg dry
Acenaphthene	83-32-9	0.00781 U	0.00781	0.0355	mg/kg dry
Acenaphthylene	208-96-8	0.0114 U	0.0114	0.0355	mg/kg dry
Anthracene	120-12-7	0.00742 U	0.00742	0.0355	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00742 U	0.00742	0.0355	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00742 U	0.00742	0.0355	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00573 U	0.00573	0.0355	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0110 U	0.0110	0.0355	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00742 U	0.00742	0.0355	mg/kg dry
Chrysene	218-01-9	0.00785 U	0.00785	0.0355	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0120 U	0.0120	0.0355	mg/kg dry
Fluoranthene	206-44-0	0.00957 U	0.00957	0.0355	mg/kg dry
Fluorene	86-73-7	0.00677 U	0.00677	0.0355	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0125 U	0.0125	0.0355	mg/kg dry
Naphthalene	91-20-3	0.0131 U	0.0131	0.0355	mg/kg dry
Phenanthrene	85-01-8	0.00742 U	0.00742	0.0355	mg/kg dry
Pyrene	129-00-0	0.00957 U	0.00957	0.0355	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.71	1.79	96 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-37-03-032206
Lab #: B601780-04
Prep. Method: EPA 3545
Analyzed: 03/24/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6C23001

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 93.00

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	6.03 U	6.03	6.09	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.36	3.58	122 %	29-145
o-Terphenyl	84-15-1	1.82	1.79	102 %	36-140

ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-30-03-032206
 Lab #: B601780-05
 Prep. Method: EPA 5035_MS
 Analyzed: 03/28/06 By: ds/
 Anal. Method: EPA 8260B
 Anal. Batch:
 QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 85.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.0002 U	0.0002	0.0004	mg/kg dry
1,1,1-Trichloroethane	71-55-6	0.0001 U	0.0001	0.0012	mg/kg dry
1,1,2,2-Tetrachloroethane	79-34-5	0.0002 U	0.0002	0.0002	mg/kg dry
1,1,2-Trichloroethane	79-00-5	0.0002 U	0.0002	0.0012	mg/kg dry
1,1-Dichloroethane	75-34-3	0.0002 U	0.0002	0.0012	mg/kg dry
1,1-Dichloroethene	75-35-4	0.0002 U	0.0002	0.0012	mg/kg dry
1,1-Dichloropropene	563-58-6	0.0002 U	0.0002	0.0012	mg/kg dry
1,2,3-Trichlorobenzene	87-61-6	0.0002 U	0.0002	0.0012	mg/kg dry
1,2,3-Trichloropropane	96-18-4	0.0004 U	0.0004	0.0012	mg/kg dry
1,2,4-Trichlorobenzene	120-82-1	0.0001 U	0.0001	0.0012	mg/kg dry
1,2,4-Trimethylbenzene	95-63-6	0.0002 U	0.0002	0.0012	mg/kg dry
1,2-Dibromo-3-chloropropane	96-12-8	0.0004 U	0.0004	0.0012	mg/kg dry
1,2-Dibromoethane	106-93-4	0.0002 U	0.0002	0.0012	mg/kg dry
1,2-Dichlorobenzene	95-50-1	0.0002 U	0.0002	0.0012	mg/kg dry
1,2-Dichloroethane	107-06-2	0.0001 U	0.0001	0.0012	mg/kg dry
1,2-Dichloropropane	78-87-5	0.0001 U	0.0001	0.0012	mg/kg dry
1,3,5-Trimethylbenzene	108-67-8	0.0002 U	0.0002	0.0012	mg/kg dry
1,3-Dichlorobenzene	541-73-1	0.0002 U	0.0002	0.0012	mg/kg dry
1,3-Dichloropropane	142-28-9	0.0002 U	0.0002	0.0012	mg/kg dry
1,4-Dichlorobenzene	106-46-7	0.0001 U	0.0001	0.0012	mg/kg dry
2,2-Dichloropropane	590-20-7	0.0011 U	0.0011	0.0012	mg/kg dry
2-Butanone	78-93-3	0.0015 U	0.0015	0.0059	mg/kg dry
2-Chloroethyl Vinyl Ether	110-75-8	0.0006 U	0.0006	0.0059	mg/kg dry
2-Chlorotoluene	95-49-8	0.0001 U	0.0001	0.0012	mg/kg dry
2-Hexanone	591-78-6	0.0009 U	0.0009	0.0059	mg/kg dry
4-Chlorotoluene	106-43-4	0.0001 U	0.0001	0.0012	mg/kg dry
4-Isopropyltoluene	99-87-6	0.0006 U	0.0006	0.0012	mg/kg dry
4-Methyl-2-pentanone	108-10-1	0.0011 U	0.0011	0.0059	mg/kg dry
Acetone	67-64-1	0.0147 O-01, B	0.0015	0.0059	mg/kg dry
Benzene	71-43-2	0.0001 U	0.0001	0.0012	mg/kg dry
Bromobenzene	108-86-1	0.0001 U	0.0001	0.0012	mg/kg dry
Bromochloromethane	74-97-5	0.0002 U	0.0002	0.0012	mg/kg dry
Bromodichloromethane	75-27-4	0.0001 U	0.0001	0.0005	mg/kg dry
Bromoform	75-25-2	0.0002 U	0.0002	0.0012	mg/kg dry
Bromomethane	74-83-9	0.0008 U	0.0008	0.0012	mg/kg dry
Carbon disulfide	75-15-0	0.0004 U	0.0004	0.0059	mg/kg dry



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-30-03-032206
 Lab #: B601780-05
 Prep. Method: EPA 5035_MS
 Analyzed: 03/28/06 By: ds/
 Anal. Method: EPA 8260B
 Anal. Batch:
 QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 85.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Carbon Tetrachloride	56-23-5	0.0002 U	0.0002	0.0012	mg/kg dry
Chlorobenzene	108-90-7	0.0001 U	0.0001	0.0012	mg/kg dry
Chloroethane	75-00-3	0.0005 U	0.0005	0.0012	mg/kg dry
Chloroform	67-66-3	0.0001 U	0.0001	0.0012	mg/kg dry
Chloromethane	74-87-3	0.0004 U	0.0004	0.0012	mg/kg dry
cis-1,2-Dichloroethene	156-59-2	0.0002 U	0.0002	0.0012	mg/kg dry
cis-1,3-Dichloropropene	10061-01-5	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromochloromethane	124-48-1	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromomethane	74-95-3	0.0002 U	0.0002	0.0012	mg/kg dry
Dichlorodifluoromethane	75-71-8	0.0004 U	0.0004	0.0012	mg/kg dry
Ethylbenzene	100-41-4	0.0002 U	0.0002	0.0012	mg/kg dry
Hexachlorobutadiene	87-68-3	0.0005 U	0.0005	0.0012	mg/kg dry
Isopropylbenzene	98-82-8	0.0002 U	0.0002	0.0012	mg/kg dry
m,p-Xylenes	108-38-3/106-42-3	0.0004 U	0.0004	0.0024	mg/kg dry
Methylene Chloride	75-09-2	0.0315 O-01, B	0.0006	0.0024	mg/kg dry
Methyl-tert-Butyl Ether	1634-04-4	0.0001 U	0.0001	0.0012	mg/kg dry
Naphthalene	91-20-3	0.0004 U	0.0004	0.0012	mg/kg dry
n-Butyl Benzene	104-51-8	0.0004 U	0.0004	0.0012	mg/kg dry
n-Propyl Benzene	103-65-1	0.0002 U	0.0002	0.0012	mg/kg dry
o-Xylene	95-47-6	0.0001 U	0.0001	0.0012	mg/kg dry
sec-Butylbenzene	135-98-8	0.0002 U	0.0002	0.0012	mg/kg dry
Styrene	100-42-5	0.0002 U	0.0002	0.0012	mg/kg dry
tert-Butylbenzene	98-06-6	0.0004 U	0.0004	0.0012	mg/kg dry
Tetrachloroethene	127-18-4	0.0009 U	0.0009	0.0012	mg/kg dry
Toluene	108-88-3	0.0002 U	0.0002	0.0012	mg/kg dry
trans-1,2-Dichloroethene	156-60-5	0.0004 U	0.0004	0.0012	mg/kg dry
trans-1,3-Dichloropropene	10061-02-6	0.0002 U	0.0002	0.0002	mg/kg dry
Trichloroethene	79-01-6	0.0001 U	0.0001	0.0012	mg/kg dry
Trichlorofluoromethane	75-69-4	0.0005 U	0.0005	0.0012	mg/kg dry
Vinyl chloride	75-01-4	0.0004 U	0.0004	0.0012	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	49.6	50.0	99 %	60-130
Dibromofluoromethane	1868-53-7	51.7	50.0	103 %	66-131
Toluene-d8	2037-26-5	50.3	50.0	101 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-30-03-032206
 Lab #: B601780-05
 Prep. Method: EPA 3545_MS
 Analyzed: 03/24/06 By: jj
 Anal. Method: EPA 8270C
 Anal. Batch:
 QC Batch: 6C22001

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 85.00

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0125 U	0.0125	0.0388	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0116 U	0.0116	0.0388	mg/kg dry
Acenaphthene	83-32-9	0.00854 U	0.00854	0.0388	mg/kg dry
Acenaphthylene	208-96-8	0.0125 U	0.0125	0.0388	mg/kg dry
Anthracene	120-12-7	0.00812 U	0.00812	0.0388	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00812 U	0.00812	0.0388	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00812 U	0.00812	0.0388	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00627 U	0.00627	0.0388	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0120 U	0.0120	0.0388	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00812 U	0.00812	0.0388	mg/kg dry
Chrysene	218-01-9	0.00859 U	0.00859	0.0388	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0132 U	0.0132	0.0388	mg/kg dry
Fluoranthene	206-44-0	0.0105 U	0.0105	0.0388	mg/kg dry
Fluorene	86-73-7	0.00741 U	0.00741	0.0388	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0136 U	0.0136	0.0388	mg/kg dry
Naphthalene	91-20-3	0.0144 U	0.0144	0.0388	mg/kg dry
Phenanthrene	85-01-8	0.00812 U	0.00812	0.0388	mg/kg dry
Pyrene	129-00-0	0.0105 U	0.0105	0.0388	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	2.00	1.96	102 %	10-167

ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-30-03-032206
 Lab #: B601780-05
 Prep. Method: EPA 3545
 Analyzed: 03/24/06 By: rw
 Anal. Method: FLPRO
 Anal. Batch:
 QC Batch: 6C23001

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 10
 Percent Solids: 85.00

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	171 D	66.0	66.6	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.62	3.92	118 %	29-145
o-Terphenyl	84-15-1	2.01	1.96	103 %	36-140



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-32-03-032206
Lab #: B601780-06
Prep. Method: EPA 5035_MS
Analyzed: 03/28/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 96.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.0002 U	0.0002	0.0003	mg/kg dry
1,1,1-Trichloroethane	71-55-6	0.0001 U	0.0001	0.0010	mg/kg dry
1,1,2,2-Tetrachloroethane	79-34-5	0.0002 U	0.0002	0.0002	mg/kg dry
1,1,2-Trichloroethane	79-00-5	0.0002 U	0.0002	0.0010	mg/kg dry
1,1-Dichloroethane	75-34-3	0.0002 U	0.0002	0.0010	mg/kg dry
1,1-Dichloroethene	75-35-4	0.0002 U	0.0002	0.0010	mg/kg dry
1,1-Dichloropropene	563-58-6	0.0002 U	0.0002	0.0010	mg/kg dry
1,2,3-Trichlorobenzene	87-61-6	0.0002 U	0.0002	0.0010	mg/kg dry
1,2,3-Trichloropropane	96-18-4	0.0003 U	0.0003	0.0010	mg/kg dry
1,2,4-Trichlorobenzene	120-82-1	0.0001 U	0.0001	0.0010	mg/kg dry
1,2,4-Trimethylbenzene	95-63-6	0.0002 U	0.0002	0.0010	mg/kg dry
1,2-Dibromo-3-chloropropane	96-12-8	0.0003 U	0.0003	0.0010	mg/kg dry
1,2-Dibromoethane	106-93-4	0.0002 U	0.0002	0.0010	mg/kg dry
1,2-Dichlorobenzene	95-50-1	0.0002 U	0.0002	0.0010	mg/kg dry
1,2-Dichloroethane	107-06-2	0.0001 U	0.0001	0.0010	mg/kg dry
1,2-Dichloropropane	78-87-5	0.0001 U	0.0001	0.0010	mg/kg dry
1,3,5-Trimethylbenzene	108-67-8	0.0002 U	0.0002	0.0010	mg/kg dry
1,3-Dichlorobenzene	541-73-1	0.0002 U	0.0002	0.0010	mg/kg dry
1,3-Dichloropropane	142-28-9	0.0002 U	0.0002	0.0010	mg/kg dry
1,4-Dichlorobenzene	106-46-7	0.0001 U	0.0001	0.0010	mg/kg dry
2,2-Dichloropropane	590-20-7	0.0009 U	0.0009	0.0010	mg/kg dry
2-Butanone	78-93-3	0.0014 U	0.0014	0.0052	mg/kg dry
2-Chloroethyl Vinyl Ether	110-75-8	0.0005 U	0.0005	0.0052	mg/kg dry
2-Chlorotoluene	95-49-8	0.0001 U	0.0001	0.0010	mg/kg dry
2-Hexanone	591-78-6	0.0008 U	0.0008	0.0052	mg/kg dry
4-Chlorotoluene	106-43-4	0.0001 U	0.0001	0.0010	mg/kg dry
4-Isopropyltoluene	99-87-6	0.0005 U	0.0005	0.0010	mg/kg dry
4-Methyl-2-pentanone	108-10-1	0.0009 U	0.0009	0.0052	mg/kg dry
Acetone	67-64-1	0.0188 O-01, B	0.0014	0.0052	mg/kg dry
Benzene	71-43-2	0.0001 U	0.0001	0.0010	mg/kg dry
Bromobenzene	108-86-1	0.0001 U	0.0001	0.0010	mg/kg dry
Bromochloromethane	74-97-5	0.0002 U	0.0002	0.0010	mg/kg dry
Bromodichloromethane	75-27-4	0.0001 U	0.0001	0.0004	mg/kg dry
Bromoform	75-25-2	0.0002 U	0.0002	0.0010	mg/kg dry
Bromomethane	74-83-9	0.0007 U	0.0007	0.0010	mg/kg dry
Carbon disulfide	75-15-0	0.0003 U	0.0003	0.0052	mg/kg dry



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-32-03-032206
 Lab #: B601780-06
 Prep. Method: EPA 5035_MS
 Analyzed: 03/28/06 By: ds/
 Anal. Method: EPA 8260B
 Anal. Batch:
 QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 96.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Carbon Tetrachloride	56-23-5	0.0002 U	0.0002	0.0010	mg/kg dry
Chlorobenzene	108-90-7	0.0001 U	0.0001	0.0010	mg/kg dry
Chloroethane	75-00-3	0.0004 U	0.0004	0.0010	mg/kg dry
Chloroform	67-66-3	0.0001 U	0.0001	0.0010	mg/kg dry
Chloromethane	74-87-3	0.0003 U	0.0003	0.0010	mg/kg dry
cis-1,2-Dichloroethene	156-59-2	0.0002 U	0.0002	0.0010	mg/kg dry
cis-1,3-Dichloropropene	10061-01-5	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromochloromethane	124-48-1	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromomethane	74-95-3	0.0002 U	0.0002	0.0010	mg/kg dry
Dichlorodifluoromethane	75-71-8	0.0003 U	0.0003	0.0010	mg/kg dry
Ethylbenzene	100-41-4	0.0002 U	0.0002	0.0010	mg/kg dry
Hexachlorobutadiene	87-68-3	0.0004 U	0.0004	0.0010	mg/kg dry
Isopropylbenzene	98-82-8	0.0002 U	0.0002	0.0010	mg/kg dry
m,p-Xylenes	108-38-3/106-42-3	0.0003 U	0.0003	0.0021	mg/kg dry
Methylene Chloride	75-09-2	0.0405 O-01, B	0.0005	0.0021	mg/kg dry
Methyl-tert-Butyl Ether	1634-04-4	0.0001 U	0.0001	0.0010	mg/kg dry
Naphthalene	91-20-3	0.0003 U	0.0003	0.0010	mg/kg dry
n-Butyl Benzene	104-51-8	0.0003 U	0.0003	0.0010	mg/kg dry
n-Propyl Benzene	103-65-1	0.0002 U	0.0002	0.0010	mg/kg dry
o-Xylene	95-47-6	0.0001 U	0.0001	0.0010	mg/kg dry
sec-Butylbenzene	135-98-8	0.0002 U	0.0002	0.0010	mg/kg dry
Styrene	100-42-5	0.0002 U	0.0002	0.0010	mg/kg dry
tert-Butylbenzene	98-06-6	0.0003 U	0.0003	0.0010	mg/kg dry
Tetrachloroethene	127-18-4	0.0008 U	0.0008	0.0010	mg/kg dry
Toluene	108-88-3	0.0002 U	0.0002	0.0010	mg/kg dry
trans-1,2-Dichloroethene	156-60-5	0.0003 U	0.0003	0.0010	mg/kg dry
trans-1,3-Dichloropropene	10061-02-6	0.0002 U	0.0002	0.0002	mg/kg dry
Trichloroethene	79-01-6	0.0001 U	0.0001	0.0010	mg/kg dry
Trichlorofluoromethane	75-69-4	0.0004 U	0.0004	0.0010	mg/kg dry
Vinyl chloride	75-01-4	0.0003 U	0.0003	0.0010	mg/kg dry

Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	49.7	50.0	99 %	60-130
Dibromofluoromethane	1868-53-7	51.3	50.0	103 %	66-131
Toluene-d8	2037-26-5	51.1	50.0	102 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-32-03-032206
 Lab #: B601780-06
 Prep. Method: EPA 3545_MS
 Analyzed: 03/24/06 By: jj
 Anal. Method: EPA 8270C
 Anal. Batch:
 QC Batch: 6C22001

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 96.00

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0110 U	0.0110	0.0344	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0103 U	0.0103	0.0344	mg/kg dry
Acenaphthene	83-32-9	0.00756 U	0.00756	0.0344	mg/kg dry
Acenaphthylene	208-96-8	0.0110 U	0.0110	0.0344	mg/kg dry
Anthracene	120-12-7	0.00719 U	0.00719	0.0344	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00719 U	0.00719	0.0344	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00719 U	0.00719	0.0344	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00555 U	0.00555	0.0344	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0106 U	0.0106	0.0344	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00719 U	0.00719	0.0344	mg/kg dry
Chrysene	218-01-9	0.00760 U	0.00760	0.0344	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0117 U	0.0117	0.0344	mg/kg dry
Fluoranthene	206-44-0	0.00927 U	0.00927	0.0344	mg/kg dry
Fluorene	86-73-7	0.00656 U	0.00656	0.0344	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0121 U	0.0121	0.0344	mg/kg dry
Naphthalene	91-20-3	0.0127 U	0.0127	0.0344	mg/kg dry
Phenanthrene	85-01-8	0.00719 U	0.00719	0.0344	mg/kg dry
Pyrene	129-00-0	0.00927 U	0.00927	0.0344	mg/kg dry

Surrogate Recovery	Result	Spike Level	% Recovery	% Recovery Limits	
p-Terphenyl	92-94-4	1.68	1.74	97 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-32-03-032206
Lab #: B601780-06
Prep. Method: EPA 3545
Analyzed: 03/24/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6C23001

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 96.00

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	5.84 U	5.84	5.90	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	4.32	3.47	124 %	29-145
o-Terphenyl	84-15-1	1.84	1.74	106 %	36-140



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-31-03-032206
Lab #: B601780-07
Prep. Method: EPA 5035_MS
Analyzed: 03/28/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 84.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.0002 U	0.0002	0.0004	mg/kg dry
1,1,1-Trichloroethane	71-55-6	0.0001 U	0.0001	0.0012	mg/kg dry
1,1,2,2-Tetrachloroethane	79-34-5	0.0002 U	0.0002	0.0002	mg/kg dry
1,1,2-Trichloroethane	79-00-5	0.0002 U	0.0002	0.0012	mg/kg dry
1,1-Dichloroethane	75-34-3	0.0002 U	0.0002	0.0012	mg/kg dry
1,1-Dichloroethene	75-35-4	0.0002 U	0.0002	0.0012	mg/kg dry
1,1-Dichloropropene	563-58-6	0.0002 U	0.0002	0.0012	mg/kg dry
1,2,3-Trichlorobenzene	87-61-6	0.0002 U	0.0002	0.0012	mg/kg dry
1,2,3-Trichloropropane	96-18-4	0.0004 U	0.0004	0.0012	mg/kg dry
1,2,4-Trichlorobenzene	120-82-1	0.0001 U	0.0001	0.0012	mg/kg dry
1,2,4-Trimethylbenzene	95-63-6	0.0002 U	0.0002	0.0012	mg/kg dry
1,2-Dibromo-3-chloropropane	96-12-8	0.0004 U	0.0004	0.0012	mg/kg dry
1,2-Dibromoethane	106-93-4	0.0002 U	0.0002	0.0012	mg/kg dry
1,2-Dichlorobenzene	95-50-1	0.0002 U	0.0002	0.0012	mg/kg dry
1,2-Dichloroethane	107-06-2	0.0001 U	0.0001	0.0012	mg/kg dry
1,2-Dichloropropane	78-87-5	0.0001 U	0.0001	0.0012	mg/kg dry
1,3,5-Trimethylbenzene	108-67-8	0.0002 U	0.0002	0.0012	mg/kg dry
1,3-Dichlorobenzene	541-73-1	0.0002 U	0.0002	0.0012	mg/kg dry
1,3-Dichloropropane	142-28-9	0.0002 U	0.0002	0.0012	mg/kg dry
1,4-Dichlorobenzene	106-46-7	0.0001 U	0.0001	0.0012	mg/kg dry
2,2-Dichloropropane	590-20-7	0.0011 U	0.0011	0.0012	mg/kg dry
2-Butanone	78-93-3	0.0015 U	0.0015	0.0060	mg/kg dry
2-Chloroethyl Vinyl Ether	110-75-8	0.0006 U	0.0006	0.0060	mg/kg dry
2-Chlorotoluene	95-49-8	0.0001 U	0.0001	0.0012	mg/kg dry
2-Hexanone	591-78-6	0.0010 U	0.0010	0.0060	mg/kg dry
4-Chlorotoluene	106-43-4	0.0001 U	0.0001	0.0012	mg/kg dry
4-Isopropyltoluene	99-87-6	0.0006 U	0.0006	0.0012	mg/kg dry
4-Methyl-2-pentanone	108-10-1	0.0011 U	0.0011	0.0060	mg/kg dry
Acetone	67-64-1	0.0199 O-01, B	0.0015	0.0060	mg/kg dry
Benzene	71-43-2	0.0001 U	0.0001	0.0012	mg/kg dry
Bromobenzene	108-86-1	0.0001 U	0.0001	0.0012	mg/kg dry
Bromochloromethane	74-97-5	0.0002 U	0.0002	0.0012	mg/kg dry
Bromodichloromethane	75-27-4	0.0001 U	0.0001	0.0005	mg/kg dry
Bromoform	75-25-2	0.0002 U	0.0002	0.0012	mg/kg dry
Bromomethane	74-83-9	0.0008 U	0.0008	0.0012	mg/kg dry
Carbon disulfide	75-15-0	0.0004 U	0.0004	0.0060	mg/kg dry

ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-31-03-032206
 Lab #: B601780-07
 Prep. Method: EPA 5035_MS
 Analyzed: 03/28/06 By: ds/
 Anal. Method: EPA 8260B
 Anal. Batch:
 QC Batch: 6C29014

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 84.00

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
Carbon Tetrachloride	56-23-5	0.0002 U	0.0002	0.0012	mg/kg dry
Chlorobenzene	108-90-7	0.0001 U	0.0001	0.0012	mg/kg dry
Chloroethane	75-00-3	0.0005 U	0.0005	0.0012	mg/kg dry
Chloroform	67-66-3	0.0001 U	0.0001	0.0012	mg/kg dry
Chloromethane	74-87-3	0.0004 U	0.0004	0.0012	mg/kg dry
cis-1,2-Dichloroethene	156-59-2	0.0002 U	0.0002	0.0012	mg/kg dry
cis-1,3-Dichloropropene	10061-01-5	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromochloromethane	124-48-1	0.0002 U	0.0002	0.0002	mg/kg dry
Dibromomethane	74-95-3	0.0002 U	0.0002	0.0012	mg/kg dry
Dichlorodifluoromethane	75-71-8	0.0004 U	0.0004	0.0012	mg/kg dry
Ethylbenzene	100-41-4	0.0002 U	0.0002	0.0012	mg/kg dry
Hexachlorobutadiene	87-68-3	0.0005 U	0.0005	0.0012	mg/kg dry
Isopropylbenzene	98-82-8	0.0002 U	0.0002	0.0012	mg/kg dry
m,p-Xylenes	108-38-3/106-42-3	0.0004 U	0.0004	0.0024	mg/kg dry
Methylene Chloride	75-09-2	0.0319 O-01, B	0.0006	0.0024	mg/kg dry
Methyl-tert-Butyl Ether	1634-04-4	0.0001 U	0.0001	0.0012	mg/kg dry
Naphthalene	91-20-3	0.0004 U	0.0004	0.0012	mg/kg dry
n-Butyl Benzene	104-51-8	0.0004 U	0.0004	0.0012	mg/kg dry
n-Propyl Benzene	103-65-1	0.0002 U	0.0002	0.0012	mg/kg dry
o-Xylene	95-47-6	0.0001 U	0.0001	0.0012	mg/kg dry
sec-Butylbenzene	135-98-8	0.0002 U	0.0002	0.0012	mg/kg dry
Styrene	100-42-5	0.0002 U	0.0002	0.0012	mg/kg dry
tert-Butylbenzene	98-06-6	0.0004 U	0.0004	0.0012	mg/kg dry
Tetrachloroethene	127-18-4	0.0010 U	0.0010	0.0012	mg/kg dry
Toluene	108-88-3	0.0002 U	0.0002	0.0012	mg/kg dry
trans-1,2-Dichloroethene	156-60-5	0.0004 U	0.0004	0.0012	mg/kg dry
trans-1,3-Dichloropropene	10061-02-6	0.0002 U	0.0002	0.0002	mg/kg dry
Trichloroethene	79-01-6	0.0001 U	0.0001	0.0012	mg/kg dry
Trichlorofluoromethane	75-69-4	0.0005 U	0.0005	0.0012	mg/kg dry
Vinyl chloride	75-01-4	0.0004 U	0.0004	0.0012	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
4-Bromofluorobenzene	460-00-4	48.4	50.0	97 %	60-130
Dibromofluoromethane	1868-53-7	51.9	50.0	104 %	66-131
Toluene-d8	2037-26-5	50.8	50.0	102 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-31-03-032206
 Lab #: B601780-07
 Prep. Method: EPA 3545_MS
 Analyzed: 03/24/06 By: jj
 Anal. Method: EPA 8270C
 Anal. Batch:
 QC Batch: 6C22001

Project: Mayport-Bldg351-2 CTO#386
 Work Order #: B601780
 Matrix: Soil
 Unit: mg/kg dry
 Dilution Factor: 1
 Percent Solids: 84.00

Semivolatile Organic Compounds by GCMS SIM

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1-Methylnaphthalene	90-12-0	0.0126 U	0.0126	0.0393	mg/kg dry
2-Methylnaphthalene	91-57-6	0.0118 U	0.0118	0.0393	mg/kg dry
Acenaphthene	83-32-9	0.00864 U	0.00864	0.0393	mg/kg dry
Acenaphthylene	208-96-8	0.0126 U	0.0126	0.0393	mg/kg dry
Anthracene	120-12-7	0.00821 U	0.00821	0.0393	mg/kg dry
Benzo(a)anthracene	56-55-3	0.00821 U	0.00821	0.0393	mg/kg dry
Benzo(a)pyrene	50-32-8	0.00821 U	0.00821	0.0393	mg/kg dry
Benzo(b)fluoranthene	205-99-2	0.00634 U	0.00634	0.0393	mg/kg dry
Benzo(g,h,i)perylene	191-24-2	0.0121 U	0.0121	0.0393	mg/kg dry
Benzo(k)fluoranthene	207-08-9	0.00821 U	0.00821	0.0393	mg/kg dry
Chrysene	218-01-9	0.00869 U	0.00869	0.0393	mg/kg dry
Dibenzo(a,h)anthracene	53-70-3	0.0133 U	0.0133	0.0393	mg/kg dry
Fluoranthene	206-44-0	0.0106 U	0.0106	0.0393	mg/kg dry
Fluorene	86-73-7	0.00750 U	0.00750	0.0393	mg/kg dry
Indeno(1,2,3-cd)pyrene	193-39-5	0.0138 U	0.0138	0.0393	mg/kg dry
Naphthalene	91-20-3	0.0145 U	0.0145	0.0393	mg/kg dry
Phenanthrene	85-01-8	0.00821 U	0.00821	0.0393	mg/kg dry
Pyrene	129-00-0	0.0106 U	0.0106	0.0393	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	1.84	1.98	93 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-351-2-SB-31-03-032206
Lab #: B601780-07
Prep. Method: EPA 3545
Analyzed: 03/24/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6C23001

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Unit: mg/kg dry
Dilution Factor: 1
Percent Solids: 84.00

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	6.68 U	6.68	6.74	mg/kg dry
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	5.32	3.97	134 %	29-145
o-Terphenyl	84-15-1	2.16	1.98	109 %	36-140



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ANALYTICAL REPORT

Sample ID: MPT-351-Disposal-032206
Lab #: B601780-08

Project: Mayport-Bldg351-2 CTO#386
Work Order #: B601780
Matrix: Soil
Percent Solids: 94.00

Metals by EPA 6000/7000 Series Methods

Parameter	CAS Number	Analytical Results	MDL	MRL	Units	Analysis Method	Prep Method	Analytical Batch
Arsenic	7440-38-2	0.4 U, D	0.4	1.1	mg/kg dry	EPA 6010B	EPA 3051	6C23015
Cadmium	7440-43-9	0.09 I, D	0.02	0.11	mg/kg dry	EPA 6010B	EPA 3051	6C23015
Chromium	7440-47-3	2.3 D	0.3	1.1	mg/kg dry	EPA 6010B	EPA 3051	6C23015
Lead	7439-92-1	3.0 D	0.1	1.1	mg/kg dry	EPA 6010B	EPA 3051	6C23015



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QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sample Notes
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Volatile Organic Compounds by GCMS - Quality Control

Batch 6C29014 - EPA 5035_MS

Blank (6C29014-BLK1)

Prepared: 03/28/2006 08:00 Analyzed: 03/28/2006 13:29

Dichlorodifluoromethane	0.0003 O-01, U	0.0010	mg/kg wet							O-01
Chloromethane	0.0003 U	0.0010	mg/kg wet							
Vinyl chloride	0.0003 U	0.0010	mg/kg wet							
Bromomethane	0.0007 U	0.0010	mg/kg wet							
Chloroethane	0.0004 U	0.0010	mg/kg wet							
Trichlorofluoromethane	0.0004 U	0.0010	mg/kg wet							
1,1-Dichloroethene	0.0002 U	0.0010	mg/kg wet							
Acetone	0.0201 O-01	0.0050	mg/kg wet							O-01
Carbon disulfide	0.0003 U	0.0050	mg/kg wet							
Methylene Chloride	0.0123 O-01	0.0020	mg/kg wet							O-01
Methyl-tert-Butyl Ether	0.0001 U	0.0010	mg/kg wet							
trans-1,2-Dichloroethene	0.0003 U	0.0010	mg/kg wet							
1,1-Dichloroethane	0.0002 U	0.0010	mg/kg wet							
2-Butanone	0.0013 U	0.0050	mg/kg wet							
cis-1,2-Dichloroethene	0.0002 U	0.0010	mg/kg wet							
2,2-Dichloropropane	0.0009 U	0.0010	mg/kg wet							
Bromochloromethane	0.0002 U	0.0010	mg/kg wet							
Chloroform	0.0001 U	0.0010	mg/kg wet							
1,1,1-Trichloroethane	0.0001 U	0.0010	mg/kg wet							
1,1-Dichloropropene	0.0002 U	0.0010	mg/kg wet							
Carbon Tetrachloride	0.0002 U	0.0010	mg/kg wet							
1,2-Dichloroethane	0.0001 U	0.0010	mg/kg wet							
Benzene	0.0001 U	0.0010	mg/kg wet							
Trichloroethene	0.0001 U	0.0010	mg/kg wet							
1,2-Dichloropropane	0.0001 U	0.0010	mg/kg wet							
Dibromomethane	0.0002 U	0.0010	mg/kg wet							
Bromodichloromethane	0.0001 U	0.0004	mg/kg wet							
2-Chloroethyl Vinyl Ether	0.0005 U	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	0.0002 U	0.0002	mg/kg wet							
4-Methyl-2-pentanone	0.0009 U	0.0050	mg/kg wet							
Toluene	0.0002 U	0.0010	mg/kg wet							
trans-1,3-Dichloropropene	0.0002 U	0.0002	mg/kg wet							
1,1,2-Trichloroethane	0.0002 U	0.0010	mg/kg wet							
1,3-Dichloropropane	0.0002 U	0.0010	mg/kg wet							
Tetrachloroethene	0.0008 U	0.0010	mg/kg wet							
2-Hexanone	0.0008 U	0.0050	mg/kg wet							
Dibromochloromethane	0.0002 U	0.0002	mg/kg wet							
1,2-Dibromoethane	0.0002 U	0.0010	mg/kg wet							
Chlorobenzene	0.0001 U	0.0010	mg/kg wet							
1,1,1,2-Tetrachloroethane	0.0002 U	0.0003	mg/kg wet							
Ethylbenzene	0.0002 U	0.0010	mg/kg wet							
m,p-Xylenes	0.0003 U	0.0020	mg/kg wet							
o-Xylene	0.0001 U	0.0010	mg/kg wet							
Styrene	0.0002 U	0.0010	mg/kg wet							
Bromoform	0.0002 U	0.0010	mg/kg wet							



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QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sample Notes
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Volatile Organic Compounds by GCMS - Quality Control

Batch 6C29014 - EPA 5035_MS

Blank (6C29014-BLK1) Continued

Prepared: 03/28/2006 08:00 Analyzed: 03/28/2006 13:29

Isopropylbenzene	0.0002 U	0.0010	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.0002 U	0.0002	mg/kg wet							
Bromobenzene	0.0001 U	0.0010	mg/kg wet							
1,2,3-Trichloropropane	0.0003 U	0.0010	mg/kg wet							
n-Propyl Benzene	0.0002 U	0.0010	mg/kg wet							
2-Chlorotoluene	0.0001 U	0.0010	mg/kg wet							
1,3,5-Trimethylbenzene	0.0002 U	0.0010	mg/kg wet							
4-Chlorotoluene	0.0001 U	0.0010	mg/kg wet							
tert-Butylbenzene	0.0003 U	0.0010	mg/kg wet							
1,2,4-Trimethylbenzene	0.0002 U	0.0010	mg/kg wet							
sec-Butylbenzene	0.0002 U	0.0010	mg/kg wet							
1,3-Dichlorobenzene	0.0002 U	0.0010	mg/kg wet							
4-Isopropyltoluene	0.0005 U	0.0010	mg/kg wet							
1,4-Dichlorobenzene	0.0001 U	0.0010	mg/kg wet							
n-Butyl Benzene	0.0003 U	0.0010	mg/kg wet							
1,2-Dichlorobenzene	0.0002 U	0.0010	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.0003 U	0.0010	mg/kg wet							
1,2,4-Trichlorobenzene	0.0001 U	0.0010	mg/kg wet							
Hexachlorobutadiene	0.0004 U	0.0010	mg/kg wet							
Naphthalene	0.0003 U	0.0010	mg/kg wet							
1,2,3-Trichlorobenzene	0.0002 U	0.0010	mg/kg wet							

Surrogate: Dibromofluoromethane

47.4

ug/kg

50.0

95 66-131

Surrogate: Toluene-d8

49.0

ug/kg

50.0

98 67-139

Surrogate: 4-Bromofluorobenzene

49.8

ug/kg

50.0

100 60-130

LCS (6C29014-BS1)

Prepared: 03/28/2006 08:00 Analyzed: 03/28/2006 22:48

1,1-Dichloroethene	18.7	1.00	ug/kg	20.0		94	59-144
Benzene	18.5	1.00	ug/kg	20.0		92	27-150
Trichloroethene	17.2	1.00	ug/kg	20.0		86	69-137
Toluene	14.4	1.00	ug/kg	20.0		72	72-124
Chlorobenzene	16.1	1.00	ug/kg	20.0		80	75-125

Surrogate: Dibromofluoromethane

51.6

ug/kg

50.0

103 66-131

Surrogate: Toluene-d8

51.5

ug/kg

50.0

103 67-139

Surrogate: 4-Bromofluorobenzene

49.6

ug/kg

50.0

99 60-130

Matrix Spike (6C29014-MS1)

Source: B601890-05

Prepared: 03/28/2006 08:00 Analyzed: 03/28/2006 15:49

1,1-Dichloroethene	18.6	1.00	ug/kg	20.0	0.200 U	93	14-137
Benzene	17.4	1.00	ug/kg	20.0	0.100 U	87	49-130
Trichloroethene	18.3	1.00	ug/kg	20.0	0.100 U	92	38-134
Toluene	14.1	1.00	ug/kg	20.0	0.200 U	70	55-124
Chlorobenzene	14.4	1.00	ug/kg	20.0	0.100 U	72	53-130

Surrogate: Dibromofluoromethane

49.7

ug/kg

50.0

99 66-131

Surrogate: Toluene-d8

49.5

ug/kg

50.0

99 67-139

Surrogate: 4-Bromofluorobenzene

49.0

ug/kg

50.0

98 60-130

Matrix Spike Dup (6C29014-MSD1)

Source: B601890-05

Prepared: 03/28/2006 08:00 Analyzed: 03/28/2006 16:24



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QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sample Notes
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Volatile Organic Compounds by GCMS - Quality Control

Batch 6C29014 - EPA 5035_MS

Matrix Spike Dup (6C29014-MSD1) Continued Source: B601890-05 Prepared: 03/28/2006 08:00 Analyzed: 03/28/2006 16:24

1,1-Dichloroethene	22.4	1.00	ug/kg	20.0	0.200 U	112	14-137	19	19	
Benzene	19.3	1.00	ug/kg	20.0	0.100 U	96	49-130	10	23	
Trichloroethene	19.4	1.00	ug/kg	20.0	0.100 U	97	38-134	6	17	
Toluene	15.1	1.00	ug/kg	20.0	0.200 U	76	55-124	7	22	
Chlorobenzene	15.2	1.00	ug/kg	20.0	0.100 U	76	53-130	5	24	
Surrogate: Dibromofluoromethane	50.7		ug/kg	50.0		101	66-131			
Surrogate: Toluene-d8	49.5		ug/kg	50.0		99	67-139			
Surrogate: 4-Bromofluorobenzene	51.3		ug/kg	50.0		103	60-130			

Semivolatile Organic Compounds by GCMS SIM - Quality Control

Batch 6C22001 - EPA 3545_MS

Blank (6C22001-BLK1) Prepared: 03/22/2006 05:44 Analyzed: 03/23/2006 18:27

Benzo(a)anthracene	0.00690 U	0.0330	mg/kg wet							
Benzo(b)fluoranthene	0.00533 U	0.0330	mg/kg wet							
Benzo(k)fluoranthene	0.00690 U	0.0330	mg/kg wet							
Benzo(g,h,i)perylene	0.0102 U	0.0330	mg/kg wet							
Benzo(a)pyrene	0.00690 U	0.0330	mg/kg wet							
Dibenzo(a,h)anthracene	0.0112 U	0.0330	mg/kg wet							
Indeno(1,2,3-cd)pyrene	0.0116 U	0.0330	mg/kg wet							
Naphthalene	0.0122 U	0.0330	mg/kg wet							
2-Methylnaphthalene	0.00990 U	0.0330	mg/kg wet							
1-Methylnaphthalene	0.0106 U	0.0330	mg/kg wet							
Acenaphthylene	0.0106 U	0.0330	mg/kg wet							
Acenaphthene	0.00726 U	0.0330	mg/kg wet							
Fluorene	0.00630 U	0.0330	mg/kg wet							
Phenanthrene	0.00690 U	0.0330	mg/kg wet							
Anthracene	0.00690 U	0.0330	mg/kg wet							
Fluoranthene	0.00890 U	0.0330	mg/kg wet							
Pyrene	0.00890 U	0.0330	mg/kg wet							
Chrysene	0.00730 U	0.0330	mg/kg wet							
Surrogate: p-Terphenyl	1.63		mg/kg wet	1.67		98	10-167			

Blank (6C22001-BLK2) Prepared: 03/23/2006 05:44 Analyzed: 03/24/2006 14:06

Benzo(a)anthracene	0.00690 U	0.0330	mg/kg wet							
Benzo(b)fluoranthene	0.00533 U	0.0330	mg/kg wet							
Benzo(k)fluoranthene	0.00690 U	0.0330	mg/kg wet							
Benzo(g,h,i)perylene	0.0102 U	0.0330	mg/kg wet							
Benzo(a)pyrene	0.00690 U	0.0330	mg/kg wet							
Dibenzo(a,h)anthracene	0.0112 U	0.0330	mg/kg wet							
Indeno(1,2,3-cd)pyrene	0.0116 U	0.0330	mg/kg wet							
Naphthalene	0.0122 U	0.0330	mg/kg wet							
2-Methylnaphthalene	0.00990 U	0.0330	mg/kg wet							
1-Methylnaphthalene	0.0106 U	0.0330	mg/kg wet							
Acenaphthylene	0.0106 U	0.0330	mg/kg wet							
Acenaphthene	0.00726 U	0.0330	mg/kg wet							



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QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sample Notes
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Semivolatile Organic Compounds by GCMS SIM - Quality Control

Batch 6C22001 - EPA 3545_MS

Blank (6C22001-BLK2) Continued

Prepared: 03/23/2006 05:44 Analyzed: 03/24/2006 14:06

Fluorene	0.00630 U	0.0330	mg/kg wet							
Phenanthrene	0.00690 U	0.0330	mg/kg wet							
Anthracene	0.00690 U	0.0330	mg/kg wet							
Fluoranthene	0.00890 U	0.0330	mg/kg wet							
Pyrene	0.00890 U	0.0330	mg/kg wet							
Chrysene	0.00730 U	0.0330	mg/kg wet							

Surrogate: *p*-Terphenyl 1.87 mg/kg wet 1.67 112 10-167

LCS (6C22001-BS1)

Prepared: 03/22/2006 05:44 Analyzed: 03/23/2006 18:44

Benzo(g,h,i)perylene	0.420	0.0330	mg/kg wet	0.667		63	10-168			
Benzo(a)pyrene	0.470	0.0330	mg/kg wet	0.667		70	41-125			
Naphthalene	0.443	0.0330	mg/kg wet	0.667		66	50-104			
Acenaphthene	0.427	0.0330	mg/kg wet	0.667		64	52-109			

Surrogate: *p*-Terphenyl 1.61 mg/kg wet 1.67 96 10-167

LCS (6C22001-BS2)

Prepared: 03/23/2006 05:44 Analyzed: 03/24/2006 14:24

Benzo(g,h,i)perylene	0.413	0.0330	mg/kg wet	0.667		62	10-168			
Benzo(a)pyrene	0.487	0.0330	mg/kg wet	0.667		73	41-125			
Naphthalene	0.450	0.0330	mg/kg wet	0.667		67	50-104			
Acenaphthene	0.440	0.0330	mg/kg wet	0.667		66	52-109			

Surrogate: *p*-Terphenyl 1.68 mg/kg wet 1.67 101 10-167

Matrix Spike (6C22001-MS1)

Source: B602174-01

Prepared: 03/22/2006 05:44 Analyzed: 03/23/2006 19:02

Benzo(g,h,i)perylene	0.449	0.0371	mg/kg dry	0.749	0.0115 U	60	10-168			
Benzo(a)pyrene	0.509	0.0371	mg/kg dry	0.749	0.00775 U	68	43-136			
Naphthalene	0.483	0.0371	mg/kg dry	0.749	0.0137 U	64	48-112			
Acenaphthene	0.464	0.0371	mg/kg dry	0.749	0.00816 U	62	48-119			

Surrogate: *p*-Terphenyl 1.72 mg/kg dry 1.87 92 10-167

Matrix Spike Dup (6C22001-MSD1)

Source: B602174-01

Prepared: 03/22/2006 05:44 Analyzed: 03/24/2006 11:54

Benzo(g,h,i)perylene	0.427	0.0371	mg/kg dry	0.749	0.0115 U	57	10-168	5	48	
Benzo(a)pyrene	0.502	0.0371	mg/kg dry	0.749	0.00775 U	67	43-136	1	34	
Naphthalene	0.498	0.0371	mg/kg dry	0.749	0.0137 U	66	48-112	3	22	
Acenaphthene	0.476	0.0371	mg/kg dry	0.749	0.00816 U	64	48-119	3	31	

Surrogate: *p*-Terphenyl 1.79 mg/kg dry 1.87 96 10-167

FL Petroleum Range Organics - Quality Control

Batch 6C23001 - EPA 3545

Blank (6C23001-BLK1)

Prepared: 03/23/2006 05:40 Analyzed: 03/24/2006 13:41

TPH (C8-C40)	5.61 U	5.66	mg/kg wet							
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Surrogate: *n*-Nonatriacontane 2.62 mg/kg wet 3.33 79 29-145

Surrogate: *o*-Terphenyl 1.79 mg/kg wet 1.67 107 36-140

LCS (6C23001-BS1)

Prepared: 03/23/2006 05:40 Analyzed: 03/24/2006 14:02

TPH (C8-C40)	53.9	5.66	mg/kg wet	56.7		95	48-118			
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Surrogate: *n*-Nonatriacontane 1.71 mg/kg wet 3.33 51 19-133



QUALITY CONTROL

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Sample Notes
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FL Petroleum Range Organics - Quality Control

Batch 6C23001 - EPA 3545

LCS (6C23001-BS1) Continued

Prepared: 03/23/2006 05:40 Analyzed: 03/24/2006 14:02

Surrogate: o-Terphenyl	1.67		mg/kg wet	1.67		100	53-128			
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Matrix Spike (6C23001-MS1)

Source: B601780-01

Prepared: 03/23/2006 05:40 Analyzed: 03/24/2006 14:24

TPH (C8-C40)	61.9	5.96	mg/kg dry	59.6	5.91 U	104	40-136			
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Surrogate: n-Nonatriacontane	1.94		mg/kg dry	3.51		55	36-152			
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Surrogate: o-Terphenyl	1.93		mg/kg dry	1.75		110	51-148			
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Matrix Spike Dup (6C23001-MSD1)

Source: B601780-01

Prepared: 03/23/2006 05:40 Analyzed: 03/24/2006 14:45

TPH (C8-C40)	73.2	5.96	mg/kg dry	59.6	5.91 U	123	40-136	17	25	
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Surrogate: n-Nonatriacontane	5.20		mg/kg dry	3.51		148	36-152			
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Surrogate: o-Terphenyl	2.06		mg/kg dry	1.75		118	51-148			
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Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 6C23015 - EPA 3051

Blank (6C23015-BLK1)

Prepared: 03/23/2006 12:18 Analyzed: 03/23/2006 18:58

Arsenic	0.2 U	0.5	mg/kg wet							
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Cadmium	0.01 U	0.05	mg/kg wet							
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Chromium	0.2 U	0.5	mg/kg wet							
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Lead	0.06 U	0.5	mg/kg wet							
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LCS (6C23015-BS1)

Prepared: 03/23/2006 12:18 Analyzed: 03/23/2006 19:04

Arsenic	50.2	0.5	mg/kg wet	50.0		100	77-125			
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Cadmium	24.8	0.05	mg/kg wet	25.0		99	76-124			
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Chromium	50.5	0.5	mg/kg wet	50.0		101	81-130			
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Lead	49.7	0.5	mg/kg wet	50.0		99	75-127			
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Matrix Spike (6C23015-MS1)

Source: B602325-07

Prepared: 03/23/2006 12:18 Analyzed: 03/23/2006 19:11

Arsenic	57.4	0.6	mg/kg dry	60.2	0.241	95	53-153			
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Cadmium	28.1	0.06	mg/kg dry	30.1	0.0668	93	59-130			
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Chromium	58.2	0.6	mg/kg dry	60.2	0.497	96	57-135			
----------	------	-----	-----------	------	-------	----	--------	--	--	--

Lead	56.9	0.6	mg/kg dry	60.2	0.485	94	63-128			
------	------	-----	-----------	------	-------	----	--------	--	--	--

Matrix Spike Dup (6C23015-MSD1)

Source: B602325-07

Prepared: 03/23/2006 12:18 Analyzed: 03/23/2006 19:18

Arsenic	56.4	0.6	mg/kg dry	60.2	0.241	93	53-153	2	22	
---------	------	-----	-----------	------	-------	----	--------	---	----	--

Cadmium	27.2	0.06	mg/kg dry	30.1	0.0668	90	59-130	3	24	
---------	------	------	-----------	------	--------	----	--------	---	----	--

Chromium	56.7	0.6	mg/kg dry	60.2	0.497	93	57-135	3	24	
----------	------	-----	-----------	------	-------	----	--------	---	----	--

Lead	55.3	0.6	mg/kg dry	60.2	0.485	91	63-128	3	26	
------	------	-----	-----------	------	-------	----	--------	---	----	--

NOTES AND DEFINITIONS

- U Analyte included in the analysis, but not detected
- O-01 This compound is a common laboratory contaminant.
- I Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- D Data reported from a dilution
- B Analyte is found in the associated blank as well as in the sample (CLP B-flag).

CLIENT : Tetra Tech NUS
ADDRESS: Foster Plaza 7
661 Andersen Dr.
Pittsburgh, PA 15220-2745

REPORT # : JAX51163
DATE SUBMITTED: August 13, 2005
DATE REPORTED : August 23, 2005

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ATTENTION: Mr. Mark Peterson

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

REFERENCE: CTO 386 ,N00103

Mayport / Bldg 351 OF

JAX51163-1 : MPT-351 OF-SB14-03 @ 14:50 (08/12/05)
JAX51163-2 : MPT-351 OF-SB04-03 @ 16:00 (08/12/05)
JAX51163-3 : MPT-351 OF-SB06-03 @ 15:25 (08/12/05)
JAX51163-4 : MPT-351 OF-TMW-04 @ 16:55 (08/11/05)

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. This data has been produced in accordance with NELAC Standards (June, 2003). This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

Note: Analytical values are reported on a dry weight basis.

PROJECT MANAGER

Christina M. Tompkins

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS

**EPA METHOD 8260 -
VOLATILE ORGANICS**

MPT-351 OF-SB14-03

Units

Methyl tert-butyl ether	1. U D1	ug/Kg
Benzene	1. U D1	ug/Kg
Toluene	1. U D1	ug/Kg
Chlorobenzene	1. U D1	ug/Kg
Ethylbenzene	1. U D1	ug/Kg
m-Xylene & p-Xylene	2. U D1	ug/Kg
o-Xylene	1. U D1	ug/Kg
1,3-Dichlorobenzene	1. U D1	ug/Kg
1,4-Dichlorobenzene	1. U D1	ug/Kg
1,2-Dichlorobenzene	1. U D1	ug/Kg

Surrogate:

% RECOV

LIMITS

Dibromofluoromethane	96	61-128
D8-Toluene	98	77-119
Bromofluorobenzene	93	60-130
Date Prepared	08/23/05 15:30	
Date Analyzed	08/23/05 14:09	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:1.08 dilution.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS

**EPA METHOD 8270 -
PAH Compounds by SIM**

	<u>MPT-351 OF-SB14-03</u>	<u>Units</u>
Naphthalene	35. U	ug/Kg
2-Methylnaphthalene	35. U	ug/Kg
1-Methylnaphthalene	35. U	ug/Kg
Acenaphthylene	35. U	ug/Kg
Acenaphthene	35. U	ug/Kg
Fluorene	35. U	ug/Kg
Phenanthrene	35. U	ug/Kg
Anthracene	35. U	ug/Kg
Fluoranthene	35. U	ug/Kg
Pyrene	35. U	ug/Kg
Chrysene	35. U	ug/Kg
Benzo (a) anthracene	35. U	ug/Kg
Benzo (b) fluoranthene	35. U	ug/Kg
Benzo (k) fluoranthene	35. U	ug/Kg
Benzo (a) pyrene	35. U	ug/Kg
Indeno (1,2,3-cd) pyrene	35. U	ug/Kg
Dibenzo (a,h) anthracene	35. U	ug/Kg
Benzo (g,h,i) perylene	35. U	ug/Kg

Surrogate:

	<u>% RECOV</u>	<u>LIMITS</u>
p-Terphenyl	97	10-167
Date Prepared	08/18/05	
Date Analyzed	08/19/05 18:38	

Miscellaneous

METHOD

MPT-351 OF-SB14-03

Units

Percent Solids	WETS/72	93.4	%
Date Prepared		08/17/05	
Date Analyzed		08/17/05 15:30	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS

EPA METHOD FLPRO -
PETROL. RESIDUAL ORG.

MPT-351 OF-SB14-03

Units

Hydrocarbons (C8-C40)

7. U

mg/Kg

Surrogate:

% RECOV

LIMITS

o-Terphenyl

92

36-140

Nonatriacontane

87

29-145

Date Prepared

08/17/05

Date Analyzed

08/19/05 12:14

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS

**EPA METHOD 8260 -
VOLATILE ORGANICS**

MPT-351 OF-SB04-03

Units

Methyl tert-butyl ether	580 U D2	ug/Kg
Benzene	580 U D2	ug/Kg
Toluene	1000 D2	ug/Kg
Chlorobenzene	580 U D2	ug/Kg
Ethylbenzene	11000 D2	ug/Kg
m-Xylene & p-Xylene	47000 D2	ug/Kg
o-Xylene	8100 D2	ug/Kg
1,3-Dichlorobenzene	580 U D2	ug/Kg
1,4-Dichlorobenzene	580 U D2	ug/Kg
1,2-Dichlorobenzene	580 U D2	ug/Kg

Surrogate:

% RECOV

LIMITS

Dibromofluoromethane	106	61-128
D8-Toluene	105	77-119
Bromofluorobenzene	93	60-130
Date Analyzed	08/22/05 14:51	

U = Compound was analyzed for but not detected to the level shown.
D2 = Analyte value determined from a 1:530 dilution.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS

**EPA METHOD 8270 -
PAH Compounds by SIM**

	<u>MPT-351 OF-SB04-03</u>	<u>Units</u>
Naphthalene	23000 D3	ug/Kg
2-Methylnaphthalene	72000 D3	ug/Kg
1-Methylnaphthalene	47000 D3	ug/Kg
Acenaphthylene	630	ug/Kg
Acenaphthene	2100	ug/Kg
Fluorene	5200	ug/Kg
Phenanthrene	13000 D3	ug/Kg
Anthracene	36. U	ug/Kg
Fluoranthene	560	ug/Kg
Pyrene	12000 D3	ug/Kg
Chrysene	180	ug/Kg
Benzo (a) anthracene	94.	ug/Kg
Benzo (b) fluoranthene	44.	ug/Kg
Benzo (k) fluoranthene	36. U	ug/Kg
Benzo (a) pyrene	47.	ug/Kg
Indeno (1,2,3-cd) pyrene	36. U	ug/Kg
Dibenzo (a,h) anthracene	36. U	ug/Kg
Benzo (g,h,i) perylene	300	ug/Kg

Surrogate:

	<u>% RECOV</u>	<u>LIMITS</u>
p-Terphenyl	83	10-167
Date Prepared	08/18/05	
Date Analyzed	08/19/05 18:56	

Miscellaneous

METHOD

MPT-351 OF-SB04-03

Units

Percent Solids	WETS/72	91.4	%
Date Prepared		08/17/05	
Date Analyzed		08/17/05 15:30	

U = Compound was analyzed for but not detected to the level shown.
D3 = Analyte value determined from a 1:20 dilution.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS

EPA METHOD FLPRO -
PETROL. RESIDUAL ORG.

MPT-351 OF-SB04-03

Units

Hydrocarbons (C8-C40)

18000 D4

mg/Kg

Surrogate:

% RECOV

LIMITS

o-Terphenyl

*

36-140

Nonatriacontane

*

29-145

Date Prepared

08/17/05

Date Analyzed

08/19/05 13:45

* = Surrogate recovery unavailable due to matrix interference.
D4 = Analyte value determined from a 1:25 dilution.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS**EPA METHOD 8260 -
VOLATILE ORGANICS****MPT-351 OF-SB06-03****Units**

Methyl tert-butyl ether	120 U D5	ug/Kg
Benzene	120 U D5	ug/Kg
Toluene	120 U D5	ug/Kg
Chlorobenzene	120 U D5	ug/Kg
Ethylbenzene	810 D5	ug/Kg
m-Xylene & p-Xylene	5000 D5	ug/Kg
o-Xylene	2300 D5	ug/Kg
1,3-Dichlorobenzene	120 U D5	ug/Kg
1,4-Dichlorobenzene	120 U D5	ug/Kg
1,2-Dichlorobenzene	120 U D5	ug/Kg

Surrogate:**% RECOV****LIMITS**

Dibromofluoromethane	106	61-128
D8-Toluene	103	77-119
Bromofluorobenzene	109	60-130
Date Analyzed	08/22/05 14:15	

U = Compound was analyzed for but not detected to the level shown.
D5 = Analyte value determined from a 1:102 dilution.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS

**EPA METHOD 8270 -
PAH Compounds by SIM**

	<u>MPT-351 OF-SB06-03</u>	<u>Units</u>
Naphthalene	590	ug/Kg
2-Methylnaphthalene	1600	ug/Kg
1-Methylnaphthalene	1500	ug/Kg
Acenaphthylene	82.	ug/Kg
Acenaphthene	270	ug/Kg
Fluorene	690	ug/Kg
Phenanthrene	1000	ug/Kg
Anthracene	950	ug/Kg
Fluoranthene	160	ug/Kg
Pyrene	2200	ug/Kg
Chrysene	41. U	ug/Kg
Benzo (a) anthracene	41. U	ug/Kg
Benzo (b) fluoranthene	41. U	ug/Kg
Benzo (k) fluoranthene	41. U	ug/Kg
Benzo (a) pyrene	41. U	ug/Kg
Indeno (1,2,3-cd) pyrene	41. U	ug/Kg
Dibenzo (a,h) anthracene	41. U	ug/Kg
Benzo (g,h,i) perylene	300	ug/Kg

Surrogate:

	<u>% RECOV</u>	<u>LIMITS</u>
p-Terphenyl	93	10-167
Date Prepared	08/18/05	
Date Analyzed	08/19/05 19:14	

Miscellaneous**METHOD**

Percent Solids
Date Prepared
Date Analyzed

WETS/72

MPT-351 OF-SB06-03**Units**

81.2
08/17/05
08/17/05 15:30

%

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS

EPA METHOD FLPRO -
PETROL. RESIDUAL ORG.

MPT-351 OF-SB06-03

Units

Hydrocarbons (C8-C40)

4300 D4

mg/Kg

Surrogate:

% RECOV

LIMITS

o-Terphenyl

*

36-140

Nonatriacontane

*

29-145

Date Prepared

08/17/05

Date Analyzed

08/19/05 12:37

* = Surrogate recovery unavailable due to matrix interference.
D4 = Analyte value determined from a 1:25 dilution.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS**EPA METHOD 8260 -
VOLATILE ORGANICS****MPT-351 OF-TMW-04****Units**

Methyl tert-butyl ether	64.	D6	ug/L
Benzene	140	D6	ug/L
Toluene	98.	D6	ug/L
Chlorobenzene	10. U	D6	ug/L
Ethylbenzene	120	D6	ug/L
m-Xylene & p-Xylene	350	D6	ug/L
o-Xylene	99.	D6	ug/L
1,3-Dichlorobenzene	10. U	D6	ug/L
1,4-Dichlorobenzene	10. U	D6	ug/L
1,2-Dichlorobenzene	10. U	D6	ug/L

Surrogate:**% RECOV****LIMITS**

Dibromofluoromethane	109	67-139
D8-Toluene	99	80-115
Bromofluorobenzene	96	66-131
Date Analyzed	08/18/05 15:13	

U = Compound was analyzed for but not detected to the level shown.
D6 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS**EPA METHOD 8260 -
VOLATILE ORGANICS**

	<u>LAB BLANK</u>	<u>Units</u>
Methyl tert-butyl ether	1. U	ug/L
Benzene	1. U	ug/L
Toluene	1. U	ug/L
Chlorobenzene	1. U	ug/L
Ethylbenzene	1. U	ug/L
m-Xylene & p-Xylene	2. U	ug/L
o-Xylene	1. U	ug/L
1,3-Dichlorobenzene	1. U	ug/L
1,4-Dichlorobenzene	1. U	ug/L
1,2-Dichlorobenzene	1. U	ug/L
<u>Surrogate:</u>	<u>% RECOV</u>	<u>LIMITS</u>
Dibromofluoromethane	107	67-139
D8-Toluene	96	80-115
Bromofluorobenzene	88	66-131
Date Analyzed	08/18/05 06:19	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS**EPA METHOD 8260 -
VOLATILE ORGANICS**

	<u>LAB BLANK</u>	<u>Units</u>
Methyl tert-butyl ether	100 U D7	ug/Kg
Benzene	100 U D7	ug/Kg
Toluene	100 U D7	ug/Kg
Chlorobenzene	100 U D7	ug/Kg
Ethylbenzene	100 U D7	ug/Kg
m-Xylene & p-Xylene	200 U D7	ug/Kg
o-Xylene	100 U D7	ug/Kg
1,3-Dichlorobenzene	100 U D7	ug/Kg
1,4-Dichlorobenzene	100 U D7	ug/Kg
1,2-Dichlorobenzene	100 U D7	ug/Kg
<u>Surrogate:</u>	<u>% RECOV</u>	<u>LIMITS</u>
Dibromofluoromethane	109	61-128
D8-Toluene	98	77-119
Bromofluorobenzene	88	60-130
Date Analyzed	08/22/05 13:39	

U = Compound was analyzed for but not detected to the level shown.
D7 = Analyte value determined from a 1:100 dilution.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS**EPA METHOD 8270 -
PAH Compounds by SIM**

	<u>LAB BLANK</u>	<u>Units</u>
Naphthalene	33. U	ug/Kg
2-Methylnaphthalene	33. U	ug/Kg
1-Methylnaphthalene	33. U	ug/Kg
Acenaphthylene	33. U	ug/Kg
Acenaphthene	33. U	ug/Kg
Fluorene	33. U	ug/Kg
Phenanthrene	33. U	ug/Kg
Anthracene	33. U	ug/Kg
Fluoranthene	33. U	ug/Kg
Pyrene	33. U	ug/Kg
Chrysene	33. U	ug/Kg
Benzo (a) anthracene	33. U	ug/Kg
Benzo (b) fluoranthene	33. U	ug/Kg
Benzo (k) fluoranthene	33. U	ug/Kg
Benzo (a) pyrene	33. U	ug/Kg
Indeno (1,2,3-cd) pyrene	33. U	ug/Kg
Dibenzo (a,h) anthracene	33. U	ug/Kg
Benzo (g,h,i) perylene	33. U	ug/Kg
<u>Surrogate:</u>	<u>% RECOV</u>	<u>LIMITS</u>
p-Terphenyl	101	10-167
Date Prepared	08/18/05	
Date Analyzed	08/19/05 17:11	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
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RESULTS OF ANALYSIS

EPA METHOD FLPRO -
PETROL. RESIDUAL ORG.

Hydrocarbons (C8-C40)

LAB BLANK

Units

7. U

mg/Kg

Surrogate:

% RECOV

LIMITS

o-Terphenyl

81

36-140

Nonatriacontane

82

29-145

Date Prepared

08/17/05

Date Analyzed

08/19/05 10:43

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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RESULTS OF ANALYSIS**EPA METHOD 8260 -
VOLATILE ORGANICS**

	<u>LAB BLANK</u>	<u>Units</u>
Methyl tert-butyl ether	1. U	ug/Kg
Benzene	1. U	ug/Kg
Toluene	1. U	ug/Kg
Chlorobenzene	1. U	ug/Kg
Ethylbenzene	1. U	ug/Kg
m-Xylene & p-Xylene	2. U	ug/Kg
o-Xylene	1. U	ug/Kg
1,3-Dichlorobenzene	1. U	ug/Kg
1,4-Dichlorobenzene	1. U	ug/Kg
1,2-Dichlorobenzene	1. U	ug/Kg
<u>Surrogate:</u>	<u>% RECOV</u>	<u>LIMITS</u>
Dibromofluoromethane	98	61-128
D8-Toluene	98	77-119
Bromofluorobenzene	98	60-130
Date Analyzed	08/23/05 06:57	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

REPORT # : JAX51163

DATE REPORTED: August 23, 2005

REFERENCE : CTO 386 ,N00103

PROJECT NAME : Mayport / Bldg 351 OF

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LABORATORY CERTIFICATIONS

Laboratory Certification: NELAC:E82277

All analyses reported with this project were analyzed by the facility indicated unless identified below.

ENCO LABORATORIES

REPORT # : JAX51163
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386 ,N00103
PROJECT NAME : Mayport / Bldg 351 OF

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QUALITY CONTROL DATA

<u>Parameter</u>	<u>% RECOVERY LCS/MS/MSD</u>	<u>LCS LIMITS</u>	<u>MS/MSD LIMITS</u>	<u>RPD MS/MSD</u>	<u>RPD LIMITS</u>
<u>EPA Method 8260</u>					
1,1-Dichloroethene	99/108/ 83	58-149	31-145	#26	19
Benzene	104/116/ 86	62-135	64-138	#30	10
Trichloroethene	114/129/ 94	66-136	47-150	#31	12
Toluene	106/124/ 89	72-126	74-124	#33	13
Chlorobenzene	121/131/ 96	77-124	81-125	#31	11
<u>EPA Method 8260</u>					
1,1-Dichloroethene	97/ 81/ 86	59-144	14-137	6	19
Benzene	108/ 88/ 97	67-150	49-130	10	23
Trichloroethene	116/ 91/104	69-137	38-134	13	17
Toluene	106/ 92/ 99	72-124	55-124	7	22
Chlorobenzene	116/ 99/108	75-125	53-130	9	24
<u>EPA Method 8260</u>					
1,1-Dichloroethene	70/ 42/ 44	59-144	14-137	5	19
Benzene	88/ 86/ 88	67-150	49-130	2	23
Trichloroethene	99/ 94/ 97	69-137	38-134	3	17
Toluene	102/103/103	72-124	55-124	<1	22
Chlorobenzene	112/113/112	75-125	53-130	<1	24
<u>EPA Method 8270</u>					
Naphthalene	83/ 85/ 87	50-104	48-112	2	22
Acenaphthene	80/ 82/ 82	52-109	48-119	<1	31
Benzo(a)pyrene	76/ 78/ 78	41-125	43-136	<1	34
Benzo(g,h,i)perylene	106/110/111	10-168	10-168	<1	48
<u>PETROL. RESIDUAL ORG.</u>					
Hydrocarbons (C8-C40)	96/ * / *	48-118	40-136	*	25

- * = MS/MSD/RPD is unavailable due to high original analyte concentration.
- # = One or more of the associated values failed to meet laboratory established limits for precision.
- < = Less Than
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- LCS = Laboratory Control Standard
- RPD = Relative Percent Difference

APPENDIX H
EXCAVATION PHOTOGRAPHS



Photo 1 – The ceramic pipe located below a concrete electrical conduit.



Photo 2 – The ceramic pipe turns to the northeast towards Building 1388.



Photo 3 – A view of the concrete electrical conduit that runs east to west located in the excavation pit. The blue PVC pipe is the fuel line conduit, and the metal pipe is a communication line.



Photo 4 – A photo of the cement conduit that extends from Building 351 northeast under the sidewalk. Note the red paint marking the location and the actual conduit exposed.



Photo 5 – A view of a cement encased electrical conduit that is supported by wood and a cement block. This electrical line “Ts” into the large electrical conduit that extends the length of the excavation east to west.



Photo 6 – A view of the support column and soil surrounding the base. The black 1 inch metal pipes are presumed to be abandoned heating oil fuel lines. The 4 inch blue line is the new heating oil line, and the 2 inch metal pipe is a communication line.



Photo 7 – Portions of the site were excavated and backfilled due to utilities and obstructions. The backfill was compacted as placed into excavation.



Photo 8 – A view of the site backfilled and compacted.

APPENDIX I
SOIL DISPOSAL DOCUMENTATION

Soil Remediation, Inc.

5815 Highway 17 North
Kingsland, GA 31548
(912) 729-7555

2299

TICKET NO. 007683

13:18 01/05/07

TRUCK NO. 144
 GROSS WT. 71980 LBS TRANSPORTER SRI
 TARE WT (M) 29600 LBS GENERATOR MayPort Navel
 NET WT. 42380 LBS DRIVER
 NET WT. 21.19 TON
 Weighers Signature J. Probst
 CUSTOMER NUMBER: 00

JOB NUMBER: 10

Additional Descriptions for Materials Listed Above <u>Truck 144</u>		Additional Codes for Materials Listed Above	
15. Special Handling Instructions and Additional Information			
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.			
Printed/Typed Name <u>DAVE RACINE</u> <u>Curtis M Cole</u>	Signature <u>Dave Racine</u> <u>Curtis M Cole</u>	Month	Day Year <u>10 15 07</u>
17. Transporter 1 Acknowledgment of Receipt of Materials			
Printed/Typed Name <u>John Cole</u>	Signature <u>John Cole</u>	Month	Day Year <u>1 5 07</u>
18. Transporter 2 Acknowledgment of Receipt of Materials			
Printed/Typed Name	Signature	Month	Day Year
19. Discrepancy Indication Space			
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.			
Printed/Typed Name <u>Joe Probst</u>	Signature <u>J. Probst</u>	Month	Day Year <u>01 05 07</u>

Printed by: J. K. KELLEY & ASSOCIATES, INC.
Macon, WI 54657-0388

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12-010-05 Rev. 12/99

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if designed for use on other (12-point) typewriters

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No. Manifest Doc. No. 2. Page 1 of 1
03512

3. Generator's Name and Mailing Address
Mayport Naval Station NC
PO Box 280067 Naval Station Bldg 351 Mayport Naval Base
Mayport Jacksonville, FL 32208-0067

4. Generator's Phone (904) 280-6730
5. Transporter 1 Company Name SRI 6. US EPA ID Number A. Transporter's Phone 229-455-2300
7. Transporter 2 Company Name 8. US EPA ID Number B. Transporter's Phone

9. Designated Facility Name and Site Address SOIL REMEDIATION, INC. COUNTY ROAD 329 RAY CITY, GA 31645
10. US EPA ID Number AIR PERMIT #'S 2951-019-00011-S-01-0
C. Facility's Phone (229) 455-2300

11. Waste Shipping Name and Description	12. Containers		13. Total Quantity	14. Unit Wt/Vol
	No.	Type		
a. Petroleum Contaminated Soil	001	TT000020T	21.19	
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
Tank 144

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name DAVID RACINE
Signature David Racine
Month Day Year 10/10/07
Curtis M Cole

17. Transporter 1 Acknowledgment of Receipt of Materials
Printed/Typed Name John Cole
Signature John Cole
Month Day Year 1/5/08

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name Joe Probst
Signature J. Probst
Month Day Year 6/10/07

GENERATOR
TRANSPORTER
FACILITY

Soil Remediation, Inc.

5815 Highway 17 North
Kingsland, GA 31548
(912) 729-7555

2300

TICKET NO. 007684

13:34 01/05/07

TRUCK NO. 145
GROSS WT. 63420 LBS TRANSPORTER SRI
TARE WT (M) 26640 LBS GENERATOR Mag Port Navel
NET WT. 34780 LBS DRIVER

NET WT. 17.39 TON

Weighers Signature J. Probst

CUSTOMER NUMBER: 00

JOB NUMBER: 10

15. Special Handling Instructions and Additional Information

Truck 145

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

SIANE RACINE

Signature

Siane Racine

Month Day Year

01 05 07

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Andie Marshall

Signature

[Signature]

Month Day Year

01 05 07

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of waste material's covered by this manifest except as noted in item 19.

Printed/Typed Name

Joe Probst

Signature

J. Probst

Month Day Year

01 05 07

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. Manifest Doc. No. 2. Page 1 of

3. Generator's Name and Mailing Address: *Mayport Naval Station AP*
PO Box 280067 Naval Station Bldg 351 - Mayport Naval Base
4. Generator's Phone: *(904) 280-6730 Jacksonville, FL 322280067*

145

5. Transporter 1 Company Name: *SRI* 6. US EPA ID Number: A. Transporter's Phone: *229-455-2300*
7. Transporter 2 Company Name: 8. US EPA ID Number: B. Transporter's Phone:

9. Designated Facility Name and Site Address: *SOIL REMEDIATION, INC. COUNTY ROAD 329 RAY CITY, GA 31645*
10. US EPA ID Number: *AIR PERMIT #S 2951-019-00011-S-01-0* C. Facility's Phone: *(229) 455-2300*

11. Waste Shipping Name and Description	12. Containers		13. Total Quantity	14. Unit W/Vol
	No.	Type		
a. <i>Petroleum Contaminated Soil</i>	<i>001</i>	<i>TT</i>	<i>00030</i>	<i>T</i>
b.			<i>17.39</i>	
c.				
d.				

D. Additional Descriptions for Materials Listed Above E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information: *Truck/45*

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Wastes.

Printed/Typed Name: *DAVE RACINE* Signature: *Dave Racine* Month Day Year: *01/05/07*

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: *Andie Marshall* Signature: *[Signature]* Month Day Year: *01/05/07*

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Signature: Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator. Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: *Joe Probst* Signature: *[Signature]* Month Day Year: *01/05/07*

GENERATOR FACILITY

Soil Remediation, Inc.

5815 Highway 17 North
Kingsland, GA 31548
(912) 729-7555

2301

TICKET NO. 007685

13:37 01/05/07

TRUCK NO. 146
 GROSS WT. 57820 LBS TRANSPORTER SRE
 TARE WT (M) 30000 LBS GENERATOR Mayport naval
 NET WT. 37820 LBS DRIVER
 NET WT. 18.91 TON Weighers Signature J. Probst
 CUSTOMER NUMBER: 00

JOB NUMBER: 10

1. Additional Descriptions for Materials Listed Above <u>Truck 146</u>		2. Hazardous Codes for Materials Listed Above	
15. Special Handling Instructions and Additional Information			
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.			
Printed/Typed Name <u>DIANE RACINE</u>	Signature <u>Diane Racine</u>	Month	Day Year <u>01 10 07</u>
17. Transporter 1 Acknowledgement of Receipt of Materials			
Printed/Typed Name <u>Dj my</u>	Signature <u>Dj my</u>	Month	Day Year <u>01 10 07</u>
18. Transporter 2 Acknowledgement of Receipt of Materials			
Printed/Typed Name	Signature	Month	Day Year
19. Discrepancy Indication Space			
20. Facility Owner or Operator, Certification of receipt of waste materials covered by this manifest except as noted in Item 19.			
Printed/Typed Name <u>Joe Probst</u>	Signature <u>J. Probst</u>	Month	Day Year <u>01 10 07</u>

TRUCK NO. FACILITY

Printed by J. J. KELLER & ASSOCIATES, INC.
Nearham, WI 54887-0888

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01-04-2007 03:35 STEVE GIBSON 19047140773

PAGE 1

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**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

Manifest Doc. No.

2. Page 1

03511

of 1

3. Generator's Name and Mailing Address

Mayport Naval Station
PO Box 280007 Naval Station Bldg 351 - Mayport Naval Base
Jacksonville, FL 32228-0007

FR DE

4. Generator's Phone

(904) 280-6723

5. Transporter 1 Company Name

SRI

6. US EPA ID Number

A. Transporter's Phone:

229-455-2300

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

SOIL REMEDIATION, INC.
COUNTY ROAD 329
RAY CITY, GA 31645

10. US EPA ID Number

AIR PERMIT #S
2951-019-
0011-S-01-0

C. Facility's Phone

(229) 455-2300

11. Waste Shipping Name and Description

12. Containers

13. Total Quantity

14. Unit Wt/Vol

No. Type

Quantity

Wt/Vol

a. Petroleum Contaminated Soil

001 TT 00020T

b. 18.91

D. Additional Descriptions for Materials Listed Above

Truck 146

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Wastes.

Printed/Typed Name

DAVE RACINE

Signature

Dave Racine

Month Day Year

01/10/07

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name

Dj my

Signature

Dj my

Month Day Year

01/10/07

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Joe Probst

Signature

J. Probst

Month Day Year

01/10/07

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PAGE 1

GENERATOR
TRANSPORTER
FACILITY

Soil Remediation, Inc.

5815 Highway 17 North
Kingsland, GA 31548
(912) 729-7555

CTO 50
351-2
IM
2333

TICKET NO. 027717

17425 01/08/07

TRUCK NO. 148
GROSS WT. 47448 LBS TRANSPORTER
TARE WT. 22007 LBS CONTAINER
NET WT. 17448 LBS DRIVER

SRI
Mayport Naval Station

Weighers Signature Joe Probst

CUSTOMER NUMBER 00

TRUCK NUMBER 15

#146

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name DAVE RACINE Signature Dave Racine Month Day Year 10/10/07

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name D. M. J. Signature D. M. J. Month Day Year 10/10/07

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name _____ Signature _____ Month Day Year _____

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name Joe Probst Signature Joe Probst Month Day Year 10/10/07

Print or type
designated for use on all other types of forms

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. Manifest Doc. No. 2. Page 1 of

3. Generator's Name and Mailing Address
 Mayport Naval Station
 PO Box 280067
 Mayport FL 32228-0067 Bldg 351 - Mayport Naval Base
 Jacksonville, FL

4. Generator's Phone (904) 280-6730

5. Transporter 1 Company Name: SRI
 6. US EPA ID Number
 A. Transporter's Phone: 229-455-2300

7. Transporter 2 Company Name
 8. US EPA ID Number
 B. Transporter's Phone

9. Designated Facility Name and Site Address
 SOIL REMEDIATION, INC.
 COUNTY ROAD 329
 RAY CITY, GA 31645
 10. US EPA ID Number
 AIR PERMIT #'S
 2951-019-
 10011-S-01-0
 C. Facility's Phone: (229) 455-2300

11. Waste Shipping Name and Description
 12. Containers No. Type
 13. Total Quantity
 14. Unit WWVol

a. Petroleum Contaminated Soil
 0.01 TT 0.02 DT

b.

c.

d.

D. Additional Descriptions for Materials Listed Above: #146
 E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Wastes.

Printed/Typed Name: DIANE RACINE
 Signature: Diane Racine
 Month Day Year: 10/10/07

17. Transporter 1 Acknowledgement of Receipt of Materials
 Printed/Typed Name: D. My
 Signature: D. My
 Month Day Year: 10/10/07

18. Transporter 2 Acknowledgement of Receipt of Materials
 Printed/Typed Name
 Signature
 Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Joe Probst
 Signature: Joe Probst
 Month Day Year: 10/10/07

GENERATOR

TRANSPORTER

FACILITY

Soil Remediation, Inc.

5815 Highway 17 North
Kingsland, GA 31548
(912) 729-7555

2334

TICKET NO. 007718

17:23 01/08/07

TRUCK NO. 144
GROSS WT. 52020 LBS TRANSPORTER
TARE WT (M) 29600 LBS GENERATOR
NET WT. 32420 LBS DRIVER

SRI
Mayport Naval Station

NET WT. 15.23 TON

Weighers Signature Joe Probst

CUSTOMER NUMBER: 00

JOB NUMBER: 10

A. Additional Descriptions for Materials Listed Above <u>Truck #144</u>		B. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information			
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.			
Printed/Typed Name <u>DIANE RACINE</u>	Signature <u>Diane Racine</u>	Month <u>11</u>	Day <u>18</u>
17. Transporter 1 Acknowledgement of Receipt of Materials			
Printed/Typed Name <u>John Cole</u>	Signature <u>John Cole</u>	Month <u>11</u>	Day <u>18</u>
18. Transporter 2 Acknowledgement of Receipt of Materials			
Printed/Typed Name	Signature	Month	Day
19. Discrepancy Indication Space			
20. Facility Owner or Operator Certification of receipt of waste materials covered by this manifest except as noted in item 19.			
Printed/Typed Name <u>Joe Probst</u>	Signature <u>Joe Probst</u>	Month <u>10</u>	Day <u>18</u>

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0388

ORIGINAL RETURN TO GENERATOR

12-01-05 Rev. 11/05

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. Manifest Doc. No. 2. Page 1 of

3. Generator's Name and Mailing Address
Mayport Naval Station
PO Box 280007 FL 32228-0007 Bldg 351 Mayport Naval Base
4. Generator's Phone *904 280-6732 Jacksonville, FL*

5. Transporter 1 Company Name *SRI* 6. US EPA ID Number A. Transporter's Phone *229-455-2300*
7. Transporter 2 Company Name 8. US EPA ID Number B. Transporter's Phone

9. Designated Facility Name and Site Address
SOIL REMEDIATION, INC.
COUNTY ROAD 329
RAY CITY, GA 31648
10. US EPA ID Number
AIR PERMIT #S
2951-019-
0011-S-01-0
C. Facility's Phone
(229) 455-2300

11. Waste Shipping Name and Description	12. Containers		13. Total Quantity	14. Unit Wt/Vol
	No.	Type		
a. <i>Petroleum Contaminated Soil</i>	<i>001</i>	<i>TT</i>	<i>20T</i>	
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
Truck # 44
E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name *DIANE RACINE* Signature *Diane Racine* Month *1* Day *8* Year *07*

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name *Jon Cole* Signature *Jon Cole* Month *1* Day *8* Year *07*

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name *Joe Probst* Signature *Joe Probst* Month *10* Day *18* Year *07*

GENERATOR
HAZARDOUS
FACILITY

APPENDIX J
TREATABILITY STUDY WORK PLAN FOR SITE 351-2

Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62467-04-D-0055



Rev. 1
03/24/10

Treatability Study Work Plan for Site 351-2

Naval Station Mayport
Jacksonville, Florida

Contract Task Order 0050

March 2010



NAS Jacksonville
Jacksonville, Florida 32212-0030

**TREATABILITY STUDY WORK PLAN
FOR
SITE 351-2**

**NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA**

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:
Naval Facilities Engineering Command Southeast
NAS Jacksonville
Jacksonville, Florida 32212-0030**

**Submitted by:
Tetra Tech NUS, Inc.
661 Andersen Drive
Foster Plaza 7
Pittsburgh, Pennsylvania 15220**

**CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0050**

JANUARY 2010

PREPARED UNDER THE SUPERVISION OF:



**MARK A. PETERSON, P.G.
TASK ORDER MANAGER
TETRA TECH NUS, INC.
JACKSONVILLE, FLORIDA**

APPROVED FOR SUBMITTAL BY:



**DEBRA M. HUMBERT
PROGRAM MANAGER
TETRA TECH NUS, INC.
PITTSBURGH, PENNSYLVANIA**

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C	GROUNDWATER ANALYTICAL DATA

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ACRONYMS

Aerostar	Aerostar Environmental Services, Inc.
bls	Below land surface
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CLEAN	Comprehensive Long-term Environmental Action Navy
COC	Constituent of concern
CTO	Contract Task Order
DPT	Direct push technology
EDB	Ethylene dibromide
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FL-PRO	Florida Petroleum Range Organics
GCTL	Groundwater Cleanup Target Level
ISR	Interim source removal
µg/L	Microgram per liter
mg/L	Milligram per liter
msl	Mean sea level
MTBE	Methyl-tert butyl ether
NAVFAC SE	Naval Facilities Engineering Command Southeast
NAVSTA	Naval Station
PAH	Polynuclear aromatic hydrocarbon
SOP	Standard operating procedure
SVOC	Semivolatile organic compound
TDS	Total dissolved solid
TOC	Top of casing
TPH	Total petroleum hydrocarbons
TtNUS	Tetra Tech NUS, Inc.
USEPA	United States Environmental Protection Agency
VOC	Volatile organic compound

EXECUTIVE SUMMARY

This Treatability Study Work Plan for Site 351-2 located at Naval Station Mayport, Jacksonville, Florida was completed in general accordance with the requirements of Chapter 62-780, Florida Administrative Code.

The treatability study will evaluate the effectiveness of treatment of contaminated groundwater with Biox[®]. The Biox[®] process combines controlled chemical oxidation and enhanced biodegradation of contaminants in soil and groundwater. Biox[®] will be injected into the shallow groundwater and intermediate zone (3 to 20 feet below land surface) to remediate the release of fuel oil impacts at this site.

Site groundwater will be sampled and analyzed before and after the Biox[®] injection to monitor the geochemical parameters (pH, conductivity, temperature, dissolved oxygen, and oxidation-reduction potential) and constituents of concern reductions at the injection areas. Monitoring wells MPT-351-2-MW01, MPT-351-2-MW02, MPT-351-2-MW03, MPT-351-2-MW04, and MPT-351-2-MW05 and three newly installed wells will be sampled within 30 days prior to the Biox[®] injection to determine baseline conditions. Upon completion of injection activities, these wells will be sampled quarterly for 1 year.

After the completion of each groundwater sampling event, a Groundwater Monitoring Report will be submitted to Florida Department of Environmental Protection. The report will present the results of the sampling event and evaluate the effectiveness of Biox[®] injections at the site.

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

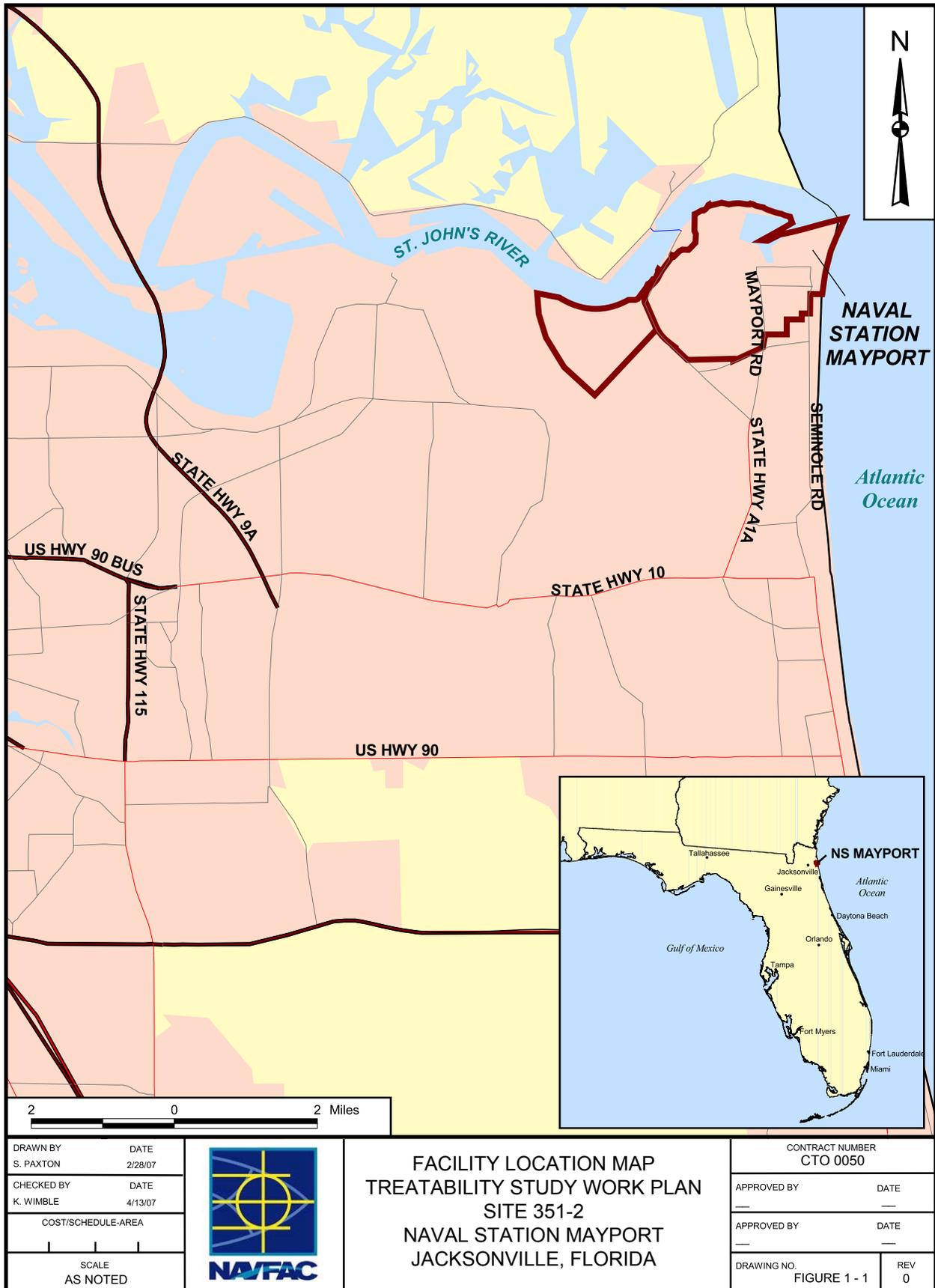
Tetra Tech NUS, Inc. (TtNUS) has prepared this Treatability Study Work Plan for Site 351-2 located at Naval Station (NAVSTA) Mayport, Jacksonville, Florida. This Treatability Study Work Plan has been prepared for the United States Navy, Naval Facilities Engineering Command Southeast (NAVFAC SE) under the Comprehensive Long-term Environmental Action Navy (CLEAN) IV Contract Number N62467-94-D-0888, Contract Task Order (CTO) 0050. The purpose of this Treatability Study Work Plan is to evaluate the effectiveness of Biox[®] as a treatment for contaminated groundwater at the site. The Florida Department of Environmental Protection (FDEP) letter accepting the Biox[®] treatment is provided as Appendix A.

The Biox[®] process combines controlled chemical oxidation and enhanced biodegradation of contaminants in soil and groundwater. Biox[®] will be injected into the unsaturated and saturated zones interval of 3 to 20 feet below land surface (bls) and within an area 35 feet by 55 feet. The boundaries of the treatment area were selected based on natural attenuation default concentrations per Chapter 62-777, Table V, Florida Administrative Code (F.A.C.). The area of the treatability study is designed to treat the impacted area in anticipation that the groundwater concentrations decrease to values within the natural attenuation default criteria. The results of the treatability study may also be used in the evaluation of groundwater treatment technologies in any future Remedial Action Plans in accordance with the requirements of Chapter 62-780, F.A.C.

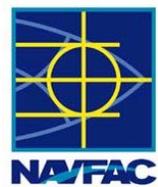
1.2 SITE DESCRIPTION

NAVSTA Mayport is located within the corporate limits of the City of Jacksonville, Duval County, Florida, approximately 12 miles northeast of downtown Jacksonville and adjacent to the town of Mayport. A Facility Location Map showing NAVSTA Mayport's location in northeastern Florida is provided as Figure 1-1. The station complex is located on the northern end of a peninsula bounded by the Atlantic Ocean to the east and the St. Johns River to the north and west. NAVSTA Mayport occupies the entire northern part of the peninsula except for the town of Mayport, which is located to the west between the Station and the St. Johns River.

Building 351 is located near the northeastern tip of the peninsula where the station is situated as shown on Figure 1-2. Building 351 is one of the primary buildings comprising the Training Site Detachment. The source area for the current investigation is located between Building 351 and Building 1388.



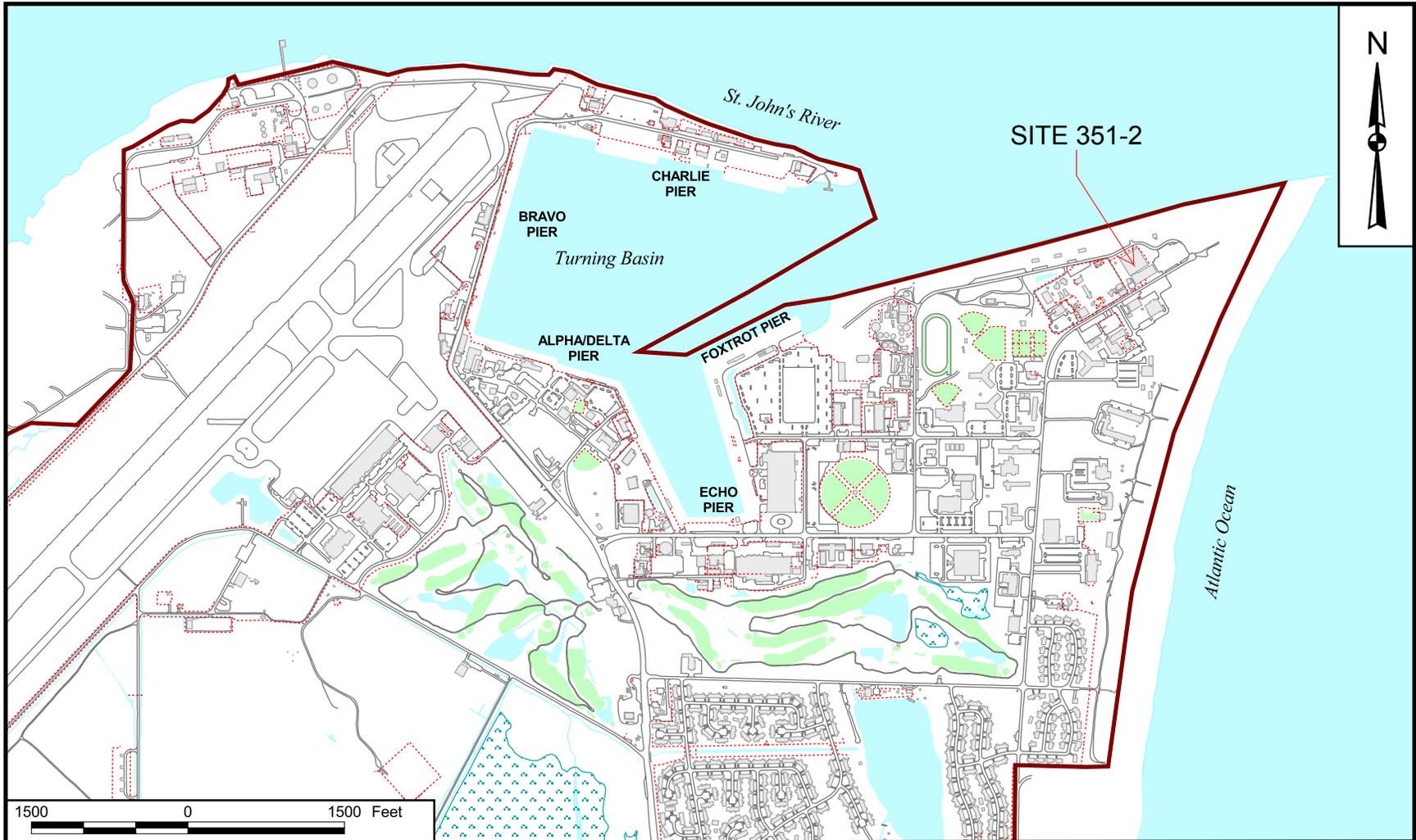
DRAWN BY S. PAXTON	DATE 2/28/07
CHECKED BY K. WIMBLE	DATE 4/13/07
COST/SCHEDULE-AREA	
SCALE AS NOTED	



FACILITY LOCATION MAP
TREATABILITY STUDY WORK PLAN
SITE 351-2
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER CTO 0050	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 1 - 1	REV 0

P:\GIS\MAYPORT_NS\MAPDOCS\APR\STATEMENT_BASIS.APR SITE LOCATION LAYOUT WITH TITLE BLOCK 4/13/07 SP



DRAWN BY	DATE
C. SPEHAR	5/15/06
CHECKED BY	DATE
C. SPEHAR	5/15/06
COST/SCHEDULE-AREA	
SCALE AS NOTED	



SITE LOCATION MAP
TREATABILITY STUDY WORK PLAN
SITE 351-2
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER CTO 0050	
APPROVED BY	DATE
APPROVED BY	DATE
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As shown on the Site Plan, Figure 1-3, Building 1388 is approximately 35 feet northwest of Building 351. Site 351-2 is named after Building 351 and the “-2” notes the second investigation area near this building.

1.3 SITE HISTORY

On December 16, 2003, it was discovered that a release of 650 gallons of No. 2 fuel oil from a faulty fuel line located at Building 351 spilled into a grassy area located between Buildings 351 and 1388. This work plan is centered on the area of the release area located in the central area between Buildings 351 and 1388.

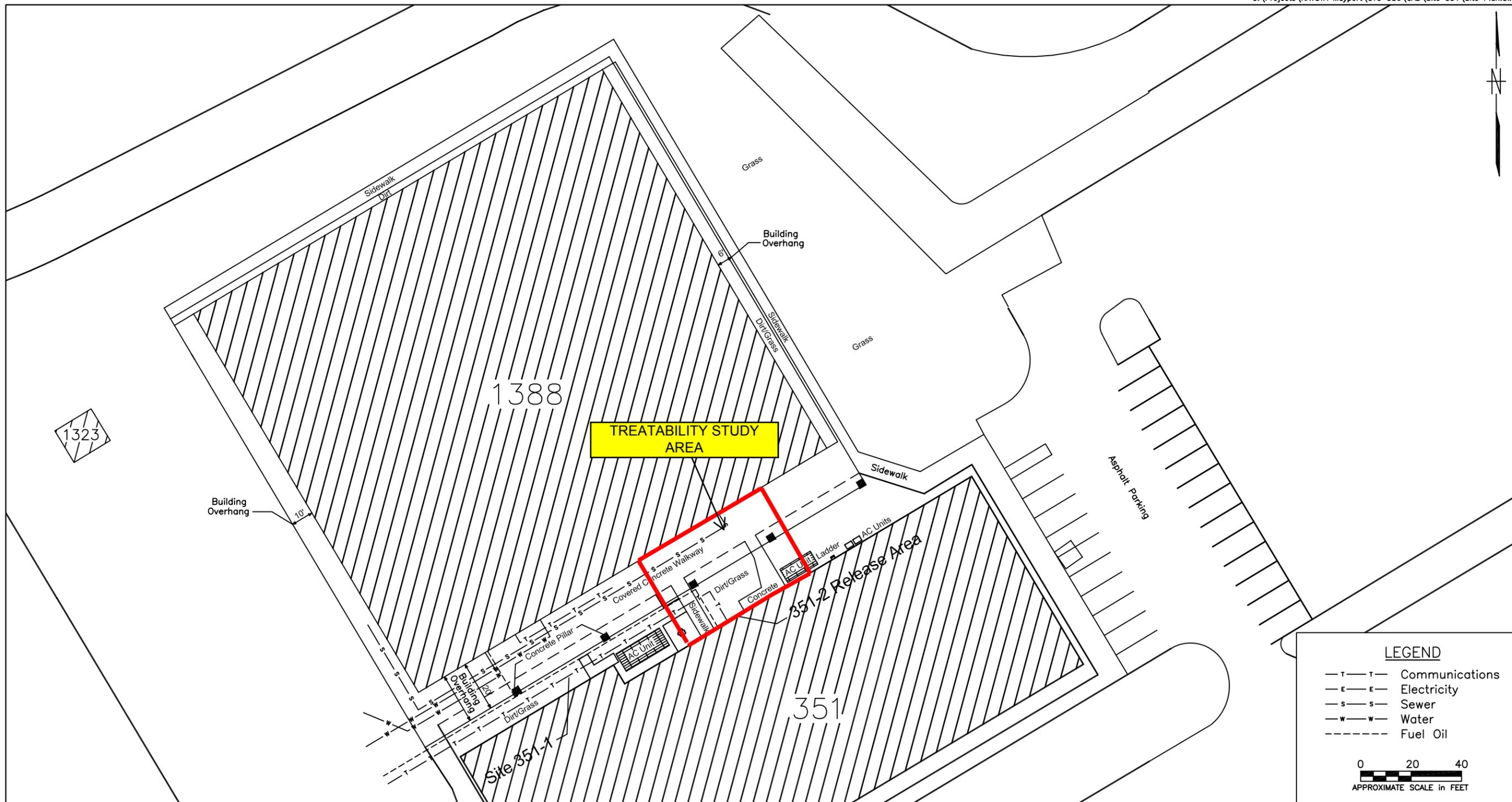
The cause of the spill as recorded in the December 16, 2003, Johnson Controls Hill, Spill Response Form, states, “The fuel supply line from the AST N1388 to boiler in Building 351 broke off in the fuel piping sump located northern side of Building 351.” Based on a hand drawn sketch, the surficial imprint of the spill area was in the shape of an “L,” and the east-west extension of the “L” was estimated to be 15 feet long and possibly 5 feet wide. The shorter north-south extension of the “L” was estimated to be 12 feet long and possibly 8 feet wide.

Seven 55-gallon drums of petroleum-impacted waste were generated during the initial cleanup of the site. It was documented on the spill response form that the cleanup of spill was not complete. The spill response form was sent to the FDEP on December 23, 2003 and a copy of the letter and Spill Response Form is presented as Appendix B.

The spill area is documented to be contained in the grassy area, which is surrounded on the northern, eastern, and western sides by sidewalks and the southern side by Building 351. The sidewalks on the eastern and western ends form the boundaries, and Building 351 and a cement ramp sidewalk form the southern boundary. Based on field observations, the contour of the grassy area, which gently slopes to the center, prevented the migration of the fuel oil from reaching the northern sidewalk.

As part of an interim source removal (ISR) conducted on June 28, 2004, Aerostar Environmental Services, Inc. (Aerostar) was contracted by NAVFAC SE to remove impacted soil for disposal. The excavation included a 15 foot by 5 foot by 3 foot deep area and resulted in the removal of 14.14 tons of petroleum-impacted soil. The effort removed the majority of the petroleum-impacted soil; however, not all petroleum-impacted soil was removed at the source area. The petroleum-impacted soil that was removed was placed in a roll off container and transported offsite for disposal at a licensed facility (Aerostar, 2004).

From August 2005 through January 2007, TtNUS completed an environmental site assessment and interim measure that delineated the horizontal and vertical extent of soil and groundwater impacts and removed and disposed of 76 tons of petroleum-impacted soil. The petroleum-impacted soil was



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SCALE: AS NOTED



SITE PLAN
TREATABILITY STUDY WORK PLAN
SITE 351-2
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NO. CTO 0050	
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DRAWING NO. FIGURE 1-3	REV. 0

delineated; however, the ISR did not remove all petroleum-impacted soil because contaminated soil was below utilities, sidewalks, and foundations.

The vertical extent of groundwater impacts was limited to a depth of 40 feet bls. The vertical extent of the groundwater was sampled for the gasoline analytical group and kerosene analytical group, and no Groundwater Cleanup Target Levels (GCTLs) were exceeded. However, during the site assessment in 2005, a groundwater sample was collected from a depth of 20 feet bls and analyzed for methyl-tert butyl ether (MTBE); benzene, toluene, ethylbenzene, and xylenes (BTEX); naphthalene; 1-methylnaphthalene; and 2-methylnaphthalene by a mobile laboratory. Concentrations of 1-methylnaphthalene (63.6 micrograms per liter [$\mu\text{g/L}$]), 2-methylnaphthalene (98.8 $\mu\text{g/L}$), total xylenes (50 $\mu\text{g/L}$), and naphthalene (50.5 $\mu\text{g/L}$) were detected in excess their respective GCTLs of 28 $\mu\text{g/L}$, 28 $\mu\text{g/L}$, 20 $\mu\text{g/L}$, and 14 $\mu\text{g/L}$, respectively. However, the concentrations were less than the natural attenuation default criteria for each constituent.

Although no free product was observed during the ISR, on September 20, 2006, 0.14 foot of free product was observed in monitoring well MPT-351-2-MW03. Free product was observed again on April 7, 2008, and has been monitored for monthly removal (when present) to date since.

During January 2009, 13 additional piezometers were placed in the surrounding areas of monitoring wells MPT-351-2-MW03 and MPT-351-2-MW05 to facilitate the monthly removal and gauging of free product, which is ongoing to date. The greatest thickness of free product (2.1 feet in monitoring well MPT-351-2-MW03) was observed on June 5, 2009. No free product has been observed at the site since July 31, 2009, when petroleum stained sorbent material was observed but no measurable free product was observed in PZ-13.

2.0 SITE CONDITIONS AND TREATABILITY STUDY IMPLEMENTATION

Various assessment activities were conducted beginning in 2004 to determine the extent of soil and groundwater contamination at the site. In addition to assessment activities, free product removal is currently being conducted by TtNUS. The following is a summary of the site conditions and the implementation of the treatability study at Site 351-2.

2.1 LITHOLOGIC FINDINGS

Descriptions of sediment materials underlying Site 351-2 were obtained during the installation of a 40-foot deep monitoring well, MPT-351-2-MW04, located in the source area. Sediments were collected from the auger flights and described by the TtNUS on-site geologist. Soils encountered in the upper 40 feet consisted primarily of fine and very fine sand and secondarily of shell hash. A very tightly packed layer of sand is approximately 20 feet bls, which is difficult for direct push technology (DPT) tooling to displace. These lithologic findings are consistent with borings completed at NAVSTA Mayport to similar depths.

2.2 GROUNDWATER AND AQUIFER CHARACTERISTICS

The State of Florida classifies the surficial aquifer underlying the site as G-II. Previous United States Geological Survey aquifer test data indicate that the average hydraulic conductivity of the surficial aquifer is approximately 4.34 feet per day (TtNUS, 2001).

The horizontal groundwater (hydraulic) gradient across the site was evaluated from water level data listed in Table 2-1 and shown on Figures 2-1 and 2-2. As depicted on the two groundwater contour figures and historically, the hydraulic gradient at the site flows to the north, but is subject to 180 degree reversal due to the site's position on a narrow peninsula roughly equidistant between two water bodies (St. Johns River and Mayport Turning Basin). The average horizontal hydraulic gradient beneath the site, calculated from potentiometric contours depicted on Figures 2-1 and 2-2, was determined to be 0.003 foot per foot. Groundwater at nearby Site 351-1 (see Figure 2-3) also depicts a northerly flow as found at Site 351-2.

Based on information provided by Driscoll (Driscoll, 1986) and on lithologic descriptions of material encountered during the current investigation, the effective porosity of surficial aquifer sediments was estimated to be 0.30.

<p align="center">Table 2-1 Water Table Elevation Data</p> <p align="center">Treatability Study Work Plan, Site 351-2 Naval Station Mayport Jacksonville, Florida</p>						
Monitoring Well MPT-351-2-	Total Well Depth (feet)	TOC Elevation (feet msl)	January 20, 2007		February 13, 2007	
			Depth to Water Below TOC (feet)	Water Table Elevation (feet msl)	Depth to Water Below TOC (feet)	Water Table Elevation (feet msl)
MW01	13	7.75	5.35	2.40	5.43	2.32
MW02	13	7.73	5.32	2.41	5.38	2.35
MW03	13	7.59	5.14	2.45	5.29	2.30
MW04	11	8.34	5.94	2.40	6.02	2.32
MW05	7	8.17	5.82	2.35	5.84	2.33

msl = Mean sea level.
TOC = Top of casing.

Using Darcy's Law, the groundwater velocity at the site was calculated. Darcy's Law may be expressed as follows: $V = \frac{(K \times I)}{n}$ where: V = average seepage velocity

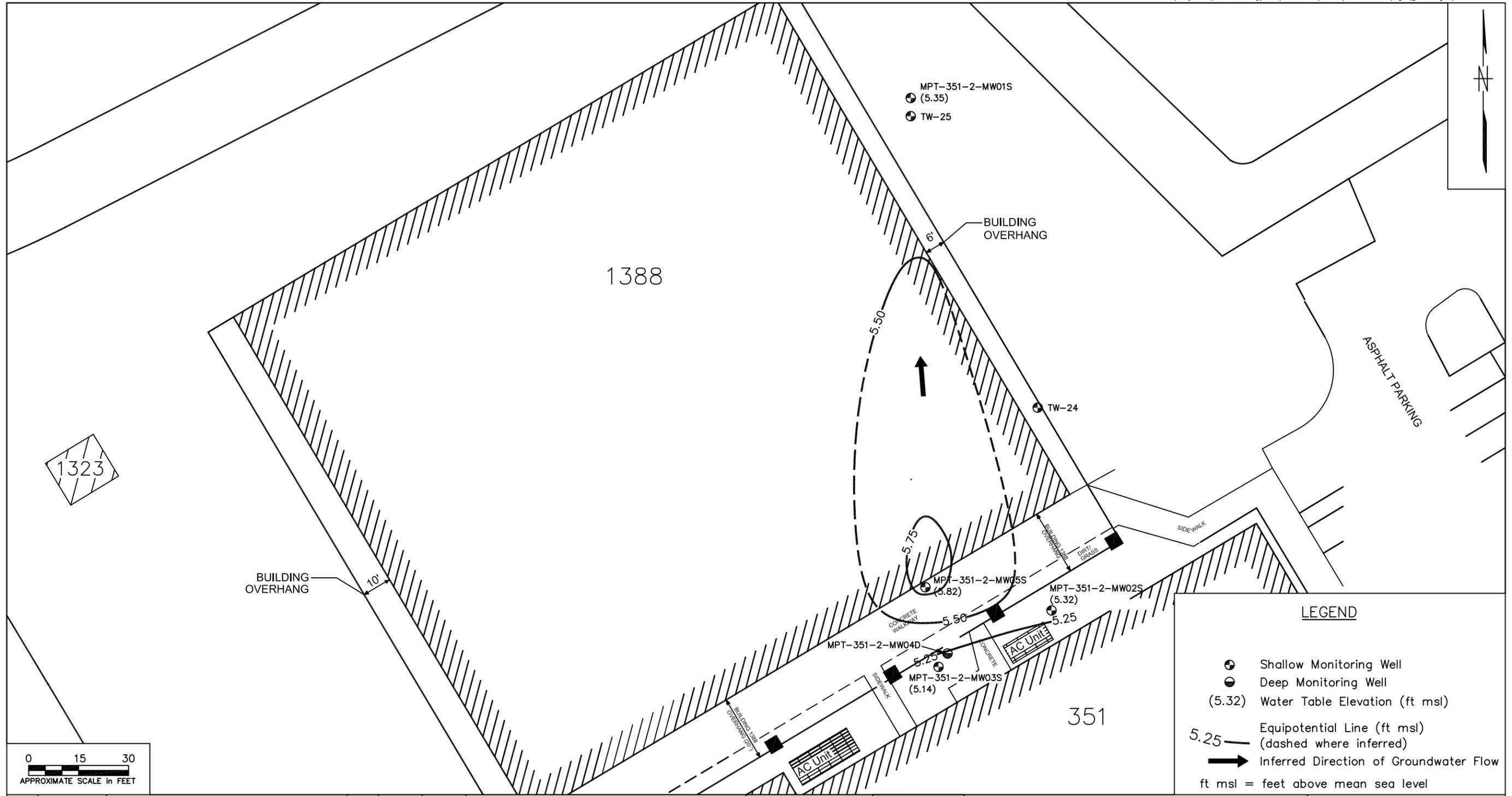
K = hydraulic conductivity
n = effective porosity
I = average hydraulic gradient

Using a hydraulic conductivity of 4.34 feet per day, a hydraulic gradient of 0.003 foot per foot, an inferred effective porosity value of 0.30, and Darcy's law, the groundwater seepage velocity across the site was calculated at 0.0434 foot per day or 15.84 feet per year. However, the reversal in flow direction with tidal influences likely results in a lower net velocity.

Groundwater flow in the deep zone was not evaluated in the previous investigations since this zone has not been impacted by constituents of concern (COCs).

2.3 SITE SOIL CONDITIONS

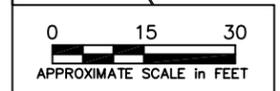
During January 2007, TtNUS conducted an ISR which involved the excavation and disposal of 76 tons of petroleum-impacted soil. During the excavation, soil was removed to the water table when possible. Obstructions such as utilities, sidewalks, and foundations prevented the removal of all petroleum-impacted soil. Prior to the excavation, eight soil samples (SB-14, SB-26, SB-30, SB-31, SB-32, SB-37, SB-53, and SB-58) were collected at a depth of 3 feet bls to pre-characterize the excavation boundary as depicted in Figure 2-4 (TtNUS, 2008). Since the majority of petroleum-impacted soil was removed and disposed, soil is not major consideration in the treatability study. However, conditions at the water table and vadose zone interface need to be discussed and be a part of the Biox[®] treatability study area.



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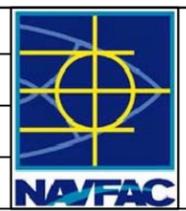
- Shallow Monitoring Well
- Deep Monitoring Well
- (5.32) Water Table Elevation (ft msl)
- 5.25 Equipotential Line (ft msl) (dashed where inferred)
- ➔ Inferred Direction of Groundwater Flow

ft msl = feet above mean sea level



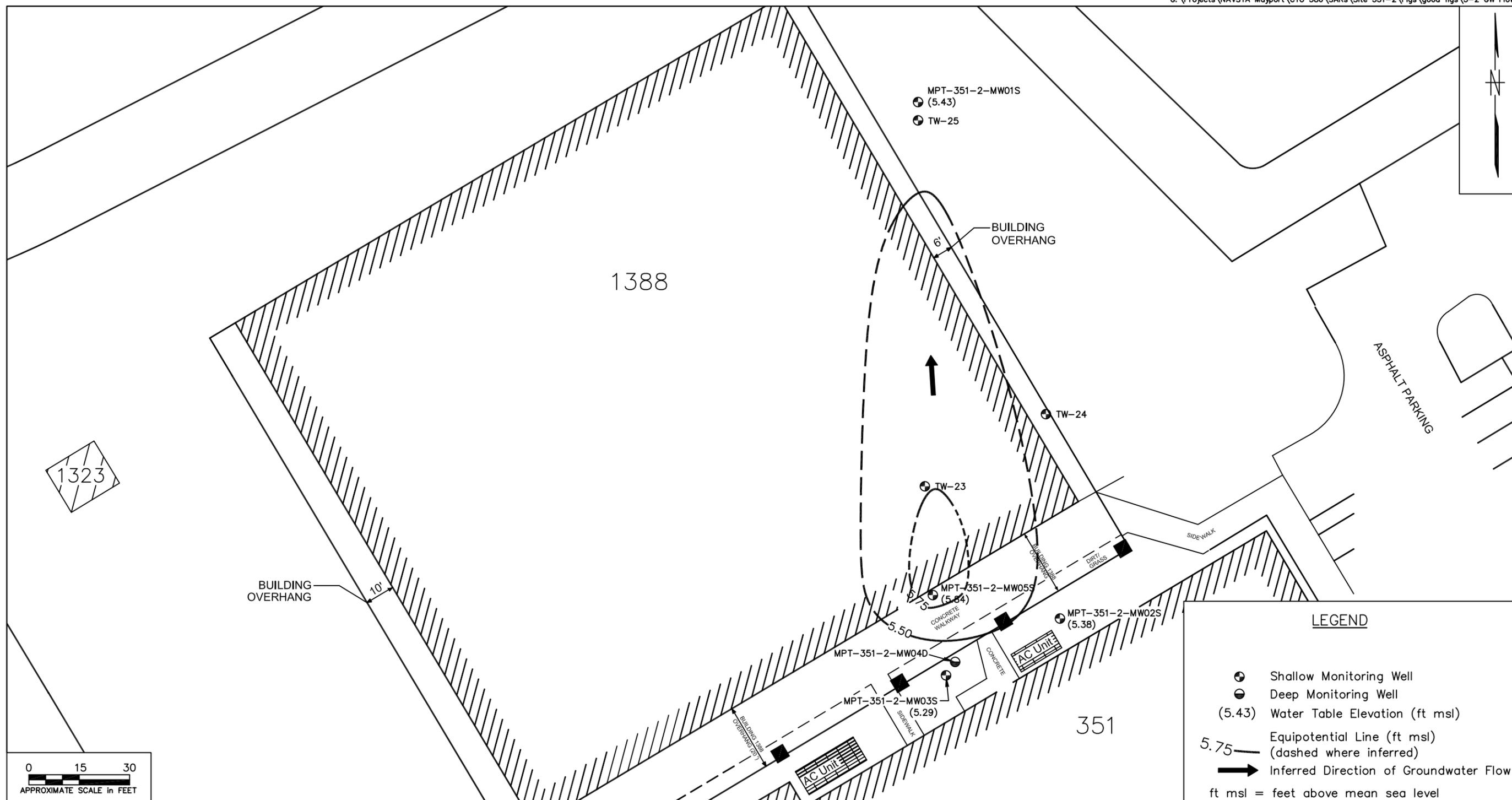
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GROUNDWATER CONTOUR, JANUARY 20, 2007
TREATABILITY STUDY WORK PLAN
SITE 351-2
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

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- Shallow Monitoring Well
- Deep Monitoring Well
- (5.43) Water Table Elevation (ft msl)
- 5.75 Equipotential Line (ft msl) (dashed where inferred)
- ➔ Inferred Direction of Groundwater Flow

ft msl = feet above mean sea level

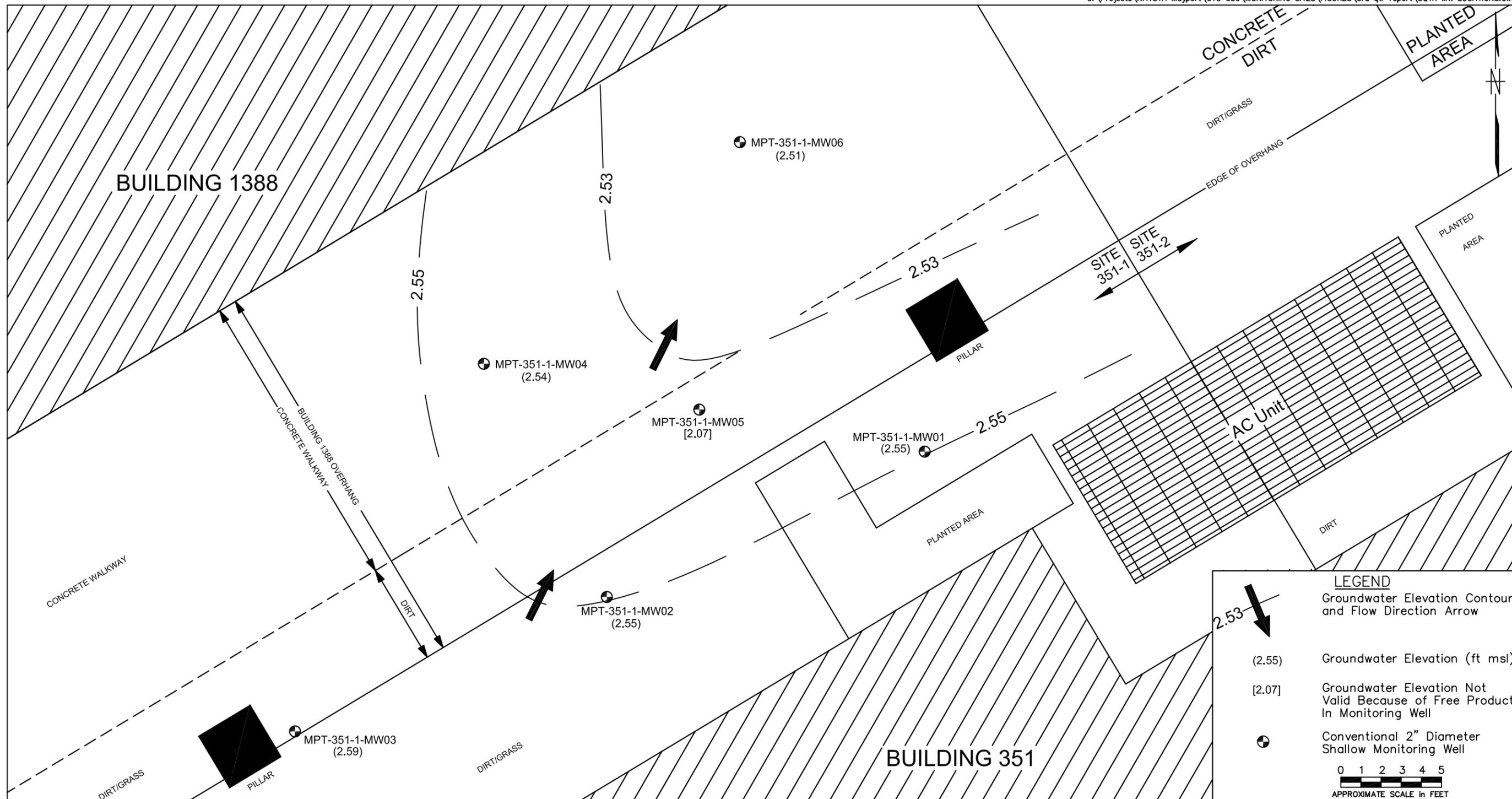
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GROUNDWATER CONTOUR, FEBRUARY 13, 2007
TREATABILITY STUDY WORK PLAN
SITE 351-2
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

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FIGURE 2-2	0



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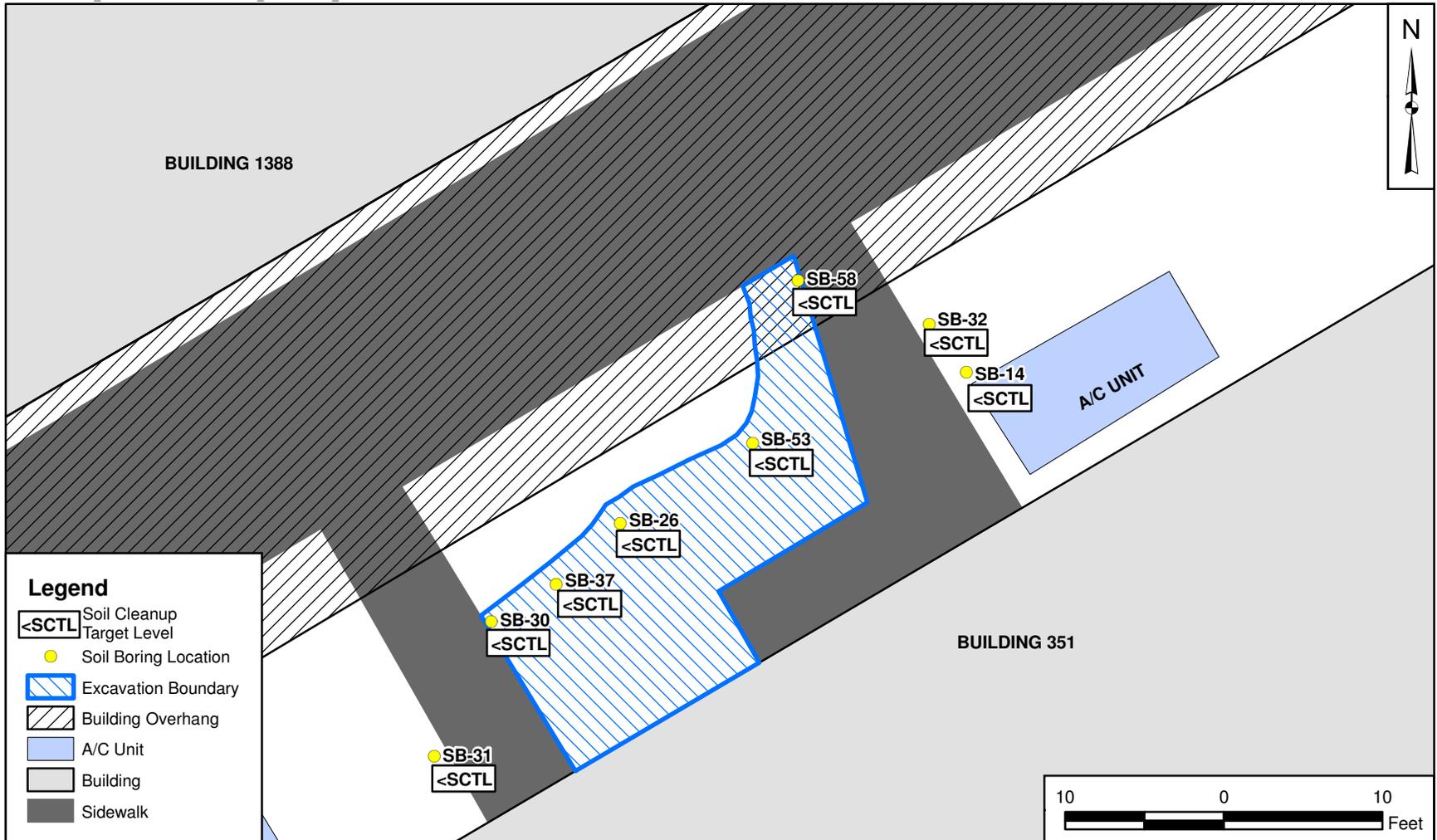
GROUNDWATER CONTOUR AT SITE 351-1,
AUGUST 16, 2007
TREATABILITY STUDY WORK PLAN
SITE 351-2
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

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D. SIEFKEN	12/17/09
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PRE-CHARACTERIZATION SOIL SAMPLE
 LOCATIONS AND EXCAVATION BOUNDARY
 TREATABILITY STUDY WORK PLAN
 SITE 351-2
 NAVAL STATION MAYPORT
 JACKSONVILLE, FLORIDA

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FIGURE NO. FIGURE 2-4	REV 0

CTO 0050

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01/13/10

Based on depth to groundwater measurements collected from 2006 to present, the depth of groundwater fluctuates between 3.5 feet bls and 5.0 feet bls. Since the high water mark for groundwater begins at 3.5 feet bls, the application of Biox[®] will begin at a depth of 3 feet bls and injections will continue at 2-foot intervals to ensure all soils within the smear zone are treated.

2.4 SITE GROUNDWATER CONDITIONS

The most recent groundwater analytical data for Site 351-2 was obtained on July 25, 2008, when groundwater samples were collected from monitoring wells MPT-351-2-MW01, MPT-351-2-MW02, and MPT-351-2-MW04 (deep well) and analyzed at a fixed-base laboratory for volatile organic compounds (VOCs) using United States Environmental Protection Agency (USEPA) Method 8260B, polynuclear aromatic hydrocarbons (PAHs) using USEPA Method 8270, and total petroleum hydrocarbons (TPH) using the Florida Petroleum Range Organics (FL-PRO) method. Monitoring wells MPT-351-2-MW03 and MPT-351-2-MW05, located near the source area, were not sampled due to the presence of free product at the time of the sampling event. Free product is discussed further in Section 2.5.

The recent findings mirrored the previous results from 2005. No FDEP GCTL exceedances were recorded for the three wells sampled outside the source area. The vertical extent, down gradient, and side gradient monitoring wells remain below FDEP GCTLs. Only trace levels of petroleum constituents were identified. The 2008 groundwater analytical results are provided in Table 2-2 and are depicted on Figure 2-5. Groundwater analytical results are provided in Appendix C.

2.4.1 Treatability Groundwater Boundary

The treatability study boundaries are by design an estimation of where the groundwater may be impacted above FDEP GCTLs, but at concentrations that do not exceed natural attenuation concentrations. To establish the treatability boundary, mobile laboratory data obtained during the 2005 site assessment was used. The final adjustment of the groundwater treatability study boundary will be made in the field and will be based on, but not limited to, field observations of such occurrences as severity of oxidation of Biox[®], soil staining, and petroleum odor.

To establish a treatment boundary, the midpoint between a groundwater sample location that exceeded the FDEP natural attenuation default concentrations per Chapter 62-777 Table V, F.A.C., and a sample location, which did not exceed FDEP GCTLs were selected.

Table 2-2
Fixed-Base Laboratory Groundwater Analytical Results (2008)

Treatability Study Work Plan, Site 351-2
 Naval Station Mayport
 Jacksonville, Florida

Compound	FDEP GCTL	Sample ID (MPT-351-2-) and Sample Date													
		TMW-23	TMW-24	TMW-25	MW01	MW01	MW02	MW02	MW03	MW03*	MW04	MW04	MW05	MW05*	
		12/29/05	12/29/05	12/29/05	01/20/06	07/25/08	01/20/06	07/25/08	01/20/06	07/25/08	01/20/06	07/25/08	2/6/2009	07/25/08	
VOCs (USEPA Method 8260B) (µg/L)															
Benzene	1	31	1 U	1 U	0.2 U	0.11 U	0.2 U	11 U	42.8	NS	0.2 U	0.11 U	87.5	NS	
Ethylbenzene	30	1 U	1 U	1 U	0.3 U	0.14 U	0.310 I	0.14 U	37.8	NS	0.620 I	0.14 U	14.2	NS	
MTBE	20	10	1 U	1 U	3.27	0.17 U	0.2 U	0.17 U	0.2 U	NS	0.2 U	0.17 U	0.2 U	NS	
Toluene	40	1 U	1 U	1 U	0.2 U	0.18 U	0.2 U	0.18 U	1.5	NS	0.2 U	0.18 U	0.2 U	NS	
m+p Xylenes	20	2	2 U	2 U	0.3 U	0.21 U	1.15 I	0.21 U	163	NS	3.27	0.21 U	42.1	NS	
o Xylene	20	1 U	1 U	1 U	0.2 U	0.21 U	0.2 U	0.21 U	22	NS	0.690 I	0.21 U	0.2 U	NS	
Xylenes (total)	20	2	1 U	1 U	1 U	0.21 U	1 U	0.21 U	185	NS	1 U	0.21 U	42.1	NS	
PAHs (USEPA Method 8270) (µg/L)															
Acenaphthene	20	0.1 U	0.1 U	0.1 U	0.14	0.041 I	0.02 U	0.015 U	2.4	NS	0.75	0.015 U	2.43	NS	
Anthracene	2100	0.1 U	0.1 U	0.1 U	0.02 U	0.015 U	0.02 U	0.028 I	0.08 I	NS	0.02 U	0.032 I	0.02 U	NS	
Benzo(a)anthracene	0.05	0.1 U	0.1 U	0.1 U	0.1 U	0.015 U	0.1 U	0.035 I	0.1 U	NS	0.1 U	0.015 U	0.1 U	NS	
Benzo(a)pyrene	0.2	0.1 U	0.1 U	0.1 U	0.1 U	0.015 U	0.1 U	0.015 U	0.1 U	NS	0.1 U	0.023 I	0.1 U	NS	
Chrysene	4.8	0.1 U	0.1 U	0.1 U	0.2 U	0.015 U	0.2 U	0.033 I	0.2 U	NS	0.2 U	0.015 U	0.2 U	NS	
Fluoranthene	280	0.1 U	0.1 U	0.1 U	0.01 U	0.015 U	0.01 U	0.015 U	0.05 I	NS	0.01 U	0.015 U	0.05 I	NS	
Fluorene	280	0.1 U	0.1 U	0.1 U	0.02 U	0.015 U	0.02 U	0.015 U	5.32	NS	2.05	0.015 U	4.89	NS	
2-Methylnaphthalene	28	0.5 U	0.5 U	0.5 U	0.02 U	0.018 U	0.02 U	0.046	122 D	NS	13.5	0.018 U	87.6	NS	
1-Methylnaphthalene	28	0.5 U	0.5 U	0.5 U	0.02 U	0.017 U	0.02 U	0.068	75.5 D	NS	10.1	0.017 U	55.6	NS	
Naphthalene	14	0.5 U	0.5 U	0.5 U	0.02 U	0.018 U	0.05 I	0.018 U	102 D	NS	1.85	0.018 U	151	NS	
Phenanthrene	210	0.1 U	0.1 U	0.1 U	0.02 U	0.015 U	0.02 U	0.053	5.06	NS	2.68	0.061	3.58	NS	
Pyrene	210	0.1 U	0.1 U	0.1 U	0.02 U	0.015 U	0.02 U	0.041 I	0.56	NS	0.45	0.015 U	0.08 I	NS	
Metal (USEPA Method 6010)															
Total lead	15	0.01 U	0.01 U	0.01 U	0.002 U	NS	0.002 U	NS	0.002 I	NS	0.002 U	NS	0.003 I	NS	
Petroleum Hydrocarbons (FL-PRO Method) (mg/L)															
TPH (C8-C40)	5	6	0.2 U	0.2 U	0.536	0.85	0.094 U	0.16 U	3.55	NS	0.604	0.16 U	3.94	NS	
EDB (USEPA Method 504.1)															
EDB	0.02	0.02 U	0.02 U	0.02 U	0.01 U	NS	0.01 U	NS	0.01 U	NS	0.01 U	NS	0.01 U	NS	

Notes:

* MW03 and MW05 were not sampled on July 25, 2008, due to the presence of free product.
 mg/L = Milligram per liter.
 EDB = Ethylene dibromide.
 NS = Not sampled.

U = Not detected.
 D = Data reported from dilution.
 I = Detected, but below reporting limits.
Bold indicates exceedance of the FDEP GCTL.

Two sample points (SB-08 and SB-09; SB-07 and SB-14) form the eastern boundary, and sample points (SB-12 and SB-13; SB-10 and SB-11) form the western boundary. Using these midpoints as eastern and western boundaries, the maximum treatment area is 35 feet wide and the length extends to 55 feet. Figure 2-6 depicts the 2005 sample locations and associated mobile laboratory data, and Table 2-3 depicts the 2005 assessment data. The length of the treatability study area may increase or decrease based on field observation of groundwater impacts, but will serve as a starting point for the treatability study. No Biox[®] treatment injection points will be installed inside the building.

The vertical extent of treatability study injection depth is based on groundwater analyzed from sample SB-06, which was collected in the source area. In an attempt to define the vertical extent during the 2005 assessment, boring SB-06 was selected to be advanced via DPT to an approximate depth of 40 feet bls. While pushing to depth, boring SB-06 met refusal at 20 feet bls due very densely packed fine grained sand. Unable to push deeper, a groundwater sample was collected from a screened depth of 16 to 20 feet bls and analyzed by a mobile laboratory for MTBE, BTEX, and the naphthalene constituents. 1-Methylnaphthalene (63.6 µg/L), 2-methylnaphthalene (98.8 µg/L), total xylenes (50 µg/L), and naphthalene (50.5 µg/L) were detected above their respective GCTLs of 28 µg/L, 28 µg/L, 20 µg/L, and 14 µg/L. Although no constituents exceeded the natural attenuation default criteria, it was determined that Biox[®] injection points should be advanced to a depth of 20 feet, if possible.

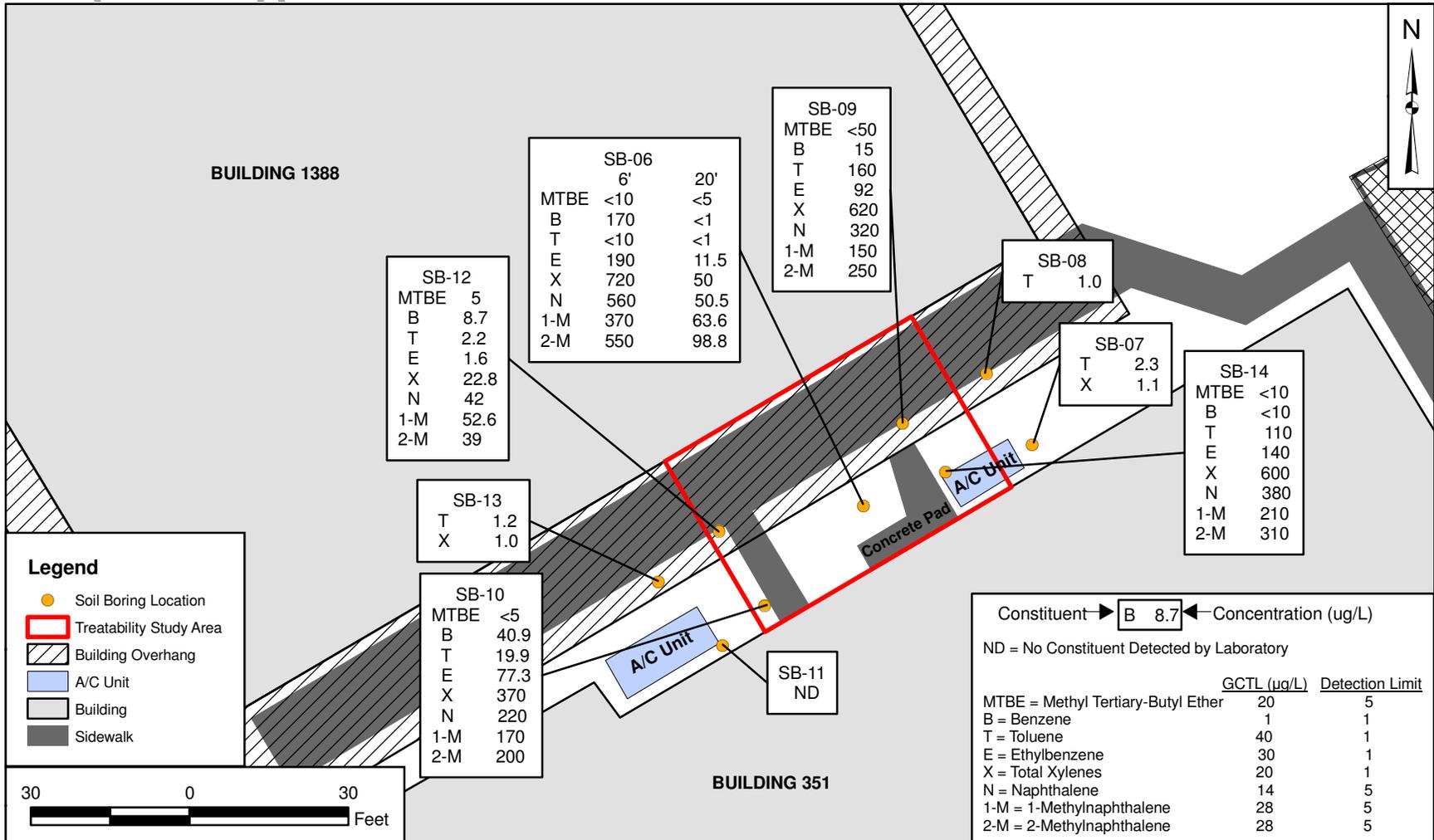
2.5 FREE PRODUCT

Free product was first observed September 20, 2006, when 0.14 foot of free product was measured during routine water level measurements in monitoring well MPT-351-2-MW03, which is located at the northern (downgradient) edge of the ISR excavation boundary. During the January 2007 ISR soil removal, no free product was observed. Monthly free product removal began on April 7, 2008, when free product was observed in monitoring well MPT-351-2-MW03. On June 20, 2008, 1.85 feet of free product was observed in monitoring well MPT-351-2-MW03, and free product has also been observed in monitoring well MPT-351-2-MW-05 located in the sidewalk along the southern wall of Building 1388. To better facilitate the free product removal, thirteen 2-inch piezometers were installed from January 6 through 8, 2009, near monitoring wells MPT-351-2-MW03 and MPT-351-2-MW05. Figure 2-7 presents the location of the free product recovery wells. Each piezometer was installed in January 2009 to a depth of 12 feet bls.

Since the installation of the monitoring wells and piezometers, free product has come and gone. When the free product is present, it is removed two-fold. First, petroleum sorbent material is left in the monitoring wells and changed when fully saturated. Second, low flow skimming of free product is conducted during which a peristaltic pump is used to remove free product from the monitoring wells when the sorbent sock does not collect all of the free product. As of November 2009, approximately 111 liters of free product have been removed from the site.

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2-11



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D. SIEFKEN	12/08/09
COST/SCHEDULE AREA	
SCALE AS NOTED	



MOBILE LABORATORY GROUNDWATER ANALYTICAL RESULTS (2005)
 TREATABILITY STUDY WORK PLAN
 SITE 351-2
 NAVAL STATION MAYPORT
 JACKSONVILLE, FLORIDA

CONTRACT NUMBER	
00103	
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APPROVED BY	DATE
FIGURE NO.	REV
FIGURE 2-6	0

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**Table 2-3
Mobile Laboratory Groundwater Analytical Results (2005)**

Treatability Study Work Plan, Site 351-2
Naval Station Mayport
Jacksonville, Florida

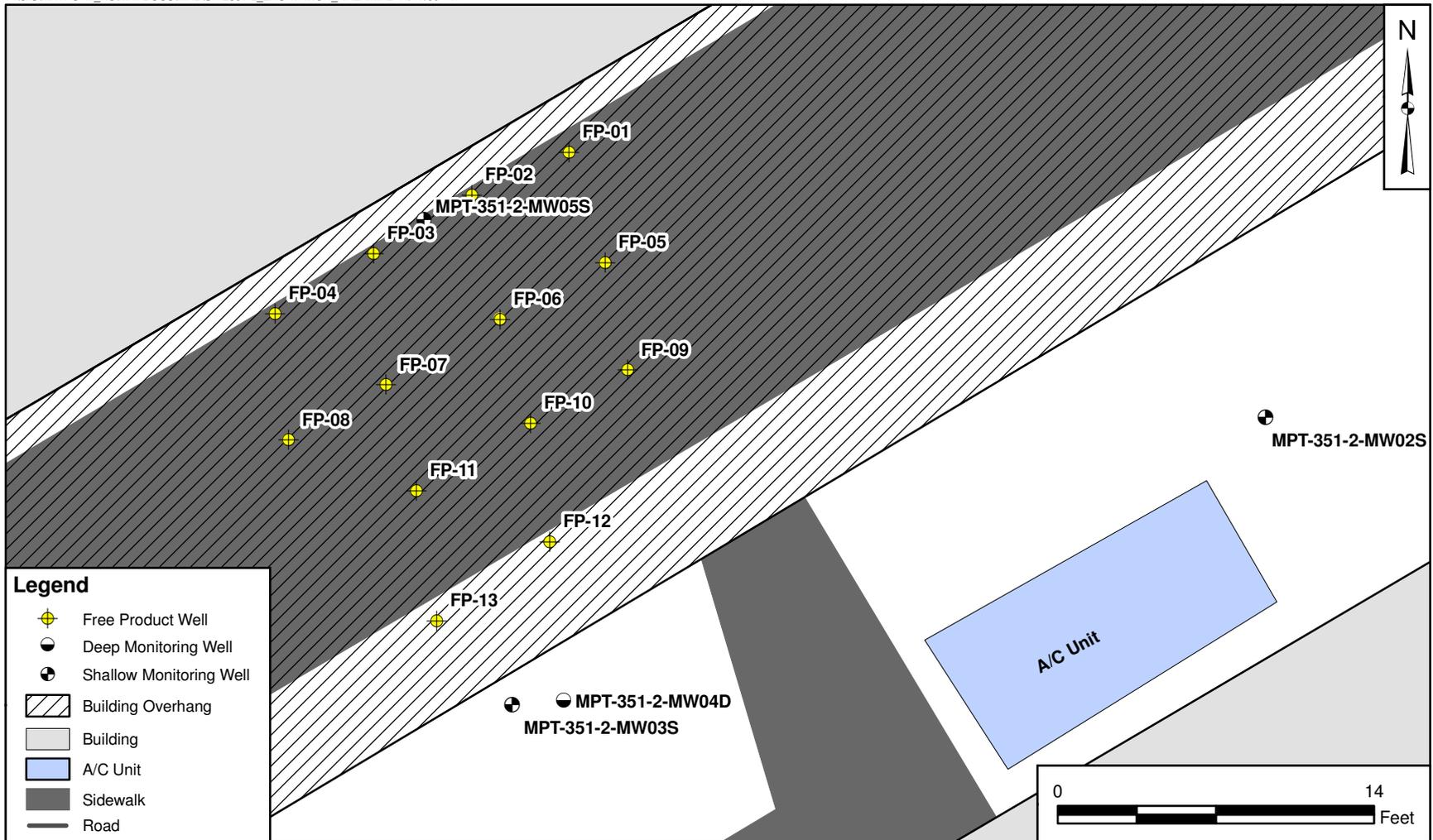
Compound	FDEP GCTL	Sample ID (MPT-351-2-) and Sample Date											
		SB-01	SB-02	SB-04	SB-06	SB-06-20	SB-07	SB-08	SB-09	SB-10	SB-11	SB-12	SB-13
		08/10/05	08/10/05	08/11/05	08/11/05	08/12/05	08/10/05	08/10/05	08/10/05	08/10/05	08/10/05	08/10/05	08/10/05
VOCs (USEPA Method 8260B) (µg/L)													
1-Methylnaphthalene	28	160	140	590	370	63.6	5 U	5 U	180	170	5 U	52.6	5 U
2-Methylnaphthalene	28	200	200	890	550	98.8	5 U	5 U	250	200	5 U	39	5 U
Benzene	1	57.2	110	150	170	1 U	1 U	1 U	18	40.9	1 U	8.7	1 U
Ethylbenzene	30	68.4	80	140	190	11.8	1 U	1 U	92	77.3	1 U	1.8	1 U
m+p Xylenes	20	240	190	460	720	50	1.1	1 U	360	180	1 U	20	1
MTBE	20	26.4	100 U	100	10 U	5 U	5 U	5 U	50 U	5 U	5 U	8	5 U
Naphthlene	14	190	260	620	560	50.5	5 U	5 U	320	220	5 U	42	5 U
o Xylene	20	160	26	140	10 U	1 U	1 U	1 U	260	190	1 U	2.8	1 U
Toluene	40	21.5	20 U	120	10 U	1 U	2.3	1	180	19.9	1 U	2.2	1.2
Total Xylenes	20	400	216	600	720	50	1.1	1 U	620	370	1 U	22.8	1

Compound	FDEP GCTL	Sample ID (MPT-351-2-) and Sample Date							
		SB-14	SB-17	SB-18	SB-19	SB-19 DUP	SB-20	SB-21	SWMU- 17-05-S
		08/11/05	08/10/05	08/11/05	08/11/05	08/11/05	08/11/05	08/11/05	08/11/05
VOCs (USEPA Method 8260B) (µg/L)									
1-Methylnaphthalene	28	210	110	5 U	5 U	5 U	5 U	5 U	5 U
2-Methylnaphthalene	28	310	140	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	1	10 U	97	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	30	140	37.2	7.9	1 U	1 U	1 U	1 U	1 U
m+p Xylenes	20	250	180	10.9	1 U	1 U	1 U	1 U	1 U
MTBE	20	10 U	45.9	5 U	51.7	120	5 U	5 U	5 U
Naphthlene	14	380	210	5 U	5 U	5 U	5 U	5 U	5 U
o Xylene	20	350	65.1	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	40	110	1.6	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	20	600	245.1	10.9	1 U	1 U	1 U	1 U	1 U

Notes:
Bold indicates exceedance of the
FDEP GCTL.
U = Not detected.

09JAX0075

2-13



CTO 0050

DRAWN BY	DATE
T. WHEATON	11/03/09
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D. SIEFKEN	11/03/09
COST/SCHEDULE AREA	
SCALE AS NOTED	



FREE PRODUCT RECOVERY WELL LOCATIONS
TREATABILITY STUDY WORK PLAN
SITE 351-2
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER	
CTO 0050	
APPROVED BY	DATE
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FIGURE NO.	REV
FIGURE 2-7	0

Rev. 0
01/13/10

Based on the most recent free product information recorded November 25, 2009, no free product was observed in any monitoring wells and has been absent from view since July 31, 2009, when oil-soaked sorbent material was observed in piezometer PZ-13.

3.0 TREATABILITY STUDY DESIGN

The treatability study will be conducted to evaluate the effectiveness of the treatment of COCs within the soil vadose smear zone and shallow and intermediate saturated zones at the site with Biox[®]. The Biox[®] process combines controlled chemical oxidation and enhanced biodegradation of contaminants in soil and groundwater. Biox[®] will be injected into the shallow groundwater zone (3 to 20 feet bls). The goal of the treatability study is to determine if the Biox[®] injections are capable of reducing COC and free product concentrations in groundwater to levels less than FDEP Natural Attenuation Default Concentrations.

3.1 BIOX[®] TECHNOLOGY

The Biox[®] process is a remedial technology that combines controlled chemical oxidation with enhanced biodegradation of contaminants in both soil and groundwater. The Biox[®] formulation includes combinations of solid peroxides, pH buffer systems, and nutrients. The Biox[®] formulation will be adjusted to area-specific soil, geochemical, and contaminant conditions. The pH of the Biox[®] fluids will range from 7 to 8.5.

The chemical oxidation component of the Biox[®] process is based on Fenton-type reactions. In Fenton-type reactions, ferrous and ferric iron decompose hydrogen peroxide to molecular oxygen, radicals (predominantly hydroxyl radicals), and water. The Fenton-type reactions of the Biox[®] process include reactions of low concentrations of hydrogen peroxide evolving from the dissolution of solid peroxides (e.g., magnesium or calcium peroxide or sodium percarbonate) with dissolved iron, as well as iron containing minerals and fulvic and humic substances in soil. An iron catalyst may be supplemented if the naturally occurring iron species are insufficient for the activation of Fenton-type reactions.

The Biox[®] formulation prevents excessive degassing. Further, the controlled Fenton-type reactions induced by the Biox[®] formulation generate only minimal increases in groundwater temperature (less than 5 degrees Fahrenheit). Fenton-type reactions can completely oxidize organic compounds to their elemental oxides, such as carbon dioxide and water. Fenton-type reactions also yield products of partial oxidation such as hydroxylated hydrocarbons. These hydroxylated hydrocarbons are surface active and tend to desorb and dissolve organic contaminants making them more available for remediation. Additionally, partially oxidized products of the reaction are more soluble in water and are more readily degraded by microorganisms present in soil. Typically, the heterotrophic microbial population increases significantly in soil and groundwater within weeks after the application of the Biox[®].

A letter from the FDEP Bureau of Petroleum Storage System accepting Biox[®] for remediation of petroleum and other suitable contaminants in groundwater and soil is included in Appendix A.

3.1.1 Field Operations

The pilot test will consist of the following field activities:

- Mobilization/demobilization
- Installation of soil borings in areas of groundwater contamination and injection of Biox[®]
- Environmental sampling following injection to evaluate COCs and geochemical parameters

Figure 3-1 shows the proposed Biox[®] injection area.

Biox[®] will be injected in 1- to 2-foot lifts using a soft advance fluid-jetting system to install the borings. After completing each injection point, the probe hole will be sealed with bentonite chips and capped with a cement grout where appropriate.

3.1.2 Investigation-Derived Waste Management

Investigation-derived waste accumulated during installation, well purging and sampling, and decontamination will be collected, containerized, and stored in Department of Transportation (17C)/UN (1A2)-approved 55-gallon drums. The drums will be labeled after they are filled. Following receipt of analytical results, TtNUS will arrange for a certified waste management contractor to properly dispose of the drums.

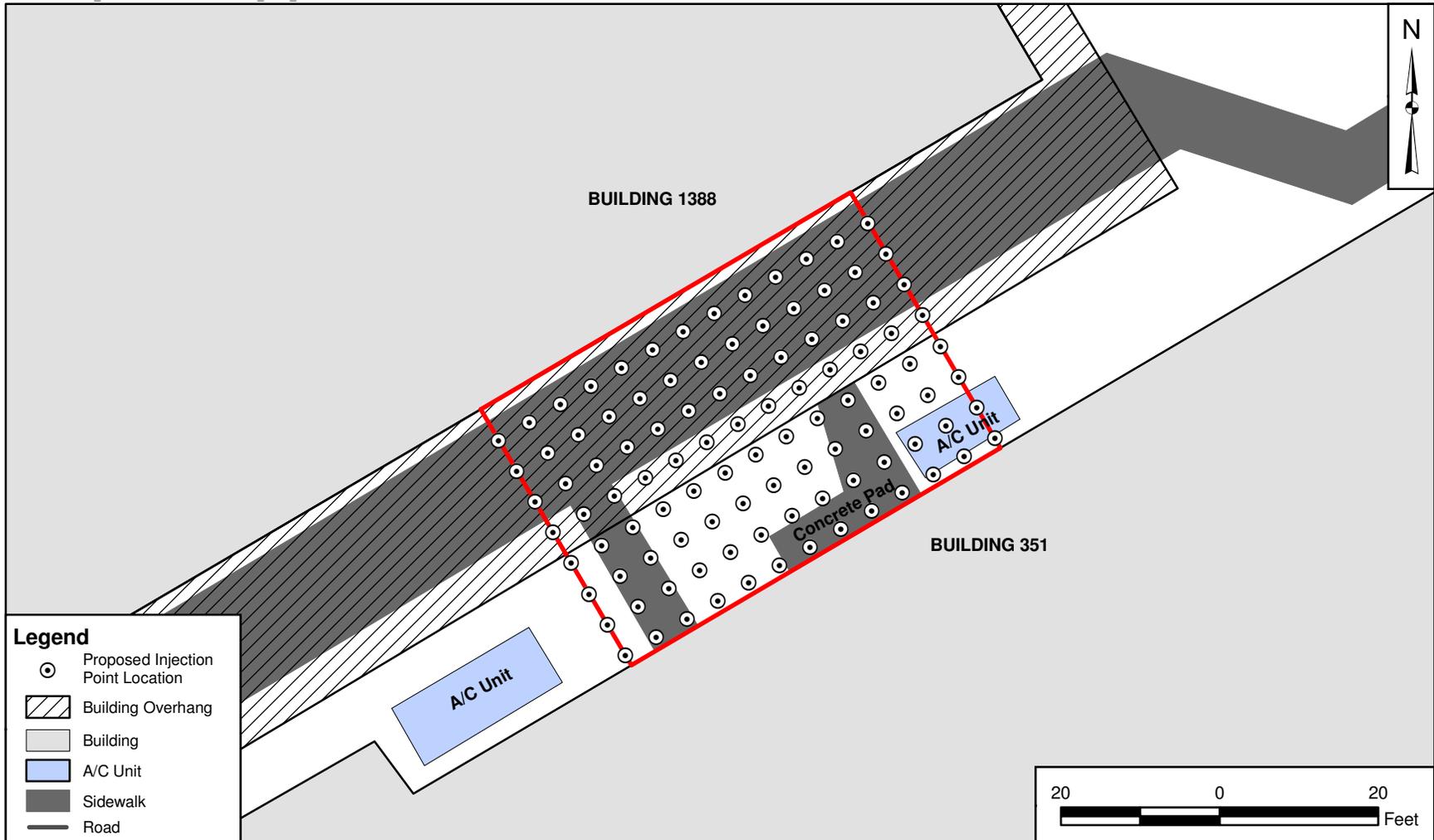
3.1.3 Decontamination

Personnel will perform decontamination procedures as required by the *Health and Safety Plan for Site Assessments and Site Characterizations, Evaluations, and Remedial Actions* (TtNUS, 2005). The equipment involved in field sampling activities will be decontaminated prior to and upon completion of drilling and sampling activities. This equipment includes down-hole tools, augers, and all non-dedicated sampling equipment.

Used personal protective equipment will be disposed of with solid drill cuttings as investigative derived waste as described in the Health and Safety Plan. These items include Tyvek[™] suits, disposable latex gloves, and paper towels.

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3-3



Legend

- Proposed Injection Point Location
- ▨ Building Overhang
- Building
- A/C Unit
- Sidewalk
- Road

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T. WHEATON	11/20/09
CHECKED BY	DATE
D. SIEFKEN	11/20/09
COST/SCHEDULE AREA	
SCALE AS NOTED	



PROPOSED BIOX INJECTION AREA
TREATABILITY STUDY WORK PLAN
SITE 351-2
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER 00103	
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. FIGURE 3-1	REV 0

CTO 0050

Rev. 0
01/13/10

3.2 MONITORING

Site groundwater will be sampled and analyzed before and after the Biox[®] injection to monitor the geochemical parameters (pH, conductivity, temperature, dissolved oxygen, and oxidation-reduction potential), COC concentrations, and FDEP-required parameters at the injection areas. Monitoring wells MPT-351-2-MW01, MPT-351-2-MW03, MPT-351-2-MW05, and three additional monitoring wells will be installed to form a six well monitoring network. Two of the three additional monitoring wells will be installed along the western treatability study boundary with one monitoring well being located within 5 feet of the wall of Building 1388 and the other monitoring well approximately 9 feet from the northern wall of Building 351. The third monitoring well will be installed along the eastern treatability study boundary within 5 feet of the southern wall of Building 1388. This monitoring well network will be sampled within 30 days prior to the Biox[®] injection to determine baseline conditions. Upon completion of injection activities, these monitoring wells will be sampled quarterly for one year. Figure 3-2 depicts the proposed locations of the three new monitoring wells to be added.

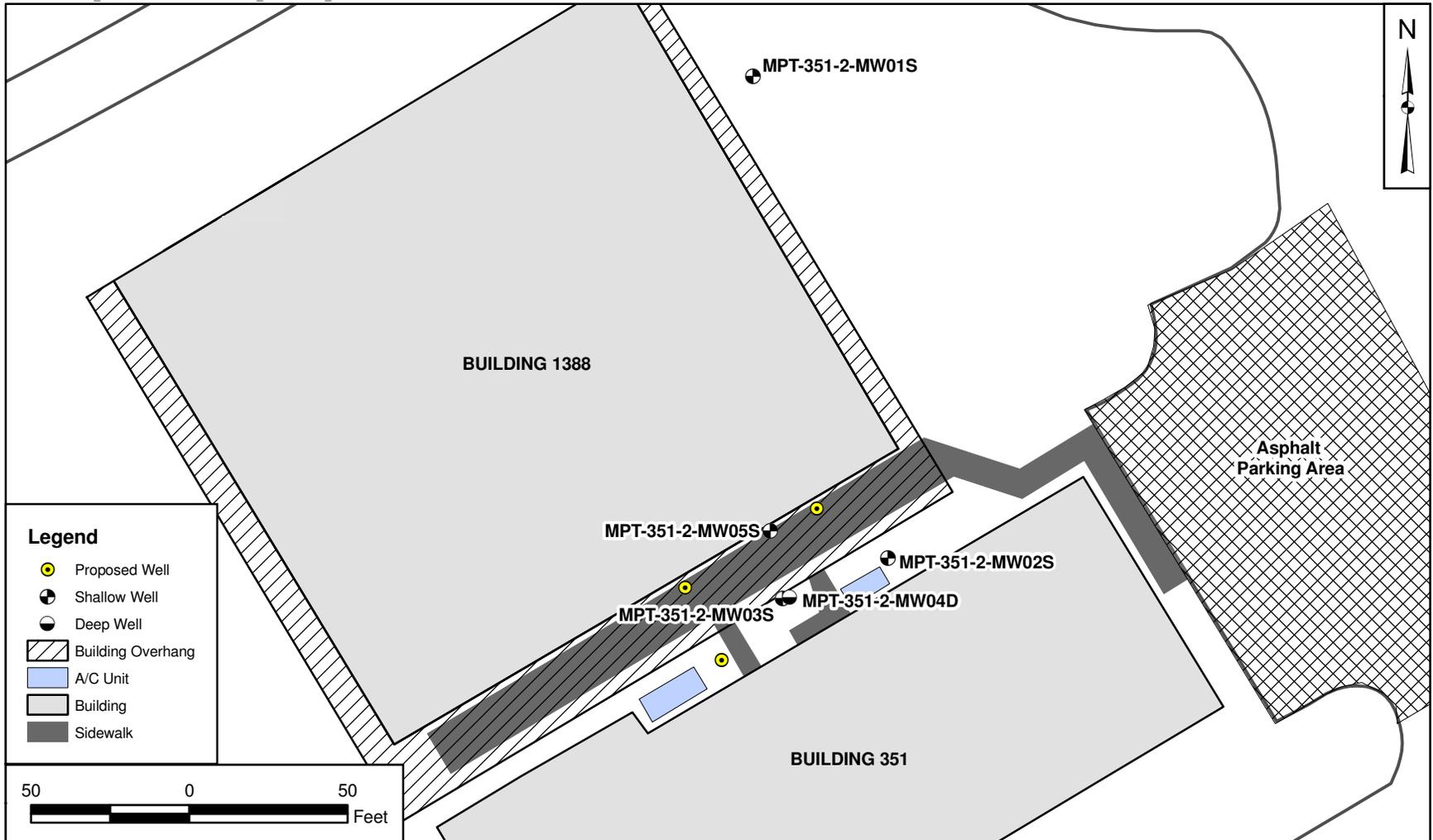
Samples collected from the monitoring wells will be analyzed for analysis of VOCs, semivolatile organic compounds (SVOCs), TPH, sulfate, total dissolved solids (TDS), sodium, iron, ammonia, and nitrate. Field activities will be completed in general accordance with the FDEP Standard Operating Procedures (SOPs) (FDEP, 2008).

3.2.1 Field Operations

Groundwater sampling will be conducted in general accordance with FDEP SOPs (FDEP, 2008 and FDEP, 2001). After collection, samples will be placed on ice and delivered to a Florida-approved laboratory for analyses of VOCs, SVOCs, TPH, iron, sodium, TDS, ammonia, sulfate, and nitrate.

3.3 REPORTING

A total of four sampling event reports will be provided to NAVFAC SE documenting activities undertaken in conjunction with the treatability study. The first Groundwater Monitoring Report will include sample results of the first quarter and will also detail the injection activities that were conducted at Site 351-2. The second and third quarter reports will address the site conditions, and the fourth quarter report will address the site conditions and effectiveness of the treatability study. Each report will be submitted to FDEP and NAVFAC SE.



DRAWN BY	DATE
T. WHEATON	12/08/09
CHECKED BY	DATE
D. SIEFKEN	12/08/09
COST/SCHEDULE AREA	
SCALE AS NOTED	



PROPOSED MONITORING WELL LOCATIONS
TREATABILITY STUDY WORK PLAN
SITE 351-2
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER 00103	
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. FIGURE 3-2	REV 0

REFERENCES

Aerostar (Aerostar Environmental Services, Inc.), 2004. Excavation Completion Report, Soil Removal, Building 351, Tank N1388, Naval Station Mayport, Florida. Prepared for Naval Facilities Engineering Command, Southern Division, North Charleston, South Carolina. August.

Driscoll, Fletcher G., 1986. Groundwater and Wells, St. Paul, Minnesota.

FDEP (Florida Department of Environmental Protection), 2001. Department of Environmental Protection Bureau of Petroleum Storage Systems, Standard Operating Procedures PCS-004, Soil Assessment and Sampling Methods for Florida Bureau of Petroleum Storage System Sites. October.

FDEP, 2008. Department of Environmental Protection Standard Operating Procedures for Field Activities, DEP-SOP-001/01. March.

TtNUS (Tetra Tech NUS, Inc.), 2001. Site Assessment Report for Building 351. Prepared for Naval Facilities Engineering Command, Southern Division, North Charleston, South Carolina. January.

TtNUS, 2005. Health and Safety Plan for Site Assessments and Site Characterizations, Evaluations, and Remedial Actions. Prepared for Naval Facilities Engineering Command Southeast, North Charleston, South Carolina. June.

TtNUS, 2008. Draft Site Assessment Report for Site 351-2 at Naval Station Mayport, Florida. Prepared for Naval Facilities Engineering Command Southeast, Jacksonville, Florida. March.

APPENDIX A

FDEP BIOX[®] ACCEPTANCE LETTER



Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

February 14, 2005

Andreas D. Jazdanian, Ph.D.
BioManagement Services, Inc.
506 East Summit Street
Crown Point, Indiana 46307

Re: **BIOX™ Process**

Dear Dr. Jazdanian:

The Bureau of Petroleum Storage Systems hereby accepts the BIOX™ Process for remediation of petroleum and other suitable contaminants in groundwater and soil, in situ and ex situ. BIOX™ acts first as a chemical oxidation process, in the relatively neutral pH range of 7.0 to 8.5, and with a minimal temperature rise of 5 °F or less, and then as a bioremediation process by providing nutrients and oxygen for the indigenous aerobic microorganisms at the remediation site.

The chemical oxidation aspect of the process is a Fenton-type reaction involving hydrogen peroxide and ferrous sulfate. The source of the hydrogen peroxide can be from any or a mixture of the following: liquid hydrogen peroxide, or solid compounds such as calcium peroxide, magnesium peroxide, and sodium percarbonate, which produce hydrogen peroxide when mixed with water. The hydroxyls produced by the Fenton reaction break down the contaminants at a remediation site to intermediate compounds that are more easily degraded by the site's indigenous microorganisms. The ultimate degradation products of petroleum hydrocarbon contaminants are carbon dioxide and water, and the ultimate degradation products of chlorinated hydrocarbon contaminants are carbon dioxide, water and chloride. The elemental chemical composition of BIOX™ is shown in Enclosure 1.

This acceptance applies only to the regulatory jurisdiction and the remediation needs of the Bureau of Petroleum Storage Systems, which is primarily the cleanup of subsurface petroleum contamination pursuant to Chapter 62-770, Florida Administrative Code (F.A.C.). Other state agencies and local governments may choose to recognize this acceptance if their needs and regulations are similar. This Bureau, however, is not responsible for applications beyond its jurisdiction.

For vadose remediation, where the underlying groundwater will not be affected by the leaching of BIOX™, there are no special concerns beyond those that would normally need to be addressed in preparing a Remedial Action Plan and conducting a cleanup in accordance with Chapters 62-770 and 62-777, F.A.C. However, for injection-type in situ groundwater

Andreas D. Jazdanian, Ph.D.
February 14, 2005
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remediation, via direct injection of BIOX™ into an aquifer, there are underground injection control regulations that must be observed. Since injection-type in situ aquifer remediation is likely to be the most common application of this product, the bulk of the regulatory requirements discussed herein will be directed to that topic.

The Bureau recognizes BIOX™ as a viable process for the remediation of petroleum contaminated sites in Florida. There are no objections to its use provided: (a) the considerations of this letter are taken into account; (b) a variance from Rule 62-522.300(3), F.A.C., allowing a temporary zone of discharge for ammonia nitrogen is granted by the Department's Division of Water Resource Management; (c) a site-specific Remedial Action Plan is submitted pursuant to Chapter 62-770, F.A.C., and approved by the Department for each site where the use of the BIOX™ Process is proposed; and (d) the Remedial Action Plan specifies the injection zone of discharge size and duration for iron, sodium, sulfate, and total dissolved solids, and proposes adequate groundwater monitoring for them, pursuant to Rule 62-522.300(2)(c), F.A.C. Some major regulatory considerations that apply to the BIOX™ Process are discussed in Enclosure 2.

While the Department of Environmental Protection does not provide endorsement of specific or brand name remediation products or processes, it does recognize the need to determine their acceptability from an environmental standpoint with respect to applicable rules and regulations, and the interests of public health and safety. Vendors must then market the products and processes on their own merits regarding performance, cost, and safety in comparison to competing alternatives in the marketplace. In no way, however, shall this regulatory acceptance letter be construed as Department certification of performance. Additionally, the Department emphasizes a distinction between its regulatory "acceptance" letters and an approval. Products and processes are accepted but they are not approved.

Also, it is not a requirement that a particular remediation product or process have an official acceptance letter in order for it to be proposed in a site-specific Remedial Action Plan. The plan, however, must contain sufficient information about the product or process to show that it meets all applicable and appropriate rules and regulations, especially those of the Florida Administrative Code pertaining to underground injection control.

Those who prepare Remedial Action Plans are advised to include a copy of this letter in the appendix, and call attention to it in the text of their document. In this way, technical reviewers will be informed that you have contacted the Department of Environmental Protection to inquire about the environmental acceptability of the BIOX™ Process. To aid those reviewers, the Bureau of Petroleum Storage Systems provides supplemental information as Enclosure 3.

The Department reserves the right to revoke its acceptance of a product or process if it has been falsely represented. Additionally, Department acceptance of any product or process does not imply it has been deemed applicable for all cleanup situations, or that it is preferred over other treatment or cleanup techniques in any particular case. A site-specific evaluation of applicability and cost-effectiveness must be considered for any product or process, whether conventional or

Andreas D. Jazdanian, Ph.D.
February 14, 2005
Page 3

innovative, and adequate site-specific design details must be provided in a Remedial Action Plan. You may contact me at (850) 877-1133, extension 29, if there are any questions.

Sincerely,

Rick Ruscito, P.E.
Ecology and Environment, Inc.
Bureau of Petroleum Storage Systems
Petroleum Cleanup Section 6

Rebecca S. Lockenbach
FDEP Section Leader
Bureau of Petroleum Storage Systems
Petroleum Cleanup Section 6

c: Tom Conrardy - FDEP/Tallahassee

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2/14/05

BIOX™ ELEMENTAL CHEMICAL COMPOSITION †

Iron, Fe	100 mg/L ▲
Sulfur, S	8,887 mg/L
Nitrogen, N	2,592 mg/L
Phosphorus, P	9,362 mg/L
Sodium, Na	6,417 mg/L
Calcium, Ca	35,297 mg/L
Magnesium, Mg	33,707 mg/L
Potassium, K	8,263 mg/L
Oxygen, O §	125,943 mg/L
Carbon, C	1,285 mg/L

† Maximum concentrations expected in BIOX fluids to be injected.

▲ mg/L (milligrams per liter)

§ Elemental oxygen, not the diatomic molecule.

REGULATORY CONSIDERATIONS

For BIOX™ Process applications, the major regulatory considerations are listed below.

- a. Groundwater cleanup standards: The onus shall be on users of the BIOX™ Process to ensure that all applicable groundwater contaminant standards will be met at the time of project completion, for petroleum and other contaminants that may be present, any residuals associated with the ingredients of BIOX™ and any byproducts produced as a result of chemical or biochemical reactions involving those ingredients. The following chapters of the Florida Administrative Code (F.A.C.) are cited: Chapter 62-550, F.A.C., for primary and secondary water quality standards; Chapter 62-520, F.A.C. for groundwater classes and standards, and minimum criteria; Chapter 62-522, F.A.C., for groundwater permitting and monitoring requirements; Chapter 62-528, F.A.C., for underground injection control, particularly Part V, for Class V, Group 4 aquifer remediation projects; Chapter 62-770, F.A.C., for petroleum cleanup criteria; and Chapter 62-777, F.A.C., also for cleanup and minimum groundwater criteria.

A noteworthy aspect of the minimum criteria set forth in Chapter 62-520, F.A.C., is that it requires groundwater to be free from substances that are harmful to plants, animals, and organisms, and free from substances that are carcinogenic, mutagenic, teratogenic or toxic to human beings. In effect, these “free from” requirements form a catchall. They close what would otherwise be a loophole in the regulations by preventing injection of a potentially harmful product in the event that any of its ingredients is not regulated as a specific primary or secondary drinking water contaminant.

- b. Injection well permit: The issuance of a site-specific Remedial Action Plan Approval Order by either the Bureau of Petroleum Storage Systems or the Bureau of Waste Cleanup, for remediation via injection of the BIOX™ Process into an aquifer, constitutes the granting of a Class V injection well permit. [62-528.630(2)(c) and 62-528.640(1)(c), F.A.C.]
- c. Groundwater injection standards: For in situ aquifer remediation, the composition of an injected fluid must meet the drinking water standards set forth in Chapter 62-550, F.A.C., and the minimum groundwater criteria of Chapter 62-520, F.A.C., pursuant to underground injection control Rule 62-528.600(2)(d), F.A.C. Aquifer remediation fluids that do not meet these requirements must obtain an injection zone of discharge. Depending on the ingredients of the fluid, it will be necessary to obtain an injection zone of discharge by either one or both of the following methods: by Rule 62-522.300(2)(c), F.A.C., or by variance from Rule 62-522.300(3), F.A.C. The nature of the reagents used in the BIOX™ process are such that both of these methods will be necessary.
- d. Variance: In order for BIOX™ reagents to be used for injection-type in situ aquifer remediation, BioManagement Services Incorporated must obtain a variance for a deviation from Rule 62-522.300(3), F.A.C., in order to allow a temporary injection zone of discharge for ammonia nitrogen. Once granted, a variance will allow a temporary zone of discharge of specified dimensions around each injection point (usually expressed as a radius of influence) for a specified period of time. The measurement of the time period usually begins after the final injection. By the end of the time period, the groundwater concentration of any residual

ammonia nitrogen in the zone of discharge must not exceed the 2.8-milligram per liter (mg/L) maximum allowed by Chapter 62-777, F.A.C. If the groundwater's natural-occurring background concentration of ammonia nitrogen at a specific remediation site is already in excess of the established minimum groundwater criterion, then its residual concentration at the completion of remediation shall be no greater than the pre-existing background concentration.

If the variance granted by the Department is not site-specific, then it may be considered as portable from one BIOX™ cleanup project to another in Florida, provided a site-specific Remedial Action Plan is submitted for each site. With a portable variance, BioManagement Services, Inc. and users of the BIOX™ Process do not have to petition for a new variance each time the BIOX™ Process is proposed for the remediation of a site, provided there is no deviation from the terms of the variance. Instructions on how to petition for a temporary injection zone of discharge variance are currently located at web page www.dep.state.fl.us/waste/categories/pcp/pages/innovative.htm.

- e. Zone of discharge by rule: Rule 62-522.300(2)(c), F.A.C., applies to the iron, sodium, sulfate and total dissolved solids in BIOX™. Each site-specific Remedial Action Plan proposing its use must: (a) indicate that the concentrations of iron, sodium, sulfate, and total dissolved solids in the fluid to be injected will be in excess of their groundwater injection standards; (b) specify a temporary zone of discharge size; (c) specify the period of time for which the temporary zone of discharge will be needed; and (d) propose groundwater monitoring of these parameters. The current groundwater standards for the BIOX™ parameters that require a zone of discharge by rule are iron (0.3 mg/L), sodium (160 mg/L), sulfate (250 mg/L), and total dissolved solids (500 mg/L).
- f. Utilization of wells: If a remediation site happens to have an abundance of monitoring wells, then the Department has no objection to the use of some wells for the application of the BIOX™ Process. However, no "designated" monitoring well, dedicated to the tracking of remediation progress (by sampling) shall be used to apply BIOX™ reagents. This will avoid premature conclusions that the entire site meets cleanup goals. By making sure that designated tracking wells are not also used for treatment, there will be more assurance that the treatment process has permeated the entire site and that it did not remain localized to the area immediately surrounding each injection well.
- g. Additional nutrients: If, in the future, either BioManagement Services Incorporated or a user of the BIOX™ Process decides to augment it with other nutrients and/or chemicals, then the injection of such nutrients and other chemicals into an aquifer must also be in accordance with the underground injection control requirements of Chapter 62-528, F.A.C., which requires that substances injected meet the drinking water standards set forth Chapter 62-550, F.A.C., and the minimum groundwater criteria of Chapter 62-520, F.A.C.

h. Groundwater monitoring:

1. Active remediation petroleum monitoring: During the period of active remediation, groundwater shall be monitored in accordance with the requirements set forth in Section 62-770.700, F.A.C., for the petroleum contaminants of concern. Two noteworthy rules within that section are 62-770.700(3)(i), F.A.C., for frequency of sampling, and 62-770.700(5)(f), F.A.C., which requires a sampling schedule for bioremediation.
2. Post remediation petroleum monitoring: At least one (1) year of quarterly post remediation groundwater monitoring for the petroleum contaminants of concern shall be conducted at a minimum of two (2) wells, one located in the area of maximum petroleum contamination, the other downgradient of the area of maximum petroleum contamination, pursuant to Section 62-770.750, F.A.C.
3. Underground injection control monitoring: A variance from Rule 62-522.300(3), F.A.C., when granted, allowing a temporary zone of discharge, will include groundwater monitoring requirements for underground injection control purposes, for the ammonia nitrogen in BIOX™. Such monitoring will occur before and after the injection of BIOX™. For the iron, sodium, sulfate and total dissolved solids, for which a temporary injection zone of discharge is permitted by rule for BIOX™, the groundwater shall be monitored in accordance with the Department-approved Remedial Action Plan that addresses the monitoring of these parameters.

- i. Underground injection control inventory: Remedial Action Plans prescribing injection-type in situ aquifer remediation shall include information pursuant to Rule 62-528.630(2)(c)1 through 6, F.A.C., for the inventory purposes of underground injection control. Per Rule 62-528.630(2)(c), F.A.C., aquifer remediation projects involving injection wells may be authorized under the provisions of a Remedial Action Plan, provided the construction, operation, and monitoring requirements of Chapter 62-528, F.A.C., are met. A memorandum outlining the inventory information about injection-type aquifer remediation plans to be transmitted by Department reviewers to the Underground Injection Control Section is provided as Enclosure 4. Only reviewers within the Department, including its district offices, may approve in situ injection-type remediation plans in which the approval constitutes a Class V injection permit; local programs are not authorized to grant such approvals. See Enclosure 3.

j. Operation:

1. Avoidance of migration: For injection-type in situ aquifer remediation projects, injection of the BIOX™ reagents shall be performed in such a way, and at such a rate and volume, that no undesirable migration of either the reagents or the petroleum contaminants in the aquifer results, pursuant to Rule 62-528.630(3), F.A.C.
2. Underground injection control operating permit: Although an operating permit is not required for aquifer remediation wells pursuant to Rule 62-528.640(1)(b), and

62-528.640(1)(c), F.A.C., since no movement of the petroleum contamination plume is expected to accompany the treatment process, the Department requests that the information items listed in Rule 62-528.640(1)(b), F.A.C., be considered and included in Remedial Action Plan proposals as a matter of good and thorough design practice. Briefly summarized, they are: quality of water in the aquifer; quality of the injected fluid; existing and potential uses of the affected aquifer; and well construction details. Additionally, each Remedial Action Plan should clearly indicate the total volume of the BIOX™ reagents that will be injected.

3. Operating parameter measurements: Rule 62-770.700(9)(h), F.A.C., sets forth frequency requirements for the measurement of bioremediation operating parameters such as dissolved oxygen levels, rates of nutrient addition, temperature, etc. It also includes an option for reduction in the frequency or discontinuation of some measurements in situations when appropriate.
- k. Abandonment of wells: Upon issuance of a petroleum Site Rehabilitation Completion Order, or a declaration of "No Further Action", injection wells shall be abandoned pursuant to Section 62-528.645, F.A.C. The Underground Injection Control Section of the Department shall be notified so that the injection wells can be removed from the inventory-tracking list.
- l. Phosphate: The Bureau has considered the orthophosphate present in BIOX™, which serves as a macronutrient for bioremediation purposes. Phosphate, which is an element essential for life, occurs naturally in Florida's groundwater and is not a regulated groundwater contaminant. At a Panama City, Florida site, total phosphorus in the groundwater was measured at 800 to 1,100 micrograms per liter (ug/L). At a Volusia County site in Florida, it was measured at 1,200 ug/L, as PO₄. For comparison purposes, the European Community Guide level for phosphorus in drinking water is 400 ug/L, as P₂O₅. While phosphorus may not be a matter of great toxicological concern for in situ injection-type groundwater remediation projects, the Bureau would like to remind users of the BIOX™ Process that it could become an environmental concern if surface water is very close or present at a remediation site. In that case, if there could be any interaction between the groundwater being remediated and the nearby surface water body, then the state's surface water regulations should be reviewed first for information about phosphorus.
- m. Open-pit applications: While open-pit applications of BIOX™ reagents is not an injection-type application, and notification of the Underground Injection Control Section therefore not required, the user of BIOX™ must still be mindful of groundwater quality. For open-pit applications, the Bureau of Petroleum Storage Systems suggests that groundwater in the application area be monitored for the same parameters that would have required monitoring had the application been an injection: ammonia nitrogen, iron, sodium, sulfate, and total dissolved solids.

SUPPLEMENTAL INFORMATION

The information below, compiled from several sources, may be helpful to reviewers of Remedial Action Plans prescribing bioremediation.

- a. Department of Environmental Protection reviewers of injection-type in situ aquifer remediation plans, regardless of whether in Tallahassee or district offices, must fill in the blanks on the Enclosure 4 memorandum, whose subject is "Proposed Injection Well(s) for In situ Aquifer Remediation at a Petroleum Remedial Action Site". The completed form must be submitted to the Underground Injection Control Section at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 (Mail Station 3530).

Only reviewers within the Department and its district offices may approve injection-type in situ remediation plans in which the approval constitutes the issuance of a Class V injection permit; local programs are not authorized to grant such approvals. Reason: Although an arrangement between the Environmental Protection Agency and the Department delegates underground injection control authority to the Department, it does not allow the Department to delegate that authority any further. This includes delegation to the Department's contracted remediation review agencies such as those operated by the counties and other local governments.

- b. Pilot study: For bioremediation, per rule 62-770.700(2), Florida Administrative Code (F.A.C.), a pilot study proposal shall be submitted for review, and a pilot test shall be performed prior to designing a treatment system. If conditions or the situation at a site does not warrant a pilot study, then a proposal explaining the rationale for the decision not to perform a pilot study shall be submitted for review. For state funded projects, reviewers are encouraged to use judgment in balancing cost and the need for technical information to be obtained from a pilot study.
- c. Dosage and application rate: It is recommended that the dosage and application details of the BIOX™ Process be determined on a site-specific basis, but for information and planning purposes, the following may be helpful:
- Delivery methods: Injection, open-pit application, or overspraying
 - Injection delivery: 1.25-inch diameter direct-push at 2-foot depth intervals
 - Injection rate and pressure: 3 to 5 gallons per minute; 30 to 200 pounds per sq. in.
 - Injection spacing: 3 to 7 ft for free product or low contaminant concentrations,
10 to 15 for low contaminant concentrations
 - Number of injections: One or more may be necessary, depending on conditions
- d. Oxidation reaction: In the first step of the BIOX™ treatment process, reagents partially oxidizing contaminants in order to produce intermediates that are more readily biodegradable in the second step. Unlike a conventional Fenton reaction, the BIOX™ Process is not highly exothermic -- it generates minimal heat -- and does not need to occur a low pH.

- e. Degradation products: Carbon dioxide and water are the ultimate products of aerobic and most anaerobic biodegradations of petroleum hydrocarbons. The intermediate products may include simple acids, alcohols, and fatty acids. Aerobic processes use oxygen as an electron acceptor to produce the carbon dioxide and water.
- f. Sampling frequency and sample parameters: BioManagement Services Incorporated has provided information about indicator parameters and the frequency of sampling that it believes are important to the BIOX™ treatment process, and the Bureau of Petroleum Storage Systems would like to pass that information along to both potential users and technical reviewers of the process. Pre-treatment baseline sampling no earlier than 30 days prior to BIOX™ application is recommended, and post-treatment sampling is recommended at 30, 60 and 90 days as follows:

Soil Analytical Parameters

Groundwater Analytical Parameters

Contaminants of Concern (COC)

COC

Chemical Oxygen Demand (COD)

COD

Biological Oxygen Demand (BOD)

BOD

Total Organic Carbon (TOC)

TOC

Total Heterotrophic Plate Count

Total Heterotrophic Plate Count

Dissolved Oxygen (DO)

Oxidation-Reduction Potential (ORP)

BioManagement Services Incorporated indicates how these parameters are useful as follows:

- Declining trends in the TOC of soil and concomitant increasing trends in the groundwater can be indicative of the extent of desorption caused by the BIOX™ process.
- Comparison of pre- to post-treatment COD and BOD of soil allows for assessment of the transformation of the soil organic matter, including contaminants, to more biodegradable species.
- Increasing trends in COD and BOD of groundwater are also indicative of desorption processes.
- Comparison of pre- to post-treatment COD and BOD of groundwater allows for the assessment of the biodegradability of the dissolved organic fraction.
- Comparison of trends in post-treatment BOD/COD ratios for soil to trends in post-treatment BOD/COD ratios for the groundwater allows for assessment of the effectiveness of enhanced biodegradation and bioavailability of contaminants over time.
- Analysis of trends in dissolved oxygen concentration, heterotrophic plate counts and biodegradability indicators (BOD, COD, BOD/COD ratio) can be used to derive limiting factors for natural and enhanced biodegradation of a cleanup site.

Memorandum

**Florida Department of
Environmental Protection**

TO: Richard Deuerling, Mail Station 3530
Division of Water Facilities
Underground Injection Control Section
Florida Department of Environmental Protection
2600 Blair Stone Road, Tallahassee, FL 32399-2400

FROM: _____ (Note 1.)

DATE: _____

SUBJ: **Proposed Injection Well(s) for In situ Aquifer
Remediation at a Petroleum Remedial Action Site**

Pursuant to Rule 62-528.630(2)(c), F.A.C, inventory information is hereby provided regarding the proposed construction of temporary injection well(s) for the purpose of in situ aquifer remediation at a petroleum-contaminated site.

Site name: _____
Site address: _____
City/County: _____
Latitude/Longitude: _____
FDEP Facility Number: _____

Site owner's name: _____
Site owner's address: _____

Well contractor's name: _____ (Note 2.)
Well contractor's address: _____

Brief description of the in situ injection-type aquifer remediation project:

Summary of major design considerations and features of the project:

Areal extent of contamination (square feet): _____
Number of injection wells: _____
Composition of injected fluid (Note 3)
(ingredient, wt. %): _____

Injection volume per well (gallons): _____
Single or multiple injection events: _____
Injection volume total (all wells, all events): _____

Richard Deuerling
Page Two
Date: _____

Site name: _____
FDEP facility no.: _____

A site map showing the areal extent of the groundwater contamination plume, and the location and spacing of injection wells and associated monitoring wells is attached.

The following is a summary description of the affected aquifer:

Name of aquifer: _____
Depth to groundwater (feet): _____
Aquifer thickness (feet): _____

The injection well(s) features are summarized below, and/or a schematic of the injection well(s) is attached.

Direct-push or Conventional (*circle the appropriate well type*)
Diameter of well(s) (i.e., riser pipe & screen) (inches): _____
Total depth of well(s) (feet): _____
Screened interval: _____ to _____ feet below surface
Grouted interval: _____ to _____ feet below surface
Casing diameter, if applicable (inches): _____
Cased depth, if applic.: _____ to _____ feet below surface
Casing material, if applic.: _____

The in situ injection-type aquifer remediation plan for this petroleum contaminated site is intended to meet the groundwater petroleum cleanup criteria set forth in Chapter 62-770, F.A.C. Additionally, all other groundwater standards will be met at the time of project completion for any residuals associated with the ingredients of the injected remediation products, and any by-products or intermediates produced as a result of the chemical or biochemical transformation of those ingredients or the contaminating petroleum during their use. Applicable primary and secondary drinking water standards are set forth in Chapter 62-550, F.A.C., and additional groundwater quality criteria are set forth in Chapter 62-520, F.A.C.

The remediation plan estimates that site remediation will take _____ months. We will notify you if there are any modifications to the remediation strategy, which will affect the injection well design or the chemical composition and volume of the injected remediation product(s).

The proposed remediation plan was approved on _____ by an enforceable approval order. A copy is attached. The remediation system installation is expected to commence within 60 days. Please call me at _____ if you require additional information.

-
- Note 1. Local programs are not authorized to approve underground injections into aquifers. Reason: Per agreement with EPA, the FDEP cannot delegate this authority. Local programs, after reviewing a Remedial Action Plan or an injection proposal document, should arrange for Department headquarters' execution of an approval order, and then complete this form. This form is primarily for use by state and local program technical reviewers, but petroleum remediation contractors may fill in all blanks except those labeled "FROM", "DATE", and "approval date", and "telephone number" blanks in the last paragraph. Those blanks should be completed only by a state or local program reviewer.
- Note 2. If an injection well installation contractor has not yet been selected, then indicate the name and address of the project's general remediation contractor/consultant.
- Note 3. Complete chemical analysis of injected fluid is required by Chapter 62-528, Florida Administrative Code. Proprietary formulations shall make confidential disclosure. Injected fluids must meet drinking water standards of Chapter 62-550, F.A.C., unless an exemption or variance has been granted.

APPENDIX B

JOHNSON CONTROLS HILL SPILL REPORT

Johnson Controls
HILL

Date: December 23, 2003
File No. 2301-0136

Mr. Tommy Surrency
Facilities Support Contract Manager
Department of the Navy
Naval Facilities Engineering Command

Subject: Contract No. N62467-00-D-2451

Reference: Annex 4
Para 4.2.4.2a
Title Post Spill Requirements

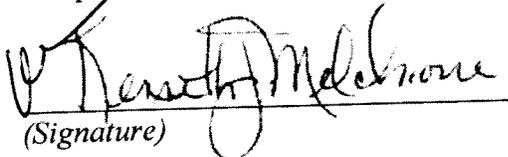
Contract deliverable is forwarded pursuant to cited contract reference. Enclosed is our Spill/Clean-Up Report Form, Table 4-10, Annex 4 and Site Specific Safety and Health Plan from a December 16, 2003, 650 gallon diesel fuel spill at bldg 351/1388, NS Mayport. Our Mr. Bob Lacy provided an advance copy of the Table 4-10 report to Mr. Pat McGugan and Mr. Dave Kiebler on December 17, 2003 by email. The clean-up of the spill was accomplished on work order 275011.

Should you require any further information in this matter, please contact me at your convenience.

Name: Kenneth J. Melchiorre P.E.

Title: Site Manager, NAS Jacksonville

Telephone: (904) 778-3868 ext. 12


(Signature)

Cc:

Mr. David Kelly
NAS Jacksonville
P.O. Box 30, Bldg. 103
Jacksonville, FL 32212-0139

Mr. Pat McGugan
NS Mayport
P.O. Box 2807, Bldg. 1966
Mayport, FL 32228-0157

Mr. Frank Janosick
Ms. Kathy Kramer
JC-H Contracts Manager
Mr. Robert Stewart
JC-H Utilities Supervisor (Bob Lacy, w/ enclosures)

Johnson Controls HILL

Environment

Spill / Clean Up Report Form

Spill Date: 12/16/03	Time of Spill: 1150	Time JC-H SCRD Received call: 1150
Time OSOT Leader w/OSOT Member Arrived On Site (enter time here):		1205
Location		
<input type="checkbox"/> NAS Jacksonville	<input checked="" type="checkbox"/> NAVSTA Mayport	<input type="checkbox"/> Other:
Building Number: 351/1388	Area / Bldg. :	FTC
Substance:	Fuel Oil	
Amount Spilled:	Approx. 650 gallons	Amount Recovered: 100 gallons
Source / Cause of Spill (explain here): Fuel supply line from AST N1388 to Boiler in Bldg. 351 broke off in fuel piping sump located north side of Bldg. 351. Piping sump overflowed and spilled fuel in surrounding area. Fuel also backed up into secondary piping containment and into 2 nd piping sump.		
Rate of Spilling:	Unknown	
Anticipated Movement of Spill:	Into ground	
Injuries: Be Specific:	None	
Approximate Temperature:	65 deg.	Weather Condition: Sunny
Immediate Dangers to Personnel or Environment: Fuel oil entering St. Johns and Ocean.		
Spill Contact Surface Water?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Spill Enter Storm Drain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Spill Contained on Impervious Surface?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Type of Surface:	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Secondary Containment <input checked="" type="checkbox"/> Soil Other:	
Spill Extend Beyond Station Boundaries?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
COTR Contacted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Time/Date: 12/16/03 @ 1226
Station Fire Department Contacted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Time/Date: 12/16/03 @ 1153
Station Environmental Contacted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Time/Date: 12/16/03 @ 1230
Additional Comments/Information: Fire Department had responded and secured area when JCH arrived.		
Person Completing Report		
Name: Julie Kaiser	Title: Sr. Environ. Coordinator	Phone: 247-2225
Signature:	Date: 12/17/03	
Additional Post Report Information		
Environmental Damages:		
Amount of Disposal Material: 7-55gl drums	Hazardous Waste: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Spill Residue Disposal Source: PWC Part B	Location: 1966	
Resources		
Number of OSOT Members: 7	Total clean-up Time: 30-manhours	
Equipment Used:		
Additional Information/Remarks: Cleanup of spill is not complete.		

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FILE

Annex 4-Environmental
Ref. Process: 12-02.51

**OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN**

A. SITE DESCRIPTION:

1. Date: 12/16/03 2. Location: FTC / 351 / 1388
3. Material Spilled: Fuel Oil (No. 2) 4. Size of Spill: 15' x 5' ^{≈ 650 gal}

5. Hazard Class (a thru e):

(a) Fire (b) Reactive (c) Pressure Release (d) Acute Health
(e) Chronic Health

6. Quantity Estimated: 650 gal 7. Area Affected: 15' x 5' x est 2-3'

8. Cause of Release (Be Specific): Fuel Supply line valve shut + initially believed to have caused spill
Piping Sump @ NE side of Bldg 351 opened + fuel supply line found broken, overflow drained into 2nd piping sump (green middle sump). Assumed fuel in secondary line.

2 piping sump

9. Weather Conditions: Sunny Temperature (F): 65 - 70 deg F

Wind Direction: N/NE

10. Topography/Terrain: Soil

B. ON-SCENE OPERATIONS TEAM (OSOT):

Title	Name	Time on Scene	Function / Assignment
Safety Officer	Jim Bryant	1330	Safety Officer / ACCESS Ctl.
OSOT Leader	Julia Kaiser	1200	
OSOT Team Member	Chris Atchinson	1330	
OSOT Team Member	Mike Thurlow	1330	
OSOT Team Member	Scott Brown	1500	
OSOT Team Member			
OSOT Team Member			

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Annex 4-Environmental
Ref. Process: 12-02.51

**OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN**

C. INITIAL ENTRANCE TO AFFECTED SITE (Specific Health and Safety Plan):

Initial Entrance Objective: The objective of the initial entrance to the contaminated area is To describe actions, and tasks to be accomplished (i.e. identify contaminate, clean-up area, monitoring conditions, etc.):

Deploy Boom @ break wall. Recover fuel in
tidal pool. Remove fuel oil from 2 piping
sumps + 3rd non-spill related storm drain

D. ON SITE CONTROL: Jim Bryant OSOT Team Member
has been designated to coordinate access control and security on site. A safe perimeter has been established at (distance or description of the controlled area):

21

(No Unauthorized personnel should be in this area)

by FDP

1. Exclusion Zone:

a. Time the Zone is Secured off: 1200 a.m. p.m.

b. Entrance Control Point: Yellow Tape

c. Location and Marker Type: Yellow Tape

2. Contamination Reduction Zone (If necessary):

a. Time the Zone is Secured off: n/a a.m. p.m.

b. Entrance Control Point: _____

c. Location and Marker Type: _____

3. Support Zone:

a. FD/JCH Command Post Location (If established): Bldg 12

b. Time JCH Command Post Established: 1200 a.m. p.m.

4. Substances Involved:

a. Substance Known? Yes No

b. MSDS: Yes No

c. Substance Description: No. 2 Fuel Oil

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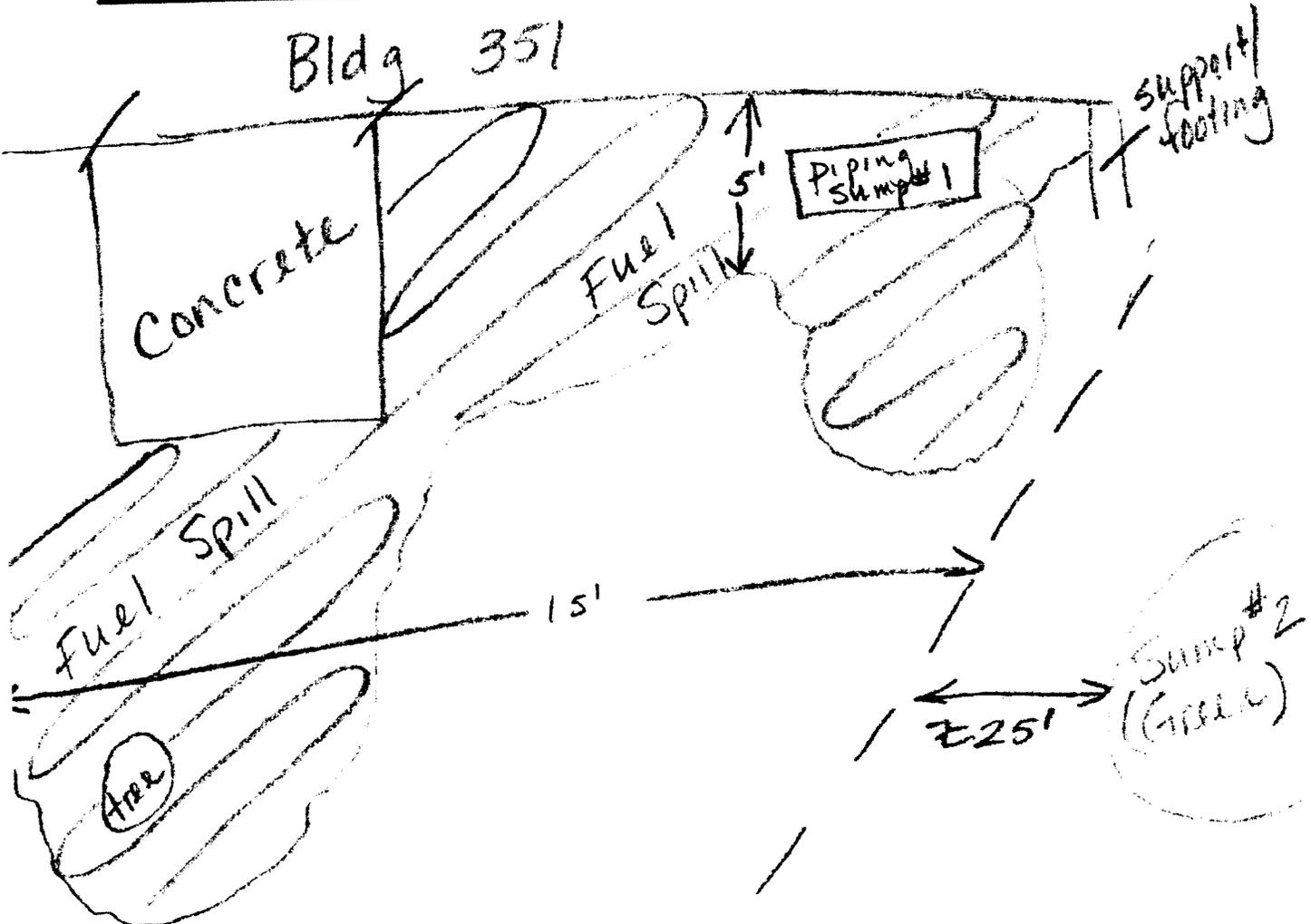
Annex 4-Environmental
Ref. Process: 12-02.51

**OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN**

E. HAZARDS:

- | | | | |
|-------------------|---|-----------------------------|----------------------------|
| a. Flammable | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Flash Point: <u>130°</u> F |
| b. Explosive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| c. Water Reactive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| d. Corrosive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| e. Acid | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| f. Base | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| g. Toxic | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| h. Inhalation | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| i. Skin | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |

F. SITE PLAN (Sketch of Area):



Johnson Controls
TITLE

Annex 4-Environmental
Ref. Process: 12-02.51

**OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN**

G. DECON SITE PLAN (Sketch of Area):



MSDS (PPE TYVEK)

Decon Officer: NIA

Decon Equipment: NIA

Description of Decon: Remove PPE + Place into 55-gal drum

H. PERSONAL PROTECTION EQUIPMENT (PPE)- (LEVEL D FOR THIS FORM):

a. Exclusion Zone (Spill Area): AT A MINIMUM, PPE FOR LEVEL D IS: BOOTS, GLOVES, and TYVEK SUIT. Additional Level D PPE if needed: Hard Hat/Face Protection

b. Contamination Zone (DECON AREA): NIA

c. Reduction Zone: NIA

I. INSTALLATION RESTORATION (IR) SITE:

1. Is the Site an Installation Restoration Site? Yes No

2. If answer is YES, what is the known IR site contaminant? _____

3. MSDS: Yes No

*IR in Area
not in specific
spill location*

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Annex 4-Environmental
Ref. Process: 12-02.51

**OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN**

4. IR SITE HAZARDS:

- | | | | |
|-------------------|------------------------------|-----------------------------|----------------------|
| a. Flammable | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Flash Point: _____ F |
| b. Explosive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| c. Water Reactive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| d. Corrosive | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| e. Acid | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| f. Base | Yes <input type="checkbox"/> | No <input type="checkbox"/> | pH: _____ |
| g. Toxic | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| h. Inhalation | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| i. Skin | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |

J. COMMUNICATION:

1. Contact Information

Name	Work Phone	Cell/Beeper Number	Home Phone
Rick Hicks, Safety Manager	542-3962	318-1799	221-8423
Ken Melchiorre, Environmental Manager	778-3868	318-2188	886-9964
Wade Musgrave, Environmental Coordinator	778-3868	707-4416	880-4646
Julie Kaiser, Sr. Environmental Coordinator	270-6761	707-4415	306-0547
Bob Lacy, Environmental Training Officer	778-3868	813-1989	246-7100
Fire Department/Ambulance (Jacksonville)	911 or 542-3333		
Fire Department/Ambulance (Mayport)	911 or 270-5333		
PWC CDO		509-5125	
David Kelly, COTR (NAS Jacksonville)	542-4558 x 520		
Pat McGugan, COTR (NAVSTA Mayport)	270-5189		
"Emergency Treatment Facility"			
NAS Jacksonville: Naval Hospital	911 if an emergency		
NAVSTA Mayport: Medical Clinic	911 if an emergency		

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Annex 4-Environmental
Ref. Process: 12-02.51

**OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN**

- K. SAFETY BRIEF HELD? Yes No *Reviewed Fuel Oil Hazards w/C. Atkinson*
- a. Confined Space? Yes No (If yes, follow JC-H confined space entry procedures)
 - b. Heat stress can be a factor when temperatures are > 70° F and humidity is > 50%.
 - c. Is a dig locate required? Yes No (trenches > 4 feet must have slope sides or shoring installed) *Did not dig any soil*
 - d. Does the clean up site have adequate oxygen? Yes No (If not, level B or A PPE is required) *Use JC-H form 3010-600 if levels C, B, or A are required*

Oxygen Level Detection Equipment Calibration Information:

Equip. _____ MFR: _____ Model No.: _____

Date of Calibration: _____ Name of Calibrator: _____

- e. Where is the closest eye wash station? *351*
- f. What communication means is available? Cell Phone Radio Land Line
- g. Discuss the possible use of respirators. *NIA*
- h. Ensure newly arriving JC-H OSOT members are briefed on the spill site clean up scenario.
- i. If in doubt, call the JC-H Environmental Manager for assistance.

L. DISPOSAL METHOD:

- a. HW: Yes No *Flash @ 130° F per MSDS*
- b. Size of Disposal Containers: Gallons: *55* Other: _____
- c. Number of Containers: *6 liquid, 1 solid*
- d. Container Pick-Up Notification (NASJAX Only) Time/Date: *12/18* POC: *KAISER*

Site and/or Area Clean-up Completed at (Specify Time of Day): *0715* a.m. p.m.

OSOT Leader: *[Signature]* Date: *12/17/03*
(Signature required)

APPENDIX C

GROUNDWATER ANALYTICAL DATA



KB LABS, INC.

Final Data Report
 Project Number 05-167
 MS Mayport CTO 386
 Jacksonville, FL

Prepared for: Tetra Tech NUS

Well ID	Analysis Date	Matrix	Dilution Factor	MTBE	Benzene	Toluene	Ethylbenzene	m,p-Xylene	o-Xylene	Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene
MPT-351-OF-SB-01-03	8/10/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-SB-02-03	8/10/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-SB-05-03	8/10/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-SB-09-03	8/10/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-SB-10-03	8/10/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-SB-14-03	8/11/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-351-OF-TMW-01	8/10/05	Water	1,10	26.4	57.2	21.5	68.4	240	160	190	200	160
MPT-351-OF-TMW-02	8/10/05	Water	20	< 100	110	< 20	80	190	26	260	200	140
MPT-351-OF-TMW-07	8/10/05	Water	1	< 5.0	< 1.0	2.3	< 1.0	1.1	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-Rinseate	8/10/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-08	8/10/05	Water	1	< 5.0	< 1.0	1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-09	8/10/05	Water	10	< 50	18	180	92	360	260	320	250	180
MPT-351-OF-TMW-10	8/10/05	Water	1,10	< 5.0	40.9	19.9	77.3	180	190	220	200	170
MPT-351-OF-TMW-11	8/10/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-12	8/10/05	Water	1	8.0	8.7	2.2	1.8	20.0	2.8	42.0	39.0	52.6
MPT-351-OF-TMW-13	8/10/05	Water	1	< 5.0	< 1.0	1.2	< 1.0	1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-17	8/10/05	Water	1,10	45.9	97	1.6	37.2	180	65.1	210	140	110



KB LABS, INC.

Final Data Report

Project Number 05-167

MS Mayport CTO 386

Jacksonville, FL

Prepared for: Tetra Tech NUS

Well ID	Analysis Date	Matrix	Dilution Factor	MTBE	Benzene	Toluene	Ethylbenzene	m,p-Xylene	o-Xylene	Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene
MPT-351-OF-TMW-18	8/11/05	Water	1	< 5.0	< 1.0	< 1.0	7.9	10.9	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-19	8/11/05	Water	1	51.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-20	8/11/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
SWMU-17-05-S	8/11/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-21	8/11/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-351-OF-TMW-14	8/11/05	Water	10	< 10	< 10	110	140	250	350	380	310	210
MPT-351-OF-TMW-06	8/11/05	Water	10	< 10	170	< 10	190	720	< 10	560	550	370
MPT-351-OF-TMW-04	8/11/05	Water	100	100	150	120	140	460	140	620	890	590
MPT-351-OF-TMW-06-20	8/12/05	Water	1	< 5.0	< 1.0	< 1.0	11.8	50.0	< 1.0	50.5	98.8	63.6
MPT-351-OF-TMW-19 Dup	8/11/05	Water	1	120	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0

ANALYTICAL REPORT
MAIN DATA PACKAGE - ORGANICS

TETRA TECH NUS, INC.

SDG #MAYPORT_002

A handwritten signature in black ink, appearing to read 'Marcia K. McGinnity', with a large, sweeping flourish extending to the right.

Marcia K. McGinnity
Senior Project Manager
Empirical Laboratories, LLC

August 7, 2008

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SDG #MAYPORT_002

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ORGANIC CASE NARRATIVE
Tetra Tech NUS, Inc./NAVSTA Mayport
Project Manager: S. Ballard
SDG: Mayport 002

Date Sampled	Date Received	Work Order	Client ID	Abbreviated Report ID
7/24/08 11:35	07/26/08	0807219-01	MPT-A+D-RW01-0708	A+D-RW01
7/24/08 12:28	07/26/08	0807219-02	MPT-A+D-RW04-0708	A+D-RW04
7/24/08 13:35	07/26/08	0807219-03	MPT-A+D-1406-16-0708	A+D-1406-16
7/24/08 14:25	07/26/08	0807219-04	MPT-A+D-RW03-0708	A+D-RW03
7/24/08 15:20	07/26/08	0807219-05	MPT-A+D-RW02-0708	A+D-RW02
7/25/08 12:00	07/26/08	0807219-06	MPT-351-2-MW02-0708	351-2-MW02
7/25/08 12:33	07/26/08	0807219-07	MPT-351-2-MW04-0708	351-2-MW04
7/25/08 13:10	07/26/08	0807219-08	MPT-351-2-MW01-0708	351-2-MW01
7/25/08 0:00	07/26/08	0807219-09	Trip Blanks	Trip Blanks

Volatile Samples

Method: The samples were extracted/analyzed for a client specified analyte list by SW-846 Methods 5030B/8260B (purge and trap followed by capillary column GC/MS) for waters upon receipt to the laboratory in satisfactory condition.

Comments: The volatile analyses for these samples were satisfactorily completed within sample holding times and met the corresponding specifications with the following exceptions:

- Method blank V4BLK0730 reported a concentration of methylene chloride at less than ½ the quantitation limit. Reported concentrations in the associated samples are qualified with a “V”.
- In spike samples V4BLK0730LCS/LCSD, the relative percent difference for bromomethane exceeded the limit of 30 at 39. All other recoveries and relative percent differences were within limits.
- In sample 351-2-MW02, recovery of the surrogate d8-toluene exceeded the limit of 115% at 116%. All associated results are non-detect or detected less than the quantitation limit and qualified as estimated with an “I”.

PAH Samples

Method: The samples were extracted/analyzed for polynuclear aromatic hydrocarbons by USEPA SW-846 Methods 3510C/8270C (separatory funnel extraction followed by capillary column GC/MS) for waters upon receipt to the laboratory in satisfactory condition.

Comments: The analyses for these samples were satisfactorily completed within sample holding times and met the corresponding specifications with the following exceptions:

- Note: These samples were analyzed for full-scan, low-concentration PAHs by employing a combination of sensitivity enhancing techniques in the extraction and analysis processes.
- In spike samples SBLK00730BW1LCS/LCSD, recoveries of 1-methylnaphthalene and 2-methylnaphthalene exceeded the limit of 115% at 120%/119% and 116%/(108%), respectively. All other recoveries and relative percent differences were within limits.
- Recovery of the surrogate d5-nitrobenzene exceeded the limit of 110% at 116% in spike sample SBLK0730BW1LCS. Recoveries of the surrogate 2-fluorobiphenyl exceeded the limit of 110% at 148% and 188% in samples A+D-RW03 and A+D-RW02, respectively, due to sample matrix. All

other surrogate recoveries were within limits.

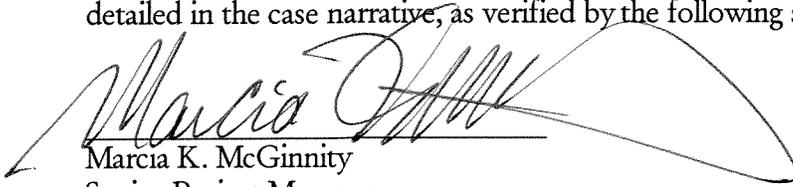
- Area counts for the internal standard d10-phenanthrene exceeded 200% of that found in the associated calibration verification standard at 225% for sample A+D-RW04. This internal standard is associated to targets anthracene, fluoranthene and phenanthrene.

Petroleum Range Organics

Method: The samples were analyzed by the Florida Petroleum Range Organics Method (FL-PRO, separatory funnel extraction followed by capillary column GC/FID) for waters upon receipt to the laboratory in satisfactory condition.

Comments: The analyses for these samples were satisfactorily completed within sample holding times and met the corresponding specifications.

I certify that, to the best of my knowledge and based upon my inquiry of those individuals immediately responsible for obtaining the information, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in the case narrative, as verified by the following signature.



Marcia K. McGinnity
Senior Project Manager

ANALYTICAL REPORT TERMS AND QUALIFIERS (FLORIDA)

- MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix.
- EQL/RL:** The estimated quantitation limit (EQL)/reporting limit (RL) is defined as the estimated concentration above which quantitative results can be obtained with a specific degree of confidence. ELAB defines the EQL to be at or near the lowest standard of the calibration curve.
- U:** The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the MDL.
- D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".
- I:** The presence of an "I" to the right of an analytical result indicates that the reported result is estimated. The data pass the identification criteria indicating that the compound is present, but the calculated result is less than the EQL/RL.
- L:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with a "L". Usually the sample will be rerun at a dilution to quantitate the flagged compound.
- V:** The presence of a "V" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero.
- J1:** The reported analyte concentration may have a low bias as the CCV exceeded the limit on the low side.
- J2:** The reported analyte concentration may have a high bias as the CCV exceeded the limit on the high side.
- J3:** The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious.
- J4:** The presence of a "J4" to the right of an analytical result indicates that the sample matrix interfered with the quantitation of the analyte. In GC and HPLC, results are reported from the column with the lower concentration.



TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER 26344

PAGE 1 OF 1

PROJECT NO: 112600133
 FACILITY: NAUSTA MAYPORT
 SAMPLERS (SIGNATURE): *[Signature]*

PROJECT MANAGER: SHINA BALLARD
 FIELD OPERATIONS LEADER: KEVIN WEICHERT
 CARRIER/WAYBILL NUMBER: [Blank]

PHONE NUMBER: 904-636-6125
 PHONE NUMBER: 904-636-6125

LABORATORY NAME AND CONTACT: EMPIRICAL LABORATORIES
 ADDRESS: 227 FRENCH LANDING DR.
 CITY, STATE: NASHVILLE, TN

STANDARD TAT 24 hr. 48 hr. 72 hr. 7 day 14 day

DATE	TIME	SAMPLE ID	LOCATION ID
7/24	1135	MPT-A+D-RW01-0708	
	1228	MPT-A+D-RW04-0708	
	1335	MPT-A+D-1406-16-0708	
	1425	MPT-A+D-RW03-0708	
	1520	MPT-A+D-RW02-0708	
7/25	1200	MPT-351-2-MW02-0708	
	1233	MPT-351-2-MW04-0708	
	1310	MPT-351-2-MW01-0708	
	0000	TRIP BLANK	

TOP DEPTH (FT)
 BOTTOM DEPTH (FT)
 MATRIX (GW, SO, SW, SD, QC, ETC.)
 COLLECTION METHOD
 GRAP (G)
 COMP (G)
 NO. OF CONTAINERS

PAHS / 8270C
 TRPH / FL-PRO
 BTEX M 8270G +
 HSOA
 HCl

CONTAINER TYPE
 PLASTIC (P) or GLASS (G)
 PRESERVATIVE USED

TYPE OF ANALYSIS
 COMMENTS

1. RELINQUISHED BY: *[Signature]* DATE: 7-25-08 TIME: 1600
 2. RELINQUISHED BY: [Blank] DATE: [Blank] TIME: [Blank]
 3. RELINQUISHED BY: *[Signature]* DATE: 7/26/08 TIME: 10:00

COMMENTS: * 16 Amber Containers (all) have sample collection time of 13:55 on container labels, not 13:35!

EMPIRICAL LABORATORIES COOLER RECEIPT FORM

LIMS Number: 0867219 COC ID(s): 26344
 Client Tetra Tech WWS Project Mayport CTO-050
 Sample Custodian WS Today's Date 7/26/08
 Date/Time Samples Received 7/26/08 10:00
 Courier (& Tracking Number) Fedex - 7376, 6746, 5496, 3746
 Cooler Opened: Date&Time 7/26/08 10:00

Custody seals intact? Date?	Yes	<input checked="" type="radio"/> No	_____
Chain of custody provided?	<input checked="" type="radio"/> Yes	No	
Sample labels present?	<input checked="" type="radio"/> Yes	No	
Bottle labels correspond w/COC?	<input checked="" type="radio"/> Yes	No	
Preservation at correct levels?	<input checked="" type="radio"/> Yes	No	N/A

Number of Custody Seals on Cooler(s): - Seal Date(s): -

Type of coolant used Ice

Coolant condition : Melted _____ Partially melted/frozen _____
 Frozen _____

of Coolers 4 Temp. of Coolers 4.50C // 4.80C // 1.8C // 0.90C // //

Condition of Bottles in Shipment: Broken Leaking Intact Missing

If broken, leaking, or missing, list sample ID#s and bottle types affected:

Comments:
Sample MPT-A+D-1406-16-0708 on all amber 1L containers
have sample collection times as 13:55, not 13:35 as listed on
COC. 10°C containers have 13:35.

Sample Delivery Group Assignment Form

Matrix: Water
QC LEVEL: Level III/EDD
Analyt. Due: 8/6/2008
Report Due: 8/11/2008

Client: TetraTech NUS, Inc.
Project Name: NAS Mayport CTO050
SDG #: Mayport_002

10BD TAT

Sample Type/count	Date Sampled	Date Received	Work Order	Client ID	Abbreviated Report ID	BTEXM/VOH		Low PAH		FLPRO
						8260B	8270C			
1	7/24/08 11:35	07/26/08	0807219-01	MPT-A+D-RW01-0708	A+D-RW01	X		X		X
2	7/24/08 12:28	07/26/08	0807219-02	MPT-A+D-RW04-0708	A+D-RW04	X		X		X
3	7/24/08 13:35	07/26/08	0807219-03	MPT-A+D-1406-16-0708	A+D-1406-16	X		X		X
4	7/24/08 14:25	07/26/08	0807219-04	MPT-A+D-RW03-0708	A+D-RW03	X		X		X
5	7/24/08 15:20	07/26/08	0807219-05	MPT-A+D-RW02-0708	A+D-RW02	X		X		X
6	7/25/08 12:00	07/26/08	0807219-06	MPT-351-2-MW02-0708	351-2-MW02	X		X		X
7	7/25/08 12:33	07/26/08	0807219-07	MPT-351-2-MW04-0708	351-2-MW04	X		X		X
8	7/25/08 13:10	07/26/08	0807219-08	MPT-351-2-MW01-0708	351-2-MW01	X		X		X
TB	7/25/08 0:00	07/26/08	0807219-09	Trip Blanks	Trip Blanks	X				

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW01

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-01

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0721901

Level: (low/med) LOW Date Sampled: 07/24/08 11:35

% Moisture: not dec. _____ Date Analyzed: 07/30/08 12:29

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L
MDL RL CONC Q

71-43-2-----Benzene	0.11	1.0		U
75-27-4-----Bromodichloromethane	0.086	0.60		U
75-25-2-----Bromoform	0.24	1.0		U
74-83-9-----Bromomethane	0.33	2.0		U
56-23-5-----Carbon tetrachloride	0.14	1.0		U
108-90-7-----Chlorobenzene	0.28	1.0		U
75-00-3-----Chloroethane	0.38	2.0		U
110-75-8-----2-Chloroethyl vinyl ether	0.53	1.0		U
67-66-3-----Chloroform	0.10	1.0		U
74-87-3-----Chloromethane	0.40	2.0	0.56	I
124-48-1-----Dibromochloromethane	0.080	0.40		U
95-50-1-----1,2-Dichlorobenzene	0.17	1.0		U
541-73-1-----1,3-Dichlorobenzene	0.21	1.0		U
106-46-7-----1,4-Dichlorobenzene	0.12	1.0		U
75-71-8-----Dichlorodifluoromethane	0.24	2.0		U
75-34-3-----1,1-Dichloroethane	0.15	1.0		U
107-06-2-----1,2-Dichloroethane	0.15	1.0		U
75-35-4-----1,1-Dichloroethene	0.42	1.0		U
156-59-2-----cis-1,2-Dichloroethene	0.44	1.0		U
156-60-5-----trans-1,2-Dichloroethene	0.40	1.0		U
78-87-5-----1,2-Dichloropropane	0.18	1.0		U
10061-01-5----cis-1,3-Dichloropropene	0.13	1.0		U
10061-02-6----trans-1,3-Dichloropropene	0.22	1.0		U
100-41-4-----Ethylbenzene	0.14	1.0		U
75-09-2-----Methylene chloride	0.26	2.0		U
1634-04-4----Methyl tert-butyl ether	0.17	1.0		U
79-34-5-----1,1,2,2-Tetrachloroethane	0.070	0.25		U
127-18-4-----Tetrachloroethene	0.14	1.0		U
108-88-3-----Toluene	0.18	1.0		U
120-82-1-----1,2,4-Trichlorobenzene	0.14	1.0		U
71-55-6-----1,1,1-Trichloroethane	0.15	1.0		U
79-00-5-----1,1,2-Trichloroethane	0.17	1.0		U
79-01-6-----Trichloroethene	0.28	1.0		U
75-69-4-----Trichlorofluoromethane	0.15	2.0		U
75-01-4-----Vinyl chloride	0.19	1.0		U
1330-20-7-----Xylene (total)	0.21	1.0		U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW04

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-02

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0721902

Level: (low/med) LOW Date Sampled: 07/24/08 12:28

% Moisture: not dec. _____ Date Analyzed: 07/30/08 12:58

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L
MDL RL CONC Q

71-43-2-----Benzene	0.11	1.0		U
75-27-4-----Bromodichloromethane	0.086	0.60		U
75-25-2-----Bromoform	0.24	1.0		U
74-83-9-----Bromomethane	0.33	2.0		U
56-23-5-----Carbon tetrachloride	0.14	1.0		U
108-90-7-----Chlorobenzene	0.28	1.0		U
75-00-3-----Chloroethane	0.38	2.0		U
110-75-8-----2-Chloroethyl vinyl ether	0.53	1.0		U
67-66-3-----Chloroform	0.10	1.0		U
74-87-3-----Chloromethane	0.40	2.0	0.57	I
124-48-1-----Dibromochloromethane	0.080	0.40		U
95-50-1-----1,2-Dichlorobenzene	0.17	1.0		U
541-73-1-----1,3-Dichlorobenzene	0.21	1.0		U
106-46-7-----1,4-Dichlorobenzene	0.12	1.0		U
75-71-8-----Dichlorodifluoromethane	0.24	2.0		U
75-34-3-----1,1-Dichloroethane	0.15	1.0		U
107-06-2-----1,2-Dichloroethane	0.15	1.0		U
75-35-4-----1,1-Dichloroethene	0.42	1.0		U
156-59-2-----cis-1,2-Dichloroethene	0.44	1.0		U
156-60-5-----trans-1,2-Dichloroethene	0.40	1.0		U
78-87-5-----1,2-Dichloropropane	0.18	1.0		U
10061-01-5----cis-1,3-Dichloropropene	0.13	1.0		U
10061-02-6----trans-1,3-Dichloropropene	0.22	1.0		U
100-41-4-----Ethylbenzene	0.14	1.0		U
75-09-2-----Methylene chloride	0.26	2.0		U
1634-04-4----Methyl tert-butyl ether	0.17	1.0		U
79-34-5-----1,1,2,2-Tetrachloroethane	0.070	0.25		U
127-18-4-----Tetrachloroethene	0.14	1.0		U
108-88-3-----Toluene	0.18	1.0		U
120-82-1-----1,2,4-Trichlorobenzene	0.14	1.0		U
71-55-6-----1,1,1-Trichloroethane	0.15	1.0		U
79-00-5-----1,1,2-Trichloroethane	0.17	1.0		U
79-01-6-----Trichloroethene	0.28	1.0		U
75-69-4-----Trichlorofluoromethane	0.15	2.0		U
75-01-4-----Vinyl chloride	0.19	1.0		U
1330-20-7-----Xylene (total)	0.21	1.0	0.57	I

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-1406-16

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-03

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0721903

Level: (low/med) LOW Date Sampled: 07/24/08 13:55

% Moisture: not dec. _____ Date Analyzed: 07/30/08 13:28

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: MDL	(ug/L or ug/Kg) RL	UG/L CONC	UG/L Q
71-43-2-----	Benzene	0.11	1.0		U
75-27-4-----	Bromodichloromethane	0.086	0.60		U
75-25-2-----	Bromoform	0.24	1.0		U
74-83-9-----	Bromomethane	0.33	2.0		U
56-23-5-----	Carbon tetrachloride	0.14	1.0		U
108-90-7-----	Chlorobenzene	0.28	1.0		U
75-00-3-----	Chloroethane	0.38	2.0		U
110-75-8-----	2-Chloroethyl vinyl ether	0.53	1.0		U
67-66-3-----	Chloroform	0.10	1.0		U
74-87-3-----	Chloromethane	0.40	2.0	0.45	I
124-48-1-----	Dibromochloromethane	0.080	0.40		U
95-50-1-----	1,2-Dichlorobenzene	0.17	1.0		U
541-73-1-----	1,3-Dichlorobenzene	0.21	1.0		U
106-46-7-----	1,4-Dichlorobenzene	0.12	1.0		U
75-71-8-----	Dichlorodifluoromethane	0.24	2.0		U
75-34-3-----	1,1-Dichloroethane	0.15	1.0		U
107-06-2-----	1,2-Dichloroethane	0.15	1.0		U
75-35-4-----	1,1-Dichloroethene	0.42	1.0		U
156-59-2-----	cis-1,2-Dichloroethene	0.44	1.0		U
156-60-5-----	trans-1,2-Dichloroethene	0.40	1.0		U
78-87-5-----	1,2-Dichloropropane	0.18	1.0		U
10061-01-5----	cis-1,3-Dichloropropene	0.13	1.0		U
10061-02-6----	trans-1,3-Dichloropropene	0.22	1.0		U
100-41-4-----	Ethylbenzene	0.14	1.0		U
75-09-2-----	Methylene chloride	0.26	2.0		U
1634-04-4----	Methyl tert-butyl ether	0.17	1.0		U
79-34-5-----	1,1,2,2-Tetrachloroethane	0.070	0.25		U
127-18-4-----	Tetrachloroethene	0.14	1.0		U
108-88-3-----	Toluene	0.18	1.0		U
120-82-1-----	1,2,4-Trichlorobenzene	0.14	1.0		U
71-55-6-----	1,1,1-Trichloroethane	0.15	1.0		U
79-00-5-----	1,1,2-Trichloroethane	0.17	1.0		U
79-01-6-----	Trichloroethene	0.28	1.0		U
75-69-4-----	Trichlorofluoromethane	0.15	2.0		U
75-01-4-----	Vinyl chloride	0.19	1.0		U
1330-20-7-----	Xylene (total)	0.21	1.0	0.27	I

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW03

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-04

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0721904

Level: (low/med) LOW Date Sampled: 07/24/08 14:25

% Moisture: not dec. _____ Date Analyzed: 07/30/08 13:58

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		UG/L CONC	UG/L Q
		MDL	(ug/L or ug/Kg) RL		
71-43-2-----	Benzene	0.11	1.0		U
75-27-4-----	Bromodichloromethane	0.086	0.60		U
75-25-2-----	Bromoform	0.24	1.0		U
74-83-9-----	Bromomethane	0.33	2.0		U
56-23-5-----	Carbon tetrachloride	0.14	1.0		U
108-90-7-----	Chlorobenzene	0.28	1.0		U
75-00-3-----	Chloroethane	0.38	2.0		U
110-75-8-----	2-Chloroethyl vinyl ether	0.53	1.0		U
67-66-3-----	Chloroform	0.10	1.0		U
74-87-3-----	Chloromethane	0.40	2.0	0.41	I
124-48-1-----	Dibromochloromethane	0.080	0.40		U
95-50-1-----	1,2-Dichlorobenzene	0.17	1.0		U
541-73-1-----	1,3-Dichlorobenzene	0.21	1.0		U
106-46-7-----	1,4-Dichlorobenzene	0.12	1.0		U
75-71-8-----	Dichlorodifluoromethane	0.24	2.0		U
75-34-3-----	1,1-Dichloroethane	0.15	1.0		U
107-06-2-----	1,2-Dichloroethane	0.15	1.0		U
75-35-4-----	1,1-Dichloroethene	0.42	1.0		U
156-59-2-----	cis-1,2-Dichloroethene	0.44	1.0		U
156-60-5-----	trans-1,2-Dichloroethene	0.40	1.0		U
78-87-5-----	1,2-Dichloropropane	0.18	1.0		U
10061-01-5----	cis-1,3-Dichloropropene	0.13	1.0		U
10061-02-6----	trans-1,3-Dichloropropene	0.22	1.0		U
100-41-4-----	Ethylbenzene	0.14	1.0	0.16	I
75-09-2-----	Methylene chloride	0.26	2.0		U
1634-04-4----	Methyl tert-butyl ether	0.17	1.0		U
79-34-5-----	1,1,2,2-Tetrachloroethane	0.070	0.25		U
127-18-4-----	Tetrachloroethene	0.14	1.0		U
108-88-3-----	Toluene	0.18	1.0	0.27	I
120-82-1-----	1,2,4-Trichlorobenzene	0.14	1.0		U
71-55-6-----	1,1,1-Trichloroethane	0.15	1.0		U
79-00-5-----	1,1,2-Trichloroethane	0.17	1.0		U
79-01-6-----	Trichloroethene	0.28	1.0		U
75-69-4-----	Trichlorofluoromethane	0.15	2.0		U
75-01-4-----	Vinyl chloride	0.19	1.0		U
1330-20-7-----	Xylene (total)	0.21	1.0	0.42	I

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW02

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-05

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0721905

Level: (low/med) LOW Date Sampled: 07/24/08 15:20

% Moisture: not dec. _____ Date Analyzed: 07/30/08 14:27

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L
MDL RL CONC Q

71-43-2-----Benzene	0.11	1.0		U
75-27-4-----Bromodichloromethane	0.086	0.60		U
75-25-2-----Bromoform	0.24	1.0		U
74-83-9-----Bromomethane	0.33	2.0		U
56-23-5-----Carbon tetrachloride	0.14	1.0		U
108-90-7-----Chlorobenzene	0.28	1.0		U
75-00-3-----Chloroethane	0.38	2.0		U
110-75-8-----2-Chloroethyl vinyl ether	0.53	1.0		U
67-66-3-----Chloroform	0.10	1.0		U
74-87-3-----Chloromethane	0.40	2.0	0.48	I
124-48-1-----Dibromochloromethane	0.080	0.40		U
95-50-1-----1,2-Dichlorobenzene	0.17	1.0		U
541-73-1-----1,3-Dichlorobenzene	0.21	1.0		U
106-46-7-----1,4-Dichlorobenzene	0.12	1.0		U
75-71-8-----Dichlorodifluoromethane	0.24	2.0		U
75-34-3-----1,1-Dichloroethane	0.15	1.0		U
107-06-2-----1,2-Dichloroethane	0.15	1.0		U
75-35-4-----1,1-Dichloroethene	0.42	1.0		U
156-59-2-----cis-1,2-Dichloroethene	0.44	1.0		U
156-60-5-----trans-1,2-Dichloroethene	0.40	1.0		U
78-87-5-----1,2-Dichloropropane	0.18	1.0		U
10061-01-5----cis-1,3-Dichloropropene	0.13	1.0		U
10061-02-6----trans-1,3-Dichloropropene	0.22	1.0		U
100-41-4-----Ethylbenzene	0.14	1.0		U
75-09-2-----Methylene chloride	0.26	2.0		U
1634-04-4----Methyl tert-butyl ether	0.17	1.0		U
79-34-5-----1,1,2,2-Tetrachloroethane	0.070	0.25		U
127-18-4-----Tetrachloroethene	0.14	1.0		U
108-88-3-----Toluene	0.18	1.0		U
120-82-1-----1,2,4-Trichlorobenzene	0.14	1.0		U
71-55-6-----1,1,1-Trichloroethane	0.15	1.0		U
79-00-5-----1,1,2-Trichloroethane	0.17	1.0		U
79-01-6-----Trichloroethene	0.28	1.0		U
75-69-4-----Trichlorofluoromethane	0.15	2.0		U
75-01-4-----Vinyl chloride	0.19	1.0		U
1330-20-7----Xylene (total)	0.21	1.0	0.47	I

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

351-2-MW02

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-06

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0721906

Level: (low/med) LOW Date Sampled: 07/25/08 12:00

% Moisture: not dec. _____ Date Analyzed: 07/30/08 14:57

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)		UG/L
		MDL	RL	CONC
71-43-2-----	Benzene	0.11	1.0	U
75-27-4-----	Bromodichloromethane	0.086	0.60	U
75-25-2-----	Bromoform	0.24	1.0	U
74-83-9-----	Bromomethane	0.33	2.0	U
56-23-5-----	Carbon tetrachloride	0.14	1.0	U
108-90-7-----	Chlorobenzene	0.28	1.0	U
75-00-3-----	Chloroethane	0.38	2.0	U
110-75-8-----	2-Chloroethyl vinyl ether	0.53	1.0	U
67-66-3-----	Chloroform	0.10	1.0	U
74-87-3-----	Chloromethane	0.40	2.0	0.41 I
124-48-1-----	Dibromochloromethane	0.080	0.40	U
95-50-1-----	1,2-Dichlorobenzene	0.17	1.0	U
541-73-1-----	1,3-Dichlorobenzene	0.21	1.0	U
106-46-7-----	1,4-Dichlorobenzene	0.12	1.0	U
75-71-8-----	Dichlorodifluoromethane	0.24	2.0	U
75-34-3-----	1,1-Dichloroethane	0.15	1.0	U
107-06-2-----	1,2-Dichloroethane	0.15	1.0	U
75-35-4-----	1,1-Dichloroethene	0.42	1.0	U
156-59-2-----	cis-1,2-Dichloroethene	0.44	1.0	U
156-60-5-----	trans-1,2-Dichloroethene	0.40	1.0	U
78-87-5-----	1,2-Dichloropropane	0.18	1.0	U
10061-01-5----	cis-1,3-Dichloropropene	0.13	1.0	U
10061-02-6----	trans-1,3-Dichloropropene	0.22	1.0	U
100-41-4-----	Ethylbenzene	0.14	1.0	U
75-09-2-----	Methylene chloride	0.26	2.0	U
1634-04-4-----	Methyl tert-butyl ether	0.17	1.0	U
79-34-5-----	1,1,2,2-Tetrachloroethane	0.070	0.25	U
127-18-4-----	Tetrachloroethene	0.14	1.0	U
108-88-3-----	Toluene	0.18	1.0	U
120-82-1-----	1,2,4-Trichlorobenzene	0.14	1.0	U
71-55-6-----	1,1,1-Trichloroethane	0.15	1.0	U
79-00-5-----	1,1,2-Trichloroethane	0.17	1.0	U
79-01-6-----	Trichloroethene	0.28	1.0	U
75-69-4-----	Trichlorofluoromethane	0.15	2.0	U
75-01-4-----	Vinyl chloride	0.19	1.0	U
1330-20-7-----	Xylene (total)	0.21	1.0	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

351-2-MW04

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-07

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0721907

Level: (low/med) LOW Date Sampled: 07/25/08 12:33

% Moisture: not dec. _____ Date Analyzed: 07/30/08 15:27

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L
MDL RL CONC Q

71-43-2-----Benzene	0.11	1.0		U
75-27-4-----Bromodichloromethane	0.086	0.60		U
75-25-2-----Bromoform	0.24	1.0		U
74-83-9-----Bromomethane	0.33	2.0		U
56-23-5-----Carbon tetrachloride	0.14	1.0		U
108-90-7-----Chlorobenzene	0.28	1.0		U
75-00-3-----Chloroethane	0.38	2.0		U
110-75-8-----2-Chloroethyl vinyl ether	0.53	1.0		U
67-66-3-----Chloroform	0.10	1.0		U
74-87-3-----Chloromethane	0.40	2.0	0.48	I
124-48-1-----Dibromochloromethane	0.080	0.40		U
95-50-1-----1,2-Dichlorobenzene	0.17	1.0		U
541-73-1-----1,3-Dichlorobenzene	0.21	1.0		U
106-46-7-----1,4-Dichlorobenzene	0.12	1.0		U
75-71-8-----Dichlorodifluoromethane	0.24	2.0		U
75-34-3-----1,1-Dichloroethane	0.15	1.0		U
107-06-2-----1,2-Dichloroethane	0.15	1.0		U
75-35-4-----1,1-Dichloroethene	0.42	1.0		U
156-59-2-----cis-1,2-Dichloroethene	0.44	1.0		U
156-60-5-----trans-1,2-Dichloroethene	0.40	1.0		U
78-87-5-----1,2-Dichloropropane	0.18	1.0		U
10061-01-5----cis-1,3-Dichloropropene	0.13	1.0		U
10061-02-6----trans-1,3-Dichloropropene	0.22	1.0		U
100-41-4-----Ethylbenzene	0.14	1.0		U
75-09-2-----Methylene chloride	0.26	2.0		U
1634-04-4----Methyl tert-butyl ether	0.17	1.0		U
79-34-5-----1,1,2,2-Tetrachloroethane	0.070	0.25		U
127-18-4-----Tetrachloroethene	0.14	1.0		U
108-88-3-----Toluene	0.18	1.0		U
120-82-1-----1,2,4-Trichlorobenzene	0.14	1.0		U
71-55-6-----1,1,1-Trichloroethane	0.15	1.0		U
79-00-5-----1,1,2-Trichloroethane	0.17	1.0		U
79-01-6-----Trichloroethene	0.28	1.0		U
75-69-4-----Trichlorofluoromethane	0.15	2.0		U
75-01-4-----Vinyl chloride	0.19	1.0		U
1330-20-7-----Xylene (total)	0.21	1.0		U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

351-2-MW01

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-08

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0721908

Level: (low/med) LOW Date Sampled: 07/25/08 13:10

% Moisture: not dec. _____ Date Analyzed: 07/30/08 15:56

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		UG/L
		MDL	(ug/L or ug/Kg) RL CONC	Q
71-43-2-----	Benzene	0.11	1.0	U
75-27-4-----	Bromodichloromethane	0.086	0.60	U
75-25-2-----	Bromoform	0.24	1.0	U
74-83-9-----	Bromomethane	0.33	2.0	U
56-23-5-----	Carbon tetrachloride	0.14	1.0	U
108-90-7-----	Chlorobenzene	0.28	1.0	U
75-00-3-----	Chloroethane	0.38	2.0	U
110-75-8-----	2-Chloroethyl vinyl ether	0.53	1.0	U
67-66-3-----	Chloroform	0.10	1.0	U
74-87-3-----	Chloromethane	0.40	2.0	U
124-48-1-----	Dibromochloromethane	0.080	0.40	U
95-50-1-----	1,2-Dichlorobenzene	0.17	1.0	U
541-73-1-----	1,3-Dichlorobenzene	0.21	1.0	U
106-46-7-----	1,4-Dichlorobenzene	0.12	1.0	U
75-71-8-----	Dichlorodifluoromethane	0.24	2.0	U
75-34-3-----	1,1-Dichloroethane	0.15	1.0	U
107-06-2-----	1,2-Dichloroethane	0.15	1.0	U
75-35-4-----	1,1-Dichloroethene	0.42	1.0	U
156-59-2-----	cis-1,2-Dichloroethene	0.44	1.0	U
156-60-5-----	trans-1,2-Dichloroethene	0.40	1.0	U
78-87-5-----	1,2-Dichloropropane	0.18	1.0	U
10061-01-5----	cis-1,3-Dichloropropene	0.13	1.0	U
10061-02-6----	trans-1,3-Dichloropropene	0.22	1.0	U
100-41-4-----	Ethylbenzene	0.14	1.0	U
75-09-2-----	Methylene chloride	0.26	2.0	U
1634-04-4----	Methyl tert-butyl ether	0.17	1.0	U
79-34-5-----	1,1,2,2-Tetrachloroethane	0.070	0.25	U
127-18-4-----	Tetrachloroethene	0.14	1.0	U
108-88-3-----	Toluene	0.18	1.0	U
120-82-1-----	1,2,4-Trichlorobenzene	0.14	1.0	U
71-55-6-----	1,1,1-Trichloroethane	0.15	1.0	U
79-00-5-----	1,1,2-Trichloroethane	0.17	1.0	U
79-01-6-----	Trichloroethene	0.28	1.0	U
75-69-4-----	Trichlorofluoromethane	0.15	2.0	U
75-01-4-----	Vinyl chloride	0.19	1.0	U
1330-20-7-----	Xylene (total)	0.21	1.0	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

TRIP BLANKS

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-09

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 0721909

Level: (low/med) LOW Date Sampled: 07/25/08 :

% Moisture: not dec. _____ Date Analyzed: 07/30/08 11:59

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L
MDL RL CONC Q

71-43-2-----	Benzene	0.11	1.0		U
75-27-4-----	Bromodichloromethane	0.086	0.60		U
75-25-2-----	Bromoform	0.24	1.0		U
74-83-9-----	Bromomethane	0.33	2.0		U
56-23-5-----	Carbon tetrachloride	0.14	1.0		U
108-90-7-----	Chlorobenzene	0.28	1.0		U
75-00-3-----	Chloroethane	0.38	2.0		U
110-75-8-----	2-Chloroethyl vinyl ether	0.53	1.0		U
67-66-3-----	Chloroform	0.10	1.0		U
74-87-3-----	Chloromethane	0.40	2.0		U
124-48-1-----	Dibromochloromethane	0.080	0.40		U
95-50-1-----	1,2-Dichlorobenzene	0.17	1.0		U
541-73-1-----	1,3-Dichlorobenzene	0.21	1.0		U
106-46-7-----	1,4-Dichlorobenzene	0.12	1.0		U
75-71-8-----	Dichlorodifluoromethane	0.24	2.0		U
75-34-3-----	1,1-Dichloroethane	0.15	1.0		U
107-06-2-----	1,2-Dichloroethane	0.15	1.0		U
75-35-4-----	1,1-Dichloroethene	0.42	1.0		U
156-59-2-----	cis-1,2-Dichloroethene	0.44	1.0		U
156-60-5-----	trans-1,2-Dichloroethene	0.40	1.0		U
78-87-5-----	1,2-Dichloropropane	0.18	1.0		U
10061-01-5----	cis-1,3-Dichloropropene	0.13	1.0		U
10061-02-6----	trans-1,3-Dichloropropene	0.22	1.0		U
100-41-4-----	Ethylbenzene	0.14	1.0		U
75-09-2-----	Methylene chloride	0.26	2.0	2.3	V
1634-04-4-----	Methyl tert-butyl ether	0.17	1.0		U
79-34-5-----	1,1,2,2-Tetrachloroethane	0.070	0.25		U
127-18-4-----	Tetrachloroethene	0.14	1.0		U
108-88-3-----	Toluene	0.18	1.0		U
120-82-1-----	1,2,4-Trichlorobenzene	0.14	1.0		U
71-55-6-----	1,1,1-Trichloroethane	0.15	1.0		U
79-00-5-----	1,1,2-Trichloroethane	0.17	1.0		U
79-01-6-----	Trichloroethene	0.28	1.0		U
75-69-4-----	Trichlorofluoromethane	0.15	2.0		U
75-01-4-----	Vinyl chloride	0.19	1.0		U
1330-20-7-----	Xylene (total)	0.21	1.0		U

FORM I VOA

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

	CLIENT SAMPLE NO.	SMC1 (DFM) #	SMC2 (DCE) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT
01	V4BLK0730LCS	98	100	106	104	0
02	V4BLK0730	102	106	110	106	0
03	TRIP BLANKS	108	105	108	101	0
04	A+D-RW01	107	101	106	106	0
05	A+D-RW04	102	95	106	102	0
06	A+D-1406-16	101	102	107	108	0
07	A+D-RW03	99	102	114	112	0
08	A+D-RW02	100	101	111	106	0
09	351-2-MW02	99	99	116*	112	1
10	351-2-MW04	98	97	106	104	0
11	351-2-MW01	96	99	111	106	0
12	V4BLK0730LCS	98	98	102	104	0
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

	EL QC LIMITS	SPIKE CONC (ug/L)
SMC1 (DFM) = Dibromofluoromethane	(85-120)	30
SMC2 (DCE) = 1,2-Dichloroethane-d4	(80-135)	30
SMC3 (TOL) = Toluene-d8	(85-115)	30
SMC4 (BFB) = Bromofluorobenzene	(85-120)	30

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate results reported from a diluted analysis

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix Spike - Client Sample No.: V4BLK0730

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Benzene	50.00	0.0000	43.12	86	80-120
Bromodichloromethane	50.00	0.0000	42.69	85	75-120
Bromoform	50.00	0.0000	49.95	100	70-130
Bromomethane	50.00	0.0000	41.12	82	30-145
Carbon tetrachloride	50.00	0.0000	43.74	87	65-140
Chlorobenzene	50.00	0.0000	46.11	92	80-120
Chloroethane	50.00	0.0000	45.80	92	60-135
2-Chloroethyl vinyl eth	100.0	0.0000	70.84	71	10-165
Chloroform	50.00	0.0000	39.18	78	65-135
Chloromethane	50.00	0.0000	52.35	105	40-125
Dibromochloromethane	50.00	0.0000	51.45	103	60-135
1,2-Dichlorobenzene	50.00	0.0000	42.64	85	70-120
1,3-Dichlorobenzene	50.00	0.0000	38.31	77	75-125
1,4-Dichlorobenzene	50.00	0.0000	42.29	84	75-125
Dichlorodifluoromethane	50.00	0.0000	54.76	110	30-155
1,1-Dichloroethane	50.00	0.0000	43.12	86	70-135
1,2-Dichloroethane	50.00	0.0000	44.05	88	70-130
1,1-Dichloroethene	50.00	0.0000	48.13	96	70-130
cis-1,2-Dichloroethene	50.00	0.0000	42.25	84	70-125
trans-1,2-Dichloroethen	50.00	0.0000	42.18	84	60-140
1,2-Dichloropropane	50.00	0.0000	43.06	86	75-125
cis-1,3-Dichloropropene	50.00	0.0000	46.58	93	70-130
trans-1,3-Dichloroprope	50.00	0.0000	51.00	102	55-140
Ethylbenzene	50.00	0.0000	47.12	94	75-125
Methylene chloride	50.00	0.2801	43.02	85	55-140
Methyl tert-butyl ether	50.00	0.0000	45.38	91	65-125
1,1,2,2-Tetrachloroetha	50.00	0.0000	43.28	86	65-130
Tetrachloroethene	50.00	0.0000	54.00	108	45-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix Spike - Client Sample No.: V4BLK0730

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Toluene	50.00	0.0000	45.02	90	75-120
1,2,4-Trichlorobenzene	50.00	0.0000	38.64	77	65-135
1,1,1-Trichloroethane	50.00	0.0000	42.13	84	65-130
1,1,2-Trichloroethane	50.00	0.0000	49.47	99	75-125
Trichloroethene	50.00	0.0000	40.97	82	70-125
Trichlorofluoromethane	50.00	0.0000	46.33	93	60-145
Vinyl chloride	50.00	0.0000	49.82	100	50-145
Xylene (total)	150.0	0.0000	137.0	91	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix Spike - Client Sample No.: V4BLK0730

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Benzene	50.00	44.08	88	2	30	80-120
Bromodichloromethane	50.00	45.38	91	6	30	75-120
Bromoform	50.00	54.50	109	9	30	70-130
Bromomethane	50.00	27.76	56	39*	30	30-145
Carbon tetrachloride	50.00	45.01	90	3	30	65-140
Chlorobenzene	50.00	47.68	95	3	30	80-120
Chloroethane	50.00	47.21	94	3	30	60-135
2-Chloroethyl vinyl eth	100.0	75.57	76	6	30	10-165
Chloroform	50.00	42.30	85	8	30	65-135
Chloromethane	50.00	50.06	100	4	30	40-125
Dibromochloromethane	50.00	54.54	109	6	30	60-135
1,2-Dichlorobenzene	50.00	45.73	91	7	30	70-120
1,3-Dichlorobenzene	50.00	47.11	94	21	30	75-125
1,4-Dichlorobenzene	50.00	47.23	94	11	30	75-125
Dichlorodifluoromethane	50.00	54.53	109	0	30	30-155
1,1-Dichloroethane	50.00	44.97	90	4	30	70-135
1,2-Dichloroethane	50.00	45.88	92	4	30	70-130
1,1-Dichloroethene	50.00	46.53	93	3	30	70-130
cis-1,2-Dichloroethene	50.00	43.54	87	3	30	70-125
trans-1,2-Dichloroethen	50.00	42.70	85	1	30	60-140
1,2-Dichloropropane	50.00	45.79	92	6	30	75-125
cis-1,3-Dichloropropene	50.00	47.92	96	3	30	70-130
trans-1,3-Dichloroprope	50.00	51.98	104	2	30	55-140
Ethylbenzene	50.00	48.43	97	3	30	75-125
Methylene chloride	50.00	45.34	90	5	30	55-140
Methyl tert-butyl ether	50.00	48.82	98	7	30	65-125
1,1,2,2-Tetrachloroetha	50.00	51.66	103	18	30	65-130
Tetrachloroethene	50.00	57.54	115	6	30	45-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix Spike - Client Sample No.: V4BLK0730

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD	%	QC LIMITS	
			% REC #	RPD #	RPD	REC.
Toluene	50.00	44.79	90	0	30	75-120
1,2,4-Trichlorobenzene	50.00	44.09	88	13	30	65-135
1,1,1-Trichloroethane	50.00	43.23	86	2	30	65-130
1,1,2-Trichloroethane	50.00	51.98	104	5	30	75-125
Trichloroethene	50.00	42.63	85	4	30	70-125
Trichlorofluoromethane	50.00	48.40	97	4	30	60-145
Vinyl chloride	50.00	47.52	95	5	30	50-145
Xylene (total)	150.0	139.4	93	2	30	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 36 outside limits

Spike Recovery: 0 out of 72 outside limits

COMMENTS: _____

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

V4BLK0730

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Lab File ID: V4BLK01 Lab Sample ID: V4BLK0730

Date Analyzed: 07/30/08 Time Analyzed: 1001

Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA4

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	V4BLK0730LCS	V4BLK0730LCS	V4LCS01	0835
02	TRIP BLANKS	0807219-09	0721909	1159
03	A+D-RW01	0807219-01	0721901	1229
04	A+D-RW04	0807219-02	0721902	1258
05	A+D-1406-16	0807219-03	0721903	1328
06	A+D-RW03	0807219-04	0721904	1358
07	A+D-RW02	0807219-05	0721905	1427
08	351-2-MW02	0807219-06	0721906	1457
09	351-2-MW04	0807219-07	0721907	1527
10	351-2-MW01	0807219-08	0721908	1556
11	V4BLK0730LCS	V4BLK0730LCSD	V4LCSD01	1853
12				
13				
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COMMENTS:

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

V4BLK0730

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: V4BLK0730

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: V4BLK01

Level: (low/med) LOW Date Sampled: _____

% Moisture: not dec. _____ Date Analyzed: 07/30/08 10:01

GC Column: DB-VRX ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION MDL	UNITS: RL	(ug/L or ug/Kg) CONC	UG/L Q
71-43-2-----	Benzene	0.11		1.0	U
75-27-4-----	Bromodichloromethane	0.086		1.0	U
75-25-2-----	Bromoform	0.24		1.0	U
74-83-9-----	Bromomethane	0.33		1.0	U
56-23-5-----	Carbon tetrachloride	0.14		1.0	U
108-90-7-----	Chlorobenzene	0.28		1.0	U
75-00-3-----	Chloroethane	0.38		1.0	U
110-75-8-----	2-Chloroethyl vinyl ether	0.53		5.0	U
67-66-3-----	Chloroform	0.10		1.0	U
74-87-3-----	Chloromethane	0.40		1.0	U
124-48-1-----	Dibromochloromethane	0.080		1.0	U
95-50-1-----	1,2-Dichlorobenzene	0.17		1.0	U
541-73-1-----	1,3-Dichlorobenzene	0.21		1.0	U
106-46-7-----	1,4-Dichlorobenzene	0.12		1.0	U
75-71-8-----	Dichlorodifluoromethane	0.24		1.0	U
75-34-3-----	1,1-Dichloroethane	0.15		1.0	U
107-06-2-----	1,2-Dichloroethane	0.15		1.0	U
75-35-4-----	1,1-Dichloroethene	0.42		1.0	U
156-59-2-----	cis-1,2-Dichloroethene	0.44		1.0	U
156-60-5-----	trans-1,2-Dichloroethene	0.40		1.0	U
78-87-5-----	1,2-Dichloropropane	0.18		1.0	U
10061-01-5----	cis-1,3-Dichloropropene	0.13		1.0	U
10061-02-6----	trans-1,3-Dichloropropene	0.22		1.0	U
100-41-4-----	Ethylbenzene	0.14		1.0	U
75-09-2-----	Methylene chloride	0.26		2.0	0.28 I
1634-04-4----	Methyl tert-butyl ether	0.17		1.0	U
79-34-5-----	1,1,2,2-Tetrachloroethane	0.070		1.0	U
127-18-4-----	Tetrachloroethene	0.14		1.0	U
108-88-3-----	Toluene	0.18		1.0	U
120-82-1-----	1,2,4-Trichlorobenzene	0.14		1.0	U
71-55-6-----	1,1,1-Trichloroethane	0.15		1.0	U
79-00-5-----	1,1,2-Trichloroethane	0.17		1.0	U
79-01-6-----	Trichloroethene	0.28		1.0	U
75-69-4-----	Trichlorofluoromethane	0.15		1.0	U
75-01-4-----	Vinyl chloride	0.19		1.0	U
1330-20-7-----	Xylene (total)	0.21		3.0	U

FORM I VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMPIRICAL LABS Contract:

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA34379

Lab File ID: V4BFB01 BFB Injection Date: 07/15/08

Instrument ID: VOA4 BFB Injection Time: 2123

GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.9
75	30.0 - 60.0% of mass 95	50.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	67.3
175	5.0 - 9.0% of mass 174	4.9 (7.3)1
176	95.0 - 101.0% of mass 174	64.2 (95.4)1
177	5.0 - 9.0% of mass 176	4.2 (6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	V4STD200PPB	V4STD09	07/15/08	2222
02	V4STD100PPB	V4STD08	07/15/08	2251
03	V4STD50PPB	V4STD07	07/15/08	2321
04	V4BLK0715LCS	V4ICV01	07/15/08	2350
05	V4STD20PPB	V4STD06	07/16/08	0020
06	V4STD10PPB	V4STD05	07/16/08	0049
07	V4STD2PPB	V4STD04	07/16/08	0119
08	V4STD1PPB	V4STD03	07/16/08	0148
09	V4STD0.5PPB	V4STD02	07/16/08	0217
10	V4STD0.25PPB	V4STD01	07/16/08	0247
11				
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22				

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002
 Lab File ID (Standard): V4CCV01 Date Analyzed: 07/30/08
 Instrument ID: VOA4 Time Analyzed: 0736
 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS1 (FLB) AREA #	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	811593	13.29	352460	16.62	335555	18.58
UPPER LIMIT	1623186	13.79	704920	17.12	671110	19.08
LOWER LIMIT	405797	12.79	176230	16.12	167778	18.08
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V4BLK0730LCS	819709	13.29	350461	16.63	347172	18.59
02 V4BLK0730	715054	13.29	295796	16.63	285979	18.59
03 TRIP BLANKS	640402	13.29	280434	16.63	255999	18.58
04 A+D-RW01	639932	13.29	273467	16.62	259546	18.58
05 A+D-RW04	655404	13.29	277223	16.63	250964	18.59
06 A+D-1406-16	672990	13.30	279849	16.63	269630	18.59
07 A+D-RW03	698868	13.29	280029	16.63	280168	18.59
08 A+D-RW02	734162	13.29	306984	16.63	311180	18.59
09 351-2-MW02	815644	13.29	327742	16.63	337378	18.58
10 351-2-MW04	836697	13.29	346640	16.63	337950	18.59
11 351-2-MW01	844590	13.30	339387	16.63	341975	18.59
12 V4BLK0730LCS	737568	13.30	324274	16.63	308121	18.59
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (FLB) = Fluorobenzene
 IS2 (CBZ) = Chlorobenzene-d5
 IS3 (DCB) = 1,4-Dichlorobenzene-d4

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 values outside QC limits with an asterisk.
 * Values outside of QC limits.

FORM 6
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA34379
 Instrument ID: VOA4 Calibration Date(s): 07/15/08 07/16/08
 Column: DB-VRX ID: 0.25 (mm) Calibration Time(s): 2222 0247
 LAB FILE ID: RF0.25: V4STD01 RF0.5: V4STD02 RF1: V4STD03
 RF2: V4STD04 RF10: V4STD05

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF10
Acetone			0.153	0.098	0.105
Acrolein		0.045	0.036	0.039	0.032
Acrylonitrile	0.093	0.104	0.116	0.111	0.099
Benzene	1.198	1.192	1.329	1.197	1.069
Bromobenzene	0.875	1.018	1.015	0.977	0.821
Bromochloromethane	0.194	0.166	0.187	0.172	0.163
Bromodichloromethane	0.447	0.472	0.514	0.444	0.420
Bromoform	0.413	0.440	0.469	0.457	0.461
Bromomethane	0.407	0.485	0.398	0.333	0.284
2-Butanone		0.163	0.126	0.110	0.124
n-Butylbenzene		2.227	2.534	2.201	1.872
sec-Butylbenzene	3.176	2.965	3.206	3.074	2.446
tert-Butylbenzene	2.305	2.000	2.253	1.941	1.663
Carbon disulfide	1.072	0.998	1.249	1.100	0.942
Carbon tetrachloride	0.474	0.369	0.438	0.387	0.350
Chlorobenzene	2.046	1.894	2.096	1.979	1.738
Chloroethane	0.352	0.277	0.363	0.275	0.270
2-Chloroethyl vinyl ether	0.166	0.195	0.177	0.183	0.163
Chloroform	0.672	0.573	0.753	0.642	0.541
1-Chlorohexane		1.182	1.166	0.999	0.823
Chloromethane	0.762	0.612	0.769	0.536	0.496
2-Chlorotoluene	3.241	2.792	3.023	2.551	2.253
4-Chlorotoluene	3.493	3.079	3.492	3.077	2.551
Cyclohexane	0.434	0.400	0.404	0.421	0.340
Dibromochloromethane	0.698	0.683	0.754	0.765	0.741
1,2-Dibromo-3-chloropropane		0.112	0.182	0.129	0.120
1,2-Dibromoethane	0.635	0.691	0.734	0.725	0.618
Dibromomethane	0.256	0.213	0.224	0.202	0.188
1,2-Dichlorobenzene	1.646	1.460	1.752	1.638	1.326
1,3-Dichlorobenzene	2.082	1.745	1.946	1.628	1.507
1,4-Dichlorobenzene	2.138	1.809	1.953	1.913	1.638
Dichlorodifluoromethane	0.444	0.465	0.440	0.435	0.382
1,1-Dichloroethane	0.545	0.650	0.732	0.609	0.570
1,2-Dichloroethane	0.414	0.417	0.559	0.422	0.413
1,1-Dichloroethene	0.288	0.276	0.334	0.291	0.257
cis-1,2-Dichloroethene	0.364	0.362	0.399	0.361	0.304
trans-1,2-Dichloroethene	0.309	0.373	0.395	0.324	0.303

FORM VI VOA

M 7/16/08

RW
7-16-08

FORM 6
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA34379
 Instrument ID: VOA4 Calibration Date(s): 07/15/08 07/16/08
 Column: DB-VRX ID: 0.25 (mm) Calibration Time(s): 2222 0247
 LAB FILE ID: RF0.25: V4STD01 RF0.5: V4STD02 RF1: V4STD03
 RF2: V4STD04 RF10: V4STD05

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF10
1,2-Dichloroethene (total)	0.336	0.367	0.397	0.343	0.303
1,2-Dichloropropane	0.304	0.344	0.407	0.304	0.295
1,3-Dichloropropane	1.033	1.022	1.081	1.199	1.007
2,2-Dichloropropane	0.437	0.353	0.478	0.360	0.331
1,1-Dichloropropene	0.426	0.480	0.533	0.438	0.382
cis-1,3-Dichloropropene	0.359	0.454	0.541	0.529	0.466
trans-1,3-Dichloropropene	0.964	0.924	0.937	0.975	0.914
Ethylbenzene	3.359	3.088	3.548	3.372	3.006
Ethyl methacrylate	0.892	0.699	0.746	0.818	0.764
Hexachlorobutadiene	0.460	0.470	0.554	0.462	0.310
2-Hexanone	0.432	0.442	0.458	0.441	0.399
Iodomethane		0.278	0.414	0.327	0.398
Isopropylbenzene	2.528	2.461	3.237	2.598	2.376
p-Isopropyltoluene		2.621	2.753	2.351	2.009
Methyl acetate		0.207	0.300	0.258	0.247
Methyl cyclohexane		0.328	0.328	0.311	0.276
Methylene chloride		2.022	1.183	0.690	0.419
Methyl methacrylate	0.255	0.259	0.270	0.269	0.228
MTBE	0.604	0.646	0.829	0.794	0.709
4-Methyl-2-pentanone	0.292	0.269	0.273	0.249	0.237
Naphthalene	2.515	2.084	2.098	2.163	1.600
n-Propylbenzene	4.467	3.774	4.372	3.975	3.344
Styrene	2.115	2.224	2.088	1.966	1.897
1,1,1,2-Tetrachloroethane	0.621	0.658	0.679	0.699	0.635
1,1,2,2-Tetrachloroethane	0.899	0.774	0.836	0.902	0.718
Tetrachloroethene	0.817	0.644	0.815	0.710	0.642
Tetrahydrofuran			0.079	0.081	0.064
Toluene	2.056	1.778	1.973	1.817	1.574
1,2,3-Trichlorobenzene	1.024	1.101	0.977	0.930	0.706
1,2,4-Trichlorobenzene		1.053	1.016	0.967	0.725
1,1,1-Trichloroethane	0.484	0.356	0.584	0.432	0.407
1,1,2-Trichloroethane	0.304	0.508	0.508	0.501	0.518
Trichloroethene	0.386	0.326	0.415	0.340	0.293
Trichlorofluoromethane	0.561	0.539	0.578	0.547	0.496
Trichlorotrifluoroethane	0.210	0.275	0.263	0.288	0.251
1,2,3-Trichloropropane		0.255	0.193	0.166	0.214
1,2,4-Trimethylbenzene	2.983	2.687	3.178	2.836	2.418

FORM 6
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA34379

Instrument ID: VOA4 Calibration Date(s): 07/15/08 07/16/08

Column: DB-VRX ID: 0.25 (mm) Calibration Time(s): 2222 0247

LAB FILE ID: RF0.25: V4STD01 RF0.5: V4STD02 RF1: V4STD03
RF2: V4STD04 RF10: V4STD05

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF10
=====	=====	=====	=====	=====	=====
1,3,5-Trimethylbenzene	2.756	2.583	3.042	2.686	2.259
Vinyl acetate		0.529	0.603	0.645	0.579
Vinyl chloride	0.445	0.487	0.552	0.475	0.408
m,p-Xylene	2.678	2.629	2.982	2.570	2.368
Xylene (total)	2.737	2.769	2.912	2.608	2.505
=====	=====	=====	=====	=====	=====
Dibromofluoromethane	0.320	0.328	0.312	0.306	0.299
1,2-Dichloroethane-d4	0.064	0.062	0.066	0.064	0.058
Toluene-d8	1.986	2.057	2.024	2.127	2.143
Bromofluorobenzene	0.932	0.939	0.912	0.921	0.942

FORM 6
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA34379

Instrument ID: VOA4 Calibration Date(s): 07/15/08 07/16/08

Column: DB-VRX ID: 0.25 (mm) Calibration Time(s): 2222 0247

LAB FILE ID: RF20: V4STD06 RF50: V4STD07 RF100: V4STD08
RF200: V4STD09

COMPOUND	RF20	RF50	RF100	RF200
Acetone	0.109	0.118	0.125	0.134
Acrolein	0.030	0.032	0.031	0.034
Acrylonitrile	0.112	0.118	0.123	0.120
Benzene	1.176	1.204	1.192	1.136
Bromobenzene	0.911	0.880	0.899	0.859
Bromochloromethane	0.171	0.188	0.184	0.177
Bromodichloromethane	0.448	0.446	0.460	0.439
Bromoform	0.508	0.507	0.502	0.478
Bromomethane	0.320	0.352	0.363	0.342
2-Butanone	0.135	0.142	0.151	0.153
n-Butylbenzene	1.930	2.028	2.011	1.960
sec-Butylbenzene	2.525	2.619	2.639	2.545
tert-Butylbenzene	1.795	1.828	1.893	1.798
Carbon disulfide	0.950	1.045	1.070	1.021
Carbon tetrachloride	0.354	0.392	0.399	0.391
Chlorobenzene	1.788	1.761	1.619	1.438
Chloroethane	0.265	0.300	0.299	0.280
2-Chloroethyl vinyl ether	0.179	0.191	0.193	0.186
Chloroform	0.572	0.592	0.592	0.570
1-Chlorohexane	0.809	0.841	0.782	0.704
Chloromethane	0.506	0.515	0.487	0.478
2-Chlorotoluene	2.460	2.436	2.380	2.380
4-Chlorotoluene	2.672	2.686	2.653	2.612
Cyclohexane	0.352	0.418	0.432	0.417
Dibromochloromethane	0.792	0.765	0.727	0.681
1,2-Dibromo-3-chloropropane	0.154	0.160	0.168	0.186
1,2-Dibromoethane	0.670	0.650	0.615	0.585
Dibromomethane	0.209	0.220	0.223	0.217
1,2-Dichlorobenzene	1.413	1.441	1.416	1.400
1,3-Dichlorobenzene	1.487	1.504	1.562	1.449
1,4-Dichlorobenzene	1.688	1.508	1.550	1.516
Dichlorodifluoromethane	0.364	0.448	0.448	0.439
1,1-Dichloroethane	0.588	0.639	0.640	0.601
1,2-Dichloroethane	0.416	0.437	0.446	0.430
1,1-Dichloroethene	0.261	0.297	0.307	0.289
cis-1,2-Dichloroethene	0.338	0.347	0.346	0.338
trans-1,2-Dichloroethene	0.311	0.330	0.333	0.319

FORM VI VOA

FORM 6
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA34379

Instrument ID: VOA4 Calibration Date(s): 07/15/08 07/16/08

Column: DB-VRX ID: 0.25 (mm) Calibration Time(s): 2222 0247

LAB FILE ID: RF20: V4STD06 RF50: V4STD07 RF100: V4STD08
RF200: V4STD09

COMPOUND	RF20	RF50	RF100	RF200
1,2-Dichloroethene (total)	0.324	0.338	0.340	0.329
1,2-Dichloropropane	0.311	0.335	0.330	0.322
1,3-Dichloropropane	1.085	1.023	0.946	0.892
2,2-Dichloropropane	0.349	0.382	0.394	0.395
1,1-Dichloropropene	0.388	0.422	0.426	0.404
cis-1,3-Dichloropropene	0.481	0.508	0.504	0.492
trans-1,3-Dichloropropene	0.971	0.955	0.897	0.833
Ethylbenzene	3.026	2.992	2.758	2.431
Ethyl methacrylate	0.864	0.841	0.800	0.759
Hexachlorobutadiene	0.320	0.335	0.357	0.329
2-Hexanone	0.430	0.420	0.415	0.402
Iodomethane	0.455	0.535	0.554	0.531
Isopropylbenzene	2.343	2.374	2.216	1.988
p-Isopropyltoluene	2.064	2.150	2.202	2.061
Methyl acetate	0.251	0.263	0.281	0.281
Methyl cyclohexane	0.261	0.314	0.325	0.310
Methylene chloride	0.422	0.413	0.412	0.386
Methyl methacrylate	0.242	0.263	0.269	0.281
MTBE	0.788	0.851	0.858	0.835
4-Methyl-2-pentanone	0.263	0.278	0.282	0.281
Naphthalene	1.809	1.815	2.029	2.016
n-Propylbenzene	3.545	3.555	3.443	3.313
Styrene	2.032	2.011	1.831	1.666
1,1,1,2-Tetrachloroethane	0.681	0.662	0.619	0.563
1,1,2,2-Tetrachloroethane	0.752	0.785	0.782	0.789
Tetrachloroethene	0.629	0.651	0.599	0.558
Tetrahydrofuran	0.072	0.078	0.080	0.079
Toluene	1.631	1.637	1.471	1.345
1,2,3-Trichlorobenzene	0.748	0.779	0.840	0.837
1,2,4-Trichlorobenzene	0.849	0.855	0.924	0.915
1,1,1-Trichloroethane	0.423	0.457	0.455	0.444
1,1,2-Trichloroethane	0.513	0.509	0.482	0.443
Trichloroethene	0.301	0.323	0.321	0.308
Trichlorofluoromethane	0.476	0.545	0.560	0.549
Trichlorotrifluoroethane	0.228	0.282	0.286	0.278
1,2,3-Trichloropropane	0.208	0.201	0.194	0.190
1,2,4-Trimethylbenzene	2.547	2.589	2.608	2.456

FORM VI VOA

FORM 6
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA34379

Instrument ID: VOA4 Calibration Date(s): 07/15/08 07/16/08

Column: DB-VRX ID: 0.25 (mm) Calibration Time(s): 2222 0247

LAB FILE ID: RF20: V4STD06 RF50: V4STD07 RF100: V4STD08
RF200: V4STD09

COMPOUND	RF20	RF50	RF100	RF200
=====	=====	=====	=====	=====
1,3,5-Trimethylbenzene	2.441	2.382	2.417	2.312
Vinyl acetate	0.630	0.721	0.740	0.708
Vinyl chloride	0.430	0.458	0.454	0.408
m,p-Xylene	2.401	2.370	2.106	1.783
Xylene (total)	2.464	2.420	2.201	1.973
=====	=====	=====	=====	=====
Dibromofluoromethane	0.305	0.306	0.312	0.312
1,2-Dichloroethane-d4	0.061	0.063	0.064	0.060
Toluene-d8	2.095	1.946	1.865	1.815
Bromofluorobenzene	0.955	0.892	0.837	0.819

FORM 6
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA34379

Instrument ID: VOA4 Calibration Date(s): 07/15/08 07/16/08

Column: DB-VRX ID: 0.25 (mm) Calibration Time(s): 2222 0247

COMPOUND	CURVE	COEFFICIENTS		%RSD
		A0	A1	OR R^2
Acetone	LINR	0.00000000	0.13119072	0.998
Acrolein	LINR	0.00000000	3.332e-002	0.998
Acrylonitrile	AVRG		0.11099945	9.1
Benzene	AVRG		1.18803682	5.7
Bromobenzene	AVRG		0.91723641	7.6
Bromochloromethane	AVRG		0.17824412	6.1
Bromodichloromethane	AVRG		0.45437649	5.8
Bromoform	AVRG		0.47069615	6.8
Bromomethane	LINR	0.00000000	0.34624661	0.999
2-Butanone	AVRG		0.13812948	12.6
n-Butylbenzene	AVRG		2.09540974	10.3
sec-Butylbenzene	AVRG		2.79933911	10.8
tert-Butylbenzene	AVRG		1.94164730	11.0
Carbon disulfide	AVRG		1.04969076	8.8
Carbon tetrachloride	AVRG		0.39498646	10.1
Chlorobenzene	AVRG		1.81773370	11.6
Chloroethane	AVRG		0.29785496	12.0
2-Chloroethyl vinyl ether	AVRG		0.18154198	6.3
Chloroform	AVRG		0.61182192	10.8
1-Chlorohexane	LINR	0.00000000	0.72897970	0.995
Chloromethane	LINR	0.00000000	0.48186451	1.000
2-Chlorotoluene	AVRG		2.61288443	12.8
4-Chlorotoluene	AVRG		2.92407537	12.8
Cyclohexane	AVRG		0.40216874	8.3
Dibromochloromethane	AVRG		0.73405326	5.4
1,2-Dibromo-3-chloropropane	LINR	0.00000000	0.18192321	0.996
1,2-Dibromoethane	AVRG		0.65814573	7.8
Dibromomethane	AVRG		0.21677268	8.6
1,2-Dichlorobenzene	AVRG		1.49904259	9.6
1,3-Dichlorobenzene	AVRG		1.65668579	13.5
1,4-Dichlorobenzene	AVRG		1.74585179	12.7
Dichlorodifluoromethane	AVRG		0.42966270	7.8
1,1-Dichloroethane	AVRG		0.61932484	8.8
1,2-Dichloroethane	AVRG		0.43941740	10.6
1,1-Dichloroethene	AVRG		0.28894246	8.1
cis-1,2-Dichloroethene	AVRG		0.35106237	7.4
trans-1,2-Dichloroethene	AVRG		0.33292729	9.3

FORM 6
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA34379
 Instrument ID: VOA4 Calibration Date(s): 07/15/08 07/16/08
 Column: DB-VRX ID: 0.25 (mm) Calibration Time(s): 2222 0247

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R^2
		A0	A1	
1,2-Dichloroethene (total)	AVRG		0.34199483	7.8
1,2-Dichloropropane	AVRG		0.32807892	10.3
1,3-Dichloropropane	AVRG		1.03224837	8.4
2,2-Dichloropropane	AVRG		0.38660758	12.1
1,1-Dichloropropene	AVRG		0.43313408	11.0
cis-1,3-Dichloropropene	AVRG		0.48150154	11.2
trans-1,3-Dichloropropene	AVRG		0.93009433	4.9
Ethylbenzene	AVRG		3.06434516	11.1
Ethyl methacrylate	AVRG		0.79817579	7.8
Hexachlorobutadiene	LINR	0.00000000	0.33481727	0.998
2-Hexanone	AVRG		0.42649573	4.5
Iodomethane	LINR	0.00000000	0.53517234	0.999
Isopropylbenzene	AVRG		2.45792053	13.9
p-Isopropyltoluene	AVRG		2.27638551	12.2
Methyl acetate	AVRG		0.26100376	10.9
Methyl cyclohexane	AVRG		0.30668612	8.2
Methylene chloride	LINR	0.00000000	0.39287735	0.998
Methyl methacrylate	AVRG		0.25966907	6.2
MTBE	AVRG		0.76815210	12.1
4-Methyl-2-pentanone	AVRG		0.26935370	6.5
Naphthalene	AVRG		2.01453012	12.9
n-Propylbenzene	AVRG		3.75437162	11.5
Styrene	AVRG		1.98107346	8.4
1,1,1,2-Tetrachloroethane	AVRG		0.64645417	6.4
1,1,2,2-Tetrachloroethane	AVRG		0.80422641	7.8
Tetrachloroethene	AVRG		0.67387616	13.4
Tetrahydrofuran	AVRG		7.61e-002	8.0
Toluene	AVRG		1.69798784	13.6
1,2,3-Trichlorobenzene	LINR	0.00000000	0.83460597	0.999
1,2,4-Trichlorobenzene	AVRG		0.91313189	11.4
1,1,1-Trichloroethane	AVRG		0.44914093	13.8
1,1,2-Trichloroethane	AVRG		0.47636355	14.4
Trichloroethene	AVRG		0.33484198	12.1
Trichlorofluoromethane	AVRG		0.53902140	6.0
Trichlorotrifluoroethane	AVRG		0.26243266	10.4
1,2,3-Trichloropropane	AVRG		0.20269736	12.5
1,2,4-Trimethylbenzene	AVRG		2.70022024	9.4

FORM VI VOA

FORM 6
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA34379

Instrument ID: VOA4 Calibration Date(s): 07/15/08 07/16/08

Column: DB-VRX ID: 0.25 (mm) Calibration Time(s): 2222 0247

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R ²
		A0	A1	
1,3,5-Trimethylbenzene	AVRG		2.54190535	9.9
Vinyl acetate	AVRG		0.64445693	11.5
Vinyl chloride	AVRG		0.45755750	9.8
m,p-Xylene	AVRG		2.43213126	14.2
Xylene (total)	AVRG		2.50994529	11.6
Dibromofluoromethane	AVRG		0.31136560	2.8
1,2-Dichloroethane-d4	AVRG		6.243e-002	3.7
Toluene-d8	AVRG		2.00653229	5.7
Bromofluorobenzene	AVRG		0.90547517	5.2

VOLATILE INITIAL CALIBRATION VERIFICATION

Lab Name: EMPIRICAL LABS Contract:
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA30743
 Instrument ID: VOA4 Calibration Date: 07/15/08 Time: 2350
 Lab File ID: V4ICV01 Init. Calib. Date(s): 07/15/08 07/16/08
 Heated Purge: (Y/N) N Init. Calib. Times: 2222 0247
 GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND	RRF	RRF50	CURVE AMOUNT	CCAL AMOUNT	MIN RRF	CURVE	%D	MAX %D
Acetone	0.120	0.120	100.0	91.68		LINR	-8.3	25.0
Acrolein	0.035	0.038	250.0	286.4		LINR	14.5	25.0
Acrylonitrile	0.111	0.121	250.0	273.4		AVRG	9.4	25.0
Benzene	1.188	1.090	50.00	45.88		AVRG	-8.2	25.0
Bromobenzene	0.917	0.838	50.00	45.70		AVRG	-8.6	25.0
Bromochloromethane	0.178	0.170	50.00	47.82		AVRG	-4.4	25.0
Bromodichloromethane	0.454	0.440	50.00	48.37		AVRG	-3.2	25.0
Bromoform	0.470	0.468	50.00	49.69	0.100	AVRG	-0.6	25.0
Bromomethane	0.365	0.339	50.00	48.90		LINR	-2.2	25.0
2-Butanone	0.138	0.148	100.0	106.9		AVRG	6.9	25.0
n-Butylbenzene	2.095	1.953	50.00	46.60		AVRG	-6.8	25.0
sec-Butylbenzene	2.799	2.507	50.00	44.78		AVRG	-10.4	25.0
tert-Butylbenzene	1.942	1.812	50.00	46.66		AVRG	-6.7	25.0
Carbon disulfide	1.050	1.169	50.00	55.67		AVRG	11.3	25.0
Carbon tetrachloride	0.395	0.368	50.00	46.66		AVRG	-6.7	25.0
Chlorobenzene	1.818	1.691	50.00	46.53	0.300	AVRG	-6.9	25.0
Chloroethane	0.298	0.293	50.00	49.25		AVRG	-1.5	25.0
2-Chloroethyl vinyl ether	0.181	0.203	100.0	111.6		AVRG	11.6	25.0
Chloroform	0.612	0.551	50.00	45.04		AVRG	-9.9	25.0
1-Chlorohexane	0.913	0.822	50.00	56.38		LINR	12.8	25.0
Chloromethane	0.573	0.535	50.00	55.52	0.100	LINR	11.0	25.0
2-Chlorotoluene	2.613	2.297	50.00	43.95		AVRG	-12.1	25.0
4-Chlorotoluene	2.924	2.349	50.00	40.17		AVRG	-19.7	25.0
Cyclohexane	0.402	0.430	50.00	53.42		AVRG	6.8	25.0
Dibromochloromethane	0.734	0.759	50.00	51.73		AVRG	3.4	25.0
1,2-Dibromo-3-chloropropane	0.151	0.148	50.00	40.58		LINR	-18.8	25.0
1,2-Dibromoethane	0.658	0.610	50.00	46.33		AVRG	-7.3	25.0
Dibromomethane	0.217	0.209	50.00	48.24		AVRG	-3.5	25.0
1,2-Dichlorobenzene	1.499	1.367	50.00	45.60		AVRG	-8.8	25.0
1,3-Dichlorobenzene	1.657	1.398	50.00	42.20		AVRG	-15.6	25.0
1,4-Dichlorobenzene	1.746	1.513	50.00	43.33		AVRG	-13.3	25.0
Dichlorodifluoromethane	0.429	0.463	50.00	53.87		AVRG	7.7	25.0
1,1-Dichloroethane	0.619	0.599	50.00	48.34	0.100	AVRG	-3.3	25.0
1,2-Dichloroethane	0.439	0.421	50.00	47.92		AVRG	-4.2	25.0
1,1-Dichloroethene	0.289	0.287	50.00	49.64		AVRG	-0.7	25.0
cis-1,2-Dichloroethene	0.351	0.328	50.00	46.66		AVRG	-6.7	25.0
trans-1,2-Dichloroethene	0.333	0.312	50.00	46.95		AVRG	-6.1	25.0

VOLATILE INITIAL CALIBRATION VERIFICATION

Lab Name: EMPIRICAL LABS Contract:
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA30743
 Instrument ID: VOA4 Calibration Date: 07/15/08 Time: 2350
 Lab File ID: V4ICV01 Init. Calib. Date(s): 07/15/08 07/16/08
 Heated Purge: (Y/N) N Init. Calib. Times: 2222 0247
 GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND	RRF	RRF50	CURVE AMOUNT	CCAL AMOUNT	MIN RRF	CURVE	%D	MAX %D
1,2-Dichloroethene (total)	0.342	0.320	100.0	93.60		AVRG	-6.4	25.0
1,2-Dichloropropane	0.328	0.306	50.00	46.66		AVRG	-6.7	25.0
1,3-Dichloropropane	1.032	0.903	50.00	43.74		AVRG	-12.5	25.0
2,2-Dichloropropane	0.386	0.360	50.00	46.53		AVRG	-6.9	25.0
1,1-Dichloropropene	0.433	0.394	50.00	45.47		AVRG	-9.0	25.0
cis-1,3-Dichloropropene	0.482	0.492	50.00	51.12		AVRG	2.2	25.0
trans-1,3-Dichloropropene	0.930	0.968	50.00	52.03		AVRG	4.1	25.0
Ethylbenzene	3.064	2.833	50.00	46.23		AVRG	-7.5	25.0
Ethyl methacrylate	0.798	0.789	50.00	49.40		AVRG	-1.2	25.0
Hexachlorobutadiene	0.400	0.295	50.00	44.06		LINR	-11.9	25.0
2-Hexanone	0.426	0.448	100.0	105.0		AVRG	5.0	25.0
Iodomethane	0.436	0.545	50.00	50.90		LINR	1.8	25.0
Isopropylbenzene	2.458	2.512	50.00	51.10		AVRG	2.2	25.0
p-Isopropyltoluene	2.276	2.177	50.00	47.82		AVRG	-4.3	25.0
Methyl acetate	0.261	0.278	50.00	53.32		AVRG	6.6	25.0
Methyl cyclohexane	0.307	0.319	50.00	52.03		AVRG	4.0	25.0
Methylene chloride	0.743	0.396	50.00	50.34		LINR	0.7	25.0
Methyl methacrylate	0.260	0.269	50.00	51.86		AVRG	3.7	25.0
MTBE	0.768	0.813	50.00	52.95		AVRG	5.9	25.0
4-Methyl-2-pentanone	0.269	0.279	100.0	103.5		AVRG	3.5	25.0
Naphthalene	2.014	1.748	50.00	43.39		AVRG	-13.2	25.0
n-Propylbenzene	3.754	3.546	50.00	47.23		AVRG	-5.5	25.0
Styrene	1.981	1.920	50.00	48.47		AVRG	-3.0	25.0
1,1,1,2-Tetrachloroethane	0.646	0.602	50.00	46.60		AVRG	-6.8	25.0
1,1,2,2-Tetrachloroethane	0.804	0.761	50.00	47.31	0.300	AVRG	-5.4	25.0
Tetrachloroethene	0.674	0.608	50.00	45.08		AVRG	-9.8	25.0
Tetrahydrofuran	0.076	0.077	50.00	50.42		AVRG	0.8	25.0
Toluene	1.698	1.543	50.00	45.45		AVRG	-9.1	25.0
1,2,3-Trichlorobenzene	0.882	0.728	50.00	43.61		LINR	-12.8	25.0
1,2,4-Trichlorobenzene	0.913	0.808	50.00	44.22		AVRG	-11.5	25.0
1,1,1-Trichloroethane	0.449	0.414	50.00	46.14		AVRG	-7.7	25.0
1,1,2-Trichloroethane	0.476	0.478	50.00	50.14		AVRG	0.3	25.0
Trichloroethene	0.335	0.299	50.00	44.64		AVRG	-10.7	25.0
Trichlorofluoromethane	0.539	0.539	50.00	50.04		AVRG	0.1	25.0
Trichlorotrifluoroethane	0.262	0.303	50.00	57.81		AVRG	15.6	25.0
1,2,3-Trichloropropane	0.203	0.191	50.00	47.15		AVRG	-5.7	25.0
1,2,4-Trimethylbenzene	2.700	2.485	50.00	46.01		AVRG	-8.0	25.0

VOLATILE INITIAL CALIBRATION VERIFICATION

Lab Name: EMPIRICAL LABS Contract:
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: SDGA30743
 Instrument ID: VOA4 Calibration Date: 07/15/08 Time: 2350
 Lab File ID: V4ICV01 Init. Calib. Date(s): 07/15/08 07/16/08
 Heated Purge: (Y/N) N Init. Calib. Times: 2222 0247
 GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND	RRF	RRF50	CURVE AMOUNT	CCAL AMOUNT	MIN RRF	CURVE	%D	MAX %D
1,3,5-Trimethylbenzene	2.542	2.395	50.00	47.10		AVRG	-5.8	25.0
Vinyl acetate	0.644	0.728	100.0	113.0		AVRG	13.0	25.0
Vinyl chloride	0.457	0.450	50.00	49.15		AVRG	-1.7	25.0
Xylene(total)	2.510	2.397	150.0	138.5		AVRG	-4.5	25.0
Dibromofluoromethane	0.311	0.312	30.00	30.02		AVRG	0.1	25.0
1,2-Dichloroethane-d4	0.062	0.061	30.00	29.31		AVRG	-2.3	25.0
Toluene-d8	2.006	2.044	30.00	30.56		AVRG	1.9	25.0
Bromofluorobenzene	0.905	0.921	30.00	30.52		AVRG	1.7	25.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002
 Instrument ID: VOA4 Calibration Date: 07/30/08 Time: 0736
 Lab File ID: V4CCV01 Init. Calib. Date(s): 03/05/08 07/16/08
 Heated Purge: (Y/N) N Init. Calib. Times: 0908 0247
 GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND	RRF	RRF50	CURVE AMOUNT	CCAL AMOUNT	MIN RRF	CURVE	%D	MAX %D
Benzene	1.188	1.096	50.00	46.12		AVRG	-7.8	
Bromodichloromethane	0.454	0.428	50.00	47.05		AVRG	-5.9	
Bromoform	0.470	0.523	50.00	55.59	0.100	AVRG	11.2	
Bromomethane	0.365	0.311	50.00	44.93		LINR	-10.1	
Carbon tetrachloride	0.395	0.379	50.00	48.00		AVRG	-4.0	
Chlorobenzene	1.818	1.814	50.00	49.91	0.300	AVRG	-0.2	
Chloroethane	0.298	0.281	50.00	47.18		AVRG	-5.6	
2-Chloroethyl vinyl ether	0.181	0.097	100.0	53.32		AVRG	-46.7	
Chloroform	0.612	0.547	50.00	44.68		AVRG	-10.6	20.0
Chloromethane	0.573	0.519	50.00	53.90	0.100	LINR	7.8	
Dibromochloromethane	0.734	0.805	50.00	54.85		AVRG	9.7	
1,2-Dichlorobenzene	1.499	1.427	50.00	47.59		AVRG	-4.8	
1,3-Dichlorobenzene	1.657	1.692	50.00	51.06		AVRG	2.1	
1,4-Dichlorobenzene	1.746	1.646	50.00	47.14		AVRG	-5.7	
Dichlorodifluoromethane	0.429	0.480	50.00	55.84		AVRG	11.7	
1,1-Dichloroethane	0.619	0.611	50.00	49.35	0.100	AVRG	-1.3	
1,2-Dichloroethane	0.439	0.426	50.00	48.51		AVRG	-3.0	
1,1-Dichloroethene	0.289	0.299	50.00	51.72		AVRG	3.4	20.0
cis-1,2-Dichloroethene	0.351	0.338	50.00	48.10		AVRG	-3.8	
trans-1,2-Dichloroethene	0.333	0.319	50.00	47.89		AVRG	-4.2	
1,2-Dichloropropane	0.328	0.312	50.00	47.58		AVRG	-4.8	20.0
cis-1,3-Dichloropropene	0.482	0.491	50.00	51.00		AVRG	2.0	
trans-1,3-Dichloropropene	0.930	0.978	50.00	52.58		AVRG	5.2	
Ethylbenzene	3.064	3.049	50.00	49.74		AVRG	-0.5	20.0
Methylene chloride	0.743	0.395	50.00	50.27		LINR	0.5	
Methyl tert-butyl ether	0.768	0.805	50.00	52.39		AVRG	4.8	
1,1,2,2-Tetrachloroethane	0.804	0.770	50.00	47.85	0.300	AVRG	-4.3	
Tetrachloroethene	0.674	0.668	50.00	49.60		AVRG	-0.8	
Toluene	1.698	1.632	50.00	48.07		AVRG	-3.8	20.0
1,2,4-Trichlorobenzene	0.913	0.790	50.00	43.24		AVRG	-13.5	
1,1,1-Trichloroethane	0.449	0.432	50.00	48.15		AVRG	-3.7	
1,1,2-Trichloroethane	0.476	0.503	50.00	52.84		AVRG	5.7	
Trichloroethene	0.335	0.312	50.00	46.53		AVRG	-6.9	
Trichlorofluoromethane	0.539	0.544	50.00	50.44		AVRG	0.9	
Vinyl chloride	0.457	0.482	50.00	52.64		AVRG	5.3	20.0
Xylene(total)	2.510	2.430	150.0	143.8		AVRG	-3.2	

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002
 Instrument ID: VOA4 Calibration Date: 07/30/08 Time: 0736
 Lab File ID: V4CCV01 Init. Calib. Date(s): 03/05/08 07/16/08
 Heated Purge: (Y/N) N Init. Calib. Times: 0908 0247
 GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND	\overline{RRF}	RRF50	CURVE AMOUNT	CCAL AMOUNT	MIN RRF	CURVE	%D	MAX %D
Dibromofluoromethane	0.311	0.318	30.00	30.67		AVRG	2.2	
1,2-Dichloroethane-d4	0.062	0.064	30.00	30.52		AVRG	1.7	
Toluene-d8	2.006	2.106	30.00	31.48		AVRG	4.9	
Bromofluorobenzene	0.905	0.934	30.00	30.94		AVRG	3.2	

Sequence Name: C:\HPCHEM\1\SEQUENCE\071508V4.S
 Comment: 8260b
 Operator: ADM
 Data Path: C:\HPCHEM\1\DATA\071408V4\
 Pre-Seq Cmd:
 Post-Seq Cmd:

8393

M 7/15/08

Method Sections To Run On A Barcode Mismatch
 (X) Full Method (X) Inject Anyway
 () Reprocessing Only () Don't Inject

Line Type	Vial	DataFile	Method	Sample Name
1 BFB	50	V4BFB01	V4BFB	V4BFB25NG; ; ; ; ; 21:23, 7/15
2 Calibration	1	V4STD09A	VWATER4	V4STD200ppb; ; ; ; ;
3 Calibration	2	V4STD09	VWATER4	V4STD200ppb; ; ; ; ;
4 Calibration	3	V4STD08	VWATER4	V4STD100ppb; ; ; ; ;
5 Calibration	4	V4STD07	VWATER4	V4STD50ppb; ; ; ; ;
6 Spike	5	V4ICV01	VWATER4	V4BLK0715LCS; ; ; ; ;
7 Calibration	6	V4STD06	VWATER4	V4STD20ppb; ; ; ; ;
8 Calibration	7	V4STD05	VWATER4	V4STD10ppb; ; ; ; ;
9 Calibration	8	V4STD04	VWATER4	V4STD2ppb; ; ; ; ;
10 Calibration	9	V4STD03	VWATER4	V4STD1ppb; ; ; ; ;
11 Calibration	10	V4STD02	VWATER4	V4STD0.5ppb; ; ; ; ;
12 Calibration	11	V4STD01	VWATER4	V4STD0.25ppb; ; ; ; ;
13 Spike	12	V4LCS01	VWATER4	V4BLK0715LCS; ; ; ; ;
14 Blank	100	BLANK01	VWATER4	V4BLK; ; ; ; ;
15 Blank	100	V4BLK01	VWATER4	V4BLK0715; ; ; ; ;
16 Sample	13	0704326	VWATER4	0807043-26; ; ; ; ; vial 14:42, 7/16
17 BFB	100	V4BFB	V4BFB	V4BFB50NG; ; ; ; ;

KALH20

Sequence Name: C:\HPCHEM\1\SEQUENCE\071508V4.S
 Comment: 8260b
 Operator: ADM
 Data Path: C:\HPCHEM\1\DATA\071408V4\
 Pre-Seq Cmd:
 Post-Seq Cmd:

8394

Method Sections To Run On A Barcode Mismatch
 (X) Full Method (X) Inject Anyway
 () Reprocessing Only () Don't Inject

Line	Sample Name/Misc Info
1	Type: BFB Vial: 50 Meth: V4BFB.M Data: V4BFB01.D Area% Report :per Method Quant Report :per Method CR Database :per Method V4BFB25NG;;;; ;3;;;;all.sub;#5473 Barcode: Samp Amt: 0 Multiplr: 1 Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method
2	Type: Calibration Vial: 1 Meth: VWATER4.M Data: V4STD09A.D Area% Report :per Method Quant Report :per Method CR Database :per Method V4STD200ppb;;;; ;1;;;9;gm-all.sub;#5494,5513 Barcode: LvlId: UpdRF:No Upd UpdRT:No Upd UpdQI:No Upd Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method
3	Type: Calibration Vial: 2 Meth: VWATER4.M Data: V4STD09.D Area% Report :per Method Quant Report :per Method CR Database :per Method V4STD200ppb;;;; ;1;;;9;gm-all.sub;#5494,5513 Barcode: LvlId: UpdRF:No Upd UpdRT:No Upd UpdQI:No Upd Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method
4	Type: Calibration Vial: 3 Meth: VWATER4.M Data: V4STD08.D Area% Report :per Method Quant Report :per Method CR Database :per Method V4STD100ppb;;;; ;1;;;8;gm-all.sub;#5494,5513 Barcode: LvlId: UpdRF:No Upd UpdRT:No Upd UpdQI:No Upd Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method
5	Type: Calibration Vial: 4 Meth: VWATER4.M Data: V4STD07.D Area% Report :per Method Quant Report :per Method CR Database :per Method V4STD50ppb;;;; ;1;;;7;gm-all.sub;#5494,5513 Barcode: LvlId: UpdRF:No Upd UpdRT:No Upd UpdQI:No Upd Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method
6	Type: Spike Vial: 5 Meth: VWATER4.M Data: V4ICV01.D Area% Report :per Method Quant Report :per Method CR Database :per Method V4BLK0715LCS;;;; ;3;LCS;;;gm-all.sub;#5494,5514 Barcode: Samp Amt: 0 Multiplr: 1 Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method
7	Type: Calibration Vial: 6 Meth: VWATER4.M Data: V4STD06.D Area% Report :per Method Quant Report :per Method CR Database :per Method V4STD20ppb;;;; ;1;;;6;gm-all.sub;#5494,5513 Barcode: LvlId: UpdRF:No Upd UpdRT:No Upd UpdQI:No Upd Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method

8395

8 Type: Calibration V4STD10ppb;;;;;
 Vial: 7 ;1;;;5;gm-all.sub;#5494,5513
 Meth: VWATER4.M Barcode:
 Data: V4STD05.D LvlId: UpdRF:No Upd UpdRT:No Upd UpdQI:No Upd
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

9 Type: Calibration V4STD2ppb;;;;;
 Vial: 8 ;1;;;4;gm-all.sub;#5494,5513
 Meth: VWATER4.M Barcode:
 Data: V4STD04.D LvlId: UpdRF:No Upd UpdRT:No Upd UpdQI:No Upd
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

10 Type: Calibration V4STD1ppb;;;;;
 Vial: 9 ;1;;;3;gm-all.sub;#5494,5513
 Meth: VWATER4.M Barcode:
 Data: V4STD03.D LvlId: UpdRF:No Upd UpdRT:No Upd UpdQI:No Upd
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

11 Type: Calibration V4STD0.5ppb;;;;;
 Vial: 10 ;1;;;2;gm-all.sub;#5494,5513
 Meth: VWATER4.M Barcode:
 Data: V4STD02.D LvlId: UpdRF:No Upd UpdRT:No Upd UpdQI:No Upd
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

12 Type: Calibration V4STD0.25ppb;;;;;
 Vial: 11 ;1;;;1;gm-all.sub;#5494,5513
 Meth: VWATER4.M Barcode:
 Data: V4STD01.D LvlId: UpdRF:No Upd UpdRT:No Upd UpdQI:No Upd
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

13 Type: Spike V4BLK0715LCS;;;;;
 Vial: 12 ;3;LCS;;;gm-all.sub;#5494,5514
 Meth: VWATER4.M Barcode:
 Data: V4LCS01.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

14 Type: Blank V4BLK;;;;;
 Vial: 100 ;3;BLANK;;;gm-all.sub;#5494
 Meth: VWATER4.M Barcode:
 Data: BLANK01.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

15 Type: Blank V4BLK0715;;;;;
 Vial: 100 ;3;BLANK;;;gm-all.sub;#5494
 Meth: VWATER4.M Barcode:
 Data: V4BLK01.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

16 Type: Sample 0807043-26;;;;; vial 1
 Vial: 13 sha.v07043;0;;;gm-all.sub;#5494
 Meth: VWATER4.M Barcode:
 Data: 0704326.D Samp Amt: 0 Multiplr: 1

PHC2.0

Area Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

17 Type: BFB V4BFB50NG; ; ; ; ;
Vial: 100 ; 3; ; ; ; all.sub; #5473
Meth: V4BFB.M Barcode:
Data: V4BFB.D Samp Amt: 0 Multiplr: 1
Area Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

8396

Sequence Name: C:\HPCHEM\1\SEQUENCE\073008V4.S
 Comment: 8260b
 Operator: ADM
 Data Path: C:\HPCHEM\1\DATA\073008V4\
 Pre-Seq Cmd:
 Post-Seq Cmd:

8938

Method Sections To Run On A Barcode Mismatch
 (X) Full Method (X) Inject Anyway
 () Reprocessing Only () Don't Inject

7/30/18

Line Type	Vial	DataFile	Method	Sample Name
1 BFB	50	V4BFB01	V4BFB	V4BFB50NG;;;;; 7:06, 7/30
2 DailyCal	1	V4CCV01	VWATER4	V4STD50ppb;;;;;
3 DailyCal	2	V4A9CCV	VWATER4	V4ap9ccv;;;;;
4 Spike	3	V4LCS01	VWATER4	V4BLK0730LCS;;;;; w/ap9
5 Spike	4	V4RL01	VWATER4	V4rl1ppb;;;;;
6 Blank	100	BLANK01	VWATER4	V4BLK;;;;;
7 Blank	100	V4BLK01	VWATER4	V4BLK0730;;;;;
8 Sample	5	0721809	VWATER4	0807218-09;;;;; ab/vial 1
9 Sample	6	0721810	VWATER4	0807218-10;;;;; eb/vial 1
10 Sample	7	0721811	VWATER4	0807218-11;;;;; tb/vial 1
11 Sample	8	0721909	VWATER4	0807219-09;;;;; tb/vial 1
12 Sample	9	0721901	VWATER4	0807219-01;;;;; vial 1
13 Sample	10	0721902	VWATER4	0807219-02;;;;; vial 1
14 Sample	11	0721903	VWATER4	0807219-03;;;;; vial 1
15 Sample	12	0721904	VWATER4	0807219-04;;;;; vial 1
16 Sample	13	0721905	VWATER4	0807219-05;;;;; vial 1
17 Sample	14	0721906	VWATER4	0807219-06;;;;; vial 1
18 Sample	15	0721907	VWATER4	0807219-07;;;;; vial 1
19 Sample	16	0721908	VWATER4	0807219-08;;;;; vial 1
20 Sample	17	0721804	VWATER4	0807218-04;;;;; vial 1
21 Sample	18	0721808D	VWATER4	0807218-08;;;;; 25x/vial 1 ✓
22 Sample	19	721808D1	VWATER4	0807218-08;;;;; 50x/vial 1 INK
23 Sample	20	0721802D	VWATER4	0807218-02;;;;; 50x/vial 1 -RR 2570
24 Sample	21	0721109D	VWATER4	0807210-09;;;;; 200x/vial #2 -RR 17
25 Spike	22	V4LCSD01	VWATER4	V4BLK0730LCSD;;;;; w/ap9 18:53, 7/30
26 BFB	50	V4BFB01E	V4BFB	V4BFB50NG;;;;; 4:14, 7/31
27 Sample	23	V4CCV01E	VWATER4	V4STD50ppb;;;;;
28 Spike	24	V4LCS01E	VWATER4	V4BLK0730ELCS;;;;;
29 Spike	25	V4RL01E	VWATER4	V4rl1ppb;;;;;
30 Blank	100	BLANK01E	VWATER4	V4BLK;;;;;
31 Blank	100	V4BLK01E	VWATER4	V4BLK0730E;;;;;
32 Sample	26	0721009	VWATER4	0807210-09;;;;; vial #2
33 Sample	27	0721020D	VWATER4	0807210-20;;;;; 5x
34 Sample	28	0721023D	VWATER4	0807210-23;;;;; 5x
35 Sample	29	0720402D	VWATER4	0807204-02;;;;; 2x
36 Sample	30	721802D2	VWATER4	0807218-02;;;;; 25x
37 BFB	100	V4BFB	V4BFB	V4BFB50NG;;;;;

Sequence Name: C:\HPCHEM\1\SEQUENCE\073008V4.S
Comment: 8260b
Operator: ADM
Data Path: C:\HPCHEM\1\DATA\073008V4\
Pre-Seq Cmd:
Post-Seq Cmd:

8939

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Line	Sample Name/Misc Info
1	Type: BFB V4BFB50NG;;;;; Vial: 50 ;3;;;;all.sub;#5473 Meth: V4BFB.M Barcode: Data: V4BFB01.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
2	Type: DailyCal V4STD50ppb;;;;; Vial: 1 ;2;;;;gm-all.sub;#5494,5524 Meth: VWATER4.M Barcode: Data: V4CCV01.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
3	Type: DailyCal V4ap9ccv;;;;; Vial: 2 ;2;;;;ap9hex.sub;#5494,5522 Meth: VWATER4.M Barcode: Data: V4A9CCV.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
4	Type: Spike V4BLK0730LCS;;;;; w/ap9 Vial: 3 ;3;LCS;;;gm-allap9.sub;#5494,5525,5523 Meth: VWATER4.M Barcode: Data: V4LCS01.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
5	Type: Spike V4rllppb;;;;; Vial: 4 ;3;;;;gm-all.sub;#5494,5524 Meth: VWATER4.M Barcode: Data: V4RL01.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
6	Type: Blank V4BLK;;;;; Vial: 100 ;3;BLANK;;;gm-all.sub;#5494 Meth: VWATER4.M Barcode: Data: BLANK01.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
7	Type: Blank V4BLK0730;;;;; Vial: 100 ;3;BLANK;;;gm-allap9.sub;#5494 Meth: VWATER4.M Barcode: Data: V4BLK01.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method

8 Type: Sample 0807218-09;;;;; ab/vial 1
Vial: 5 ch2.v07218;0;;;;;gm-all.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721809.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

PH220 8940

9 Type: Sample 0807218-10;;;;; eb/vial 1
Vial: 6 ch2.v07218;0;;;;;gm-all.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721810.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

10 Type: Sample 0807218-11;;;;; tb/vial 1
Vial: 7 ch2.v07218;0;;;;;gm-all.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721811.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

11 Type: Sample 0807219-09;;;;; tb/vial 1
Vial: 8 tet.v07219;0;;;;;gm-allap9.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721909.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

12 Type: Sample 0807219-01;;;;; vial 1
Vial: 9 tet.v07219;0;;;;;gm-allap9.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721901.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

13 Type: Sample 0807219-02;;;;; vial 1
Vial: 10 tet.v07219;0;;;;;gm-allap9.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721902.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

14 Type: Sample 0807219-03;;;;; vial 1
Vial: 11 tet.v07219;0;;;;;gm-allap9.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721903.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

15 Type: Sample 0807219-04;;;;; vial 1
Vial: 12 tet.v07219;0;;;;;gm-allap9.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721904.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

16 Type: Sample 0807219-05;;;;; vial 1
Vial: 13 tet.v07219;0;;;;;gm-allap9.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721905.D Samp Amt: 0 Multiplr: 1

```

Area% Report      :per Method      Lib. Search Rep :per Method
Quant Report     :per Method      Post-Quant Macro:per Method
CR Database      :per Method      CR Spreadsheet  :per Method
-----
17 Type: Sample   0807219-06;;;;; vial 1
Vial: 14         tet.v07219;0;;;;;gm-allap9.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721906.D Samp Amt: 0           Multiplr: 1
Area% Report     :per Method      Lib. Search Rep :per Method
Quant Report     :per Method      Post-Quant Macro:per Method
CR Database      :per Method      CR Spreadsheet  :per Method
-----
18 Type: Sample   0807219-07;;;;; vial 1
Vial: 15         tet.v07219;0;;;;;gm-allap9.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721907.D Samp Amt: 0           Multiplr: 1
Area% Report     :per Method      Lib. Search Rep :per Method
Quant Report     :per Method      Post-Quant Macro:per Method
CR Database      :per Method      CR Spreadsheet  :per Method
-----
19 Type: Sample   0807219-08;;;;; vial 1
Vial: 16         tet.v07219;0;;;;;gm-allap9.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721908.D Samp Amt: 0           Multiplr: 1
Area% Report     :per Method      Lib. Search Rep :per Method
Quant Report     :per Method      Post-Quant Macro:per Method
CR Database      :per Method      CR Spreadsheet  :per Method
-----
20 Type: Sample   0807218-04;;;;; vial 1
Vial: 17         ch2.v07218;0;;;;;gm-all.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721804.D Samp Amt: 0           Multiplr: 1
Area% Report     :per Method      Lib. Search Rep :per Method
Quant Report     :per Method      Post-Quant Macro:per Method
CR Database      :per Method      CR Spreadsheet  :per Method
-----
21 Type: Sample   0807218-08;;;;; 25x/vial 1
Vial: 18         ch2.v07218;0;;;;;gm-all.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721808D.D Samp Amt: 0           Multiplr: 25
Area% Report     :per Method      Lib. Search Rep :per Method
Quant Report     :per Method      Post-Quant Macro:per Method
CR Database      :per Method      CR Spreadsheet  :per Method
-----
22 Type: Sample   0807218-08;;;;; 50x/vial 1
Vial: 19         ch2.v07218;0;;;;;gm-all.sub;#5494
Meth: VWATER4.M Barcode:
Data: 721808D1.D Samp Amt: 0           Multiplr: 50
Area% Report     :per Method      Lib. Search Rep :per Method
Quant Report     :per Method      Post-Quant Macro:per Method
CR Database      :per Method      CR Spreadsheet  :per Method
-----
23 Type: Sample   0807218-02;;;;; 50x/vial 1
Vial: 20         ch2.v07218;0;;;;;gm-all.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721802D.D Samp Amt: 0           Multiplr: 50
Area% Report     :per Method      Lib. Search Rep :per Method
Quant Report     :per Method      Post-Quant Macro:per Method
CR Database      :per Method      CR Spreadsheet  :per Method
-----
24 Type: Sample   0807210-09;;;;; 200x/vial #2
Vial: 21         ch2.v07218;0;;;;;gm-all.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721109D.D Samp Amt: 0           Multiplr: 200
Area% Report     :per Method      Lib. Search Rep :per Method
Quant Report     :per Method      Post-Quant Macro:per Method
CR Database      :per Method      CR Spreadsheet  :per Method
-----
25 Type: Spike    V4BLK0730LCSD;;;;; w/ap9

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Vial: 22 ;3;LCSD;;;gm-allap9.sub;#5494,5525,5523
Meth: VWATER4.M Barcode:
Data: V4LCSD01.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

26 Type: BFB V4BFB50NG;;;;;
Vial: 50 ;3;;;all.sub;#5473
Meth: V4BFB.M Barcode:
Data: V4BFB01E.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

27 Type: Sample V4STD50ppb;;;;;
Vial: 23 ;;;;gm-all.sub;#5494,5524
Meth: VWATER4.M Barcode:
Data: V4CCV01E.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

28 Type: Spike V4BLK0730ELCS;;;;;
Vial: 24 ;3;LCS;;;gm-all.sub;#5494,5525,5523
Meth: VWATER4.M Barcode:
Data: V4LCS01E.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

29 Type: Spike V4rl1ppb;;;;;
Vial: 25 ;3;;;gm-all.sub;#5494,5524
Meth: VWATER4.M Barcode:
Data: V4RL01E.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

30 Type: Blank V4BLK;;;;;
Vial: 100 ;3;BLANK;;;gm-all.sub;#5494
Meth: VWATER4.M Barcode:
Data: BLANK01E.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

31 Type: Blank V4BLK0730E;;;;;
Vial: 100 ;3;BLANK;;;gm-allap9.sub;#5494
Meth: VWATER4.M Barcode:
Data: V4BLK01E.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

32 Type: Sample 0807210-09;;;;; vial #2
Vial: 26 pip.v07210;0;;;gm-all.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721009.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

33 Type: Sample 0807210-20;;;;; 5x
Vial: 27 pip.v07210;0;;;gm-all.sub;#5494
Meth: VWATER4.M Barcode:
Data: 0721020D.D Samp Amt: 0 Multiplr: 5
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method

	CR Database	:per Method	CR Spreadsheet	:per Method
34	Type: Sample	0807210-23;;;;; 5x		
	Vial: 28	pip.v07210;0;;;;;gm-all.sub;#5494		
	Meth: VWATER4.M	Barcode:		
	Data: 0721023D.D	Samp Amt: 0	Multiplr: 5	
	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method
35	Type: Sample	0807204-02;;;;; 2x		
	Vial: 29	arc.v07204;0;;;;;gm-all.sub;#5494		
	Meth: VWATER4.M	Barcode:		
	Data: 0720402D.D	Samp Amt: 0	Multiplr: 2	
	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method
36	Type: Sample	0807218-02;;;;; 25x		
	Vial: 30	ch2.v07218;0;;;;;gm-all.sub;#5494		
	Meth: VWATER4.M	Barcode:		
	Data: 721802D2.D	Samp Amt: 0	Multiplr: 5	
	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method
37	Type: BFB	V4BFB50NG;;;;;		
	Vial: 100	;3;;;;;all.sub;#5473		
	Meth: V4BFB.M	Barcode:		
	Data: V4BFB.D	Samp Amt: 0	Multiplr: 1	
	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method

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FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW01

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-01

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 0721901

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/24/08 11:35

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 08/04/08 16:34

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS:			UG/L Q
		MDL	(ug/L or ug/Kg) RL	CONC	
83-32-9------	Acenaphthene	0.015	0.046		U
208-96-8------	Acenaphthylene	0.015	0.046		U
120-12-7------	Anthracene	0.015	0.046		U
56-55-3------	Benzo (a) anthracene	0.015	0.046		U
205-99-2------	Benzo (b) fluoranthene	0.015	0.046		U
207-08-9------	Benzo (k) fluoranthene	0.015	0.046		U
191-24-2------	Benzo (g, h, i) perylene	0.015	0.046		U
50-32-8------	Benzo (a) pyrene	0.015	0.046		U
218-01-9------	Chrysene	0.015	0.046		U
53-70-3------	Dibenz (a, h) anthracene	0.015	0.046		U
206-44-0------	Fluoranthene	0.015	0.046		U
86-73-7------	Fluorene	0.015	0.046		U
193-39-5------	Indeno (1, 2, 3-cd) pyrene	0.017	0.046		U
91-57-6------	2-Methylnaphthalene	0.018	0.046		U
90-12-0------	1-Methylnaphthalene	0.017	0.046		U
91-20-3------	Naphthalene	0.018	0.046		U
85-01-8------	Phenanthrene	0.015	0.046		U
129-00-0------	Pyrene	0.015	0.046		U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW04

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002
 Matrix: (soil/water) WATER Lab Sample ID: 0807219-02
 Sample wt/vol: 1080 (g/mL) ML Lab File ID: 0721902
 % Moisture: _____ decanted: (Y/N)____ Date Sampled: 07/24/08 12:28
 Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted:07/30/08
 Concentrated Extract Volume: 500.0(uL) Date Analyzed: 08/04/08 17:12
 Injection Volume: 2.0(uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS:			UG/L Q
		MDL	(ug/L or ug/Kg) RL	CONC	
83-32-9-----	Acenaphthene	0.015	0.046	4.1	
208-96-8-----	Acenaphthylene	0.015	0.046		U
120-12-7-----	Anthracene	0.015	0.046		U
56-55-3-----	Benzo (a) anthracene	0.015	0.046		U
205-99-2-----	Benzo (b) fluoranthene	0.015	0.046		U
207-08-9-----	Benzo (k) fluoranthene	0.015	0.046		U
191-24-2-----	Benzo (g, h, i) perylene	0.015	0.046		U
50-32-8-----	Benzo (a) pyrene	0.015	0.046		U
218-01-9-----	Chrysene	0.015	0.046		U
53-70-3-----	Dibenz (a, h) anthracene	0.015	0.046		U
206-44-0-----	Fluoranthene	0.015	0.046		U
86-73-7-----	Fluorene	0.015	0.046	9.8	
193-39-5-----	Indeno (1, 2, 3-cd) pyrene	0.017	0.046		U
91-57-6-----	2-Methylnaphthalene	0.018	0.046		U
90-12-0-----	1-Methylnaphthalene	0.017	0.046	2.9	
91-20-3-----	Naphthalene	0.018	0.046		U
85-01-8-----	Phenanthrene	0.015	0.046		U
129-00-0-----	Pyrene	0.015	0.046		U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-1406-16

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-03

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 0721903

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/24/08 13:55

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 08/04/08 17:50

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L
MDL RL CONC Q

CAS NO.	COMPOUND	MDL	RL	CONC	Q
83-32-9-----	Acenaphthene	0.015	0.046	2.6	
208-96-8-----	Acenaphthylene	0.015	0.046		U
120-12-7-----	Anthracene	0.015	0.046		U
56-55-3-----	Benzo (a) anthracene	0.015	0.046		U
205-99-2-----	Benzo (b) fluoranthene	0.015	0.046		U
207-08-9-----	Benzo (k) fluoranthene	0.015	0.046		U
191-24-2-----	Benzo (g, h, i) perylene	0.015	0.046		U
50-32-8-----	Benzo (a) pyrene	0.015	0.046		U
218-01-9-----	Chrysene	0.015	0.046		U
53-70-3-----	Dibenz (a, h) anthracene	0.015	0.046		U
206-44-0-----	Fluoranthene	0.015	0.046		U
86-73-7-----	Fluorene	0.015	0.046	7.8	
193-39-5-----	Indeno (1, 2, 3-cd) pyrene	0.017	0.046		U
91-57-6-----	2-Methylnaphthalene	0.018	0.046		U
90-12-0-----	1-Methylnaphthalene	0.017	0.046	1.9	
91-20-3-----	Naphthalene	0.018	0.046		U
85-01-8-----	Phenanthrene	0.015	0.046		U
129-00-0-----	Pyrene	0.015	0.046		U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW03

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-04

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 0721904

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/24/08 14:25

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 08/04/08 18:29

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS:			UG/L Q
		MDL	(ug/L or ug/Kg) RL	UG/L CONC	
83-32-9-----	Acenaphthene	0.015	0.046	6.4	
208-96-8-----	Acenaphthylene	0.015	0.046	1.2	
120-12-7-----	Anthracene	0.015	0.046		U
56-55-3-----	Benzo (a) anthracene	0.015	0.046		U
205-99-2-----	Benzo (b) fluoranthene	0.015	0.046		U
207-08-9-----	Benzo (k) fluoranthene	0.015	0.046		U
191-24-2-----	Benzo (g, h, i) perylene	0.015	0.046		U
50-32-8-----	Benzo (a) pyrene	0.015	0.046		U
218-01-9-----	Chrysene	0.015	0.046		U
53-70-3-----	Dibenz (a, h) anthracene	0.015	0.046		U
206-44-0-----	Fluoranthene	0.015	0.046		U
86-73-7-----	Fluorene	0.015	0.046	19	L
193-39-5-----	Indeno (1, 2, 3-cd) pyrene	0.017	0.046		U
91-57-6-----	2-Methylnaphthalene	0.018	0.046	6.1	
90-12-0-----	1-Methylnaphthalene	0.017	0.046	53	L
91-20-3-----	Naphthalene	0.018	0.046		U
85-01-8-----	Phenanthrene	0.015	0.046		U
129-00-0-----	Pyrene	0.015	0.046		U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW03DL

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-04DL

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 0721904D

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/24/08 14:25

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 08/05/08 17:16

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS:		UG/L	Q
		MDL	(ug/L or ug/Kg) RL CONC		
83-32-9-----	Acenaphthene	0.15	0.46	4.8	D
208-96-8-----	Acenaphthylene	0.15	0.46		UD
120-12-7-----	Anthracene	0.15	0.46		UD
56-55-3-----	Benzo (a) anthracene	0.15	0.46		UD
205-99-2-----	Benzo (b) fluoranthene	0.15	0.46		UD
207-08-9-----	Benzo (k) fluoranthene	0.15	0.46		UD
191-24-2-----	Benzo (g, h, i) perylene	0.15	0.46		UD
50-32-8-----	Benzo (a) pyrene	0.15	0.46		UD
218-01-9-----	Chrysene	0.15	0.46		UD
53-70-3-----	Dibenz (a, h) anthracene	0.15	0.46		UD
206-44-0-----	Fluoranthene	0.15	0.46		UD
86-73-7-----	Fluorene	0.15	0.46	11	D
193-39-5-----	Indeno (1, 2, 3-cd) pyrene	0.17	0.46		UD
91-57-6-----	2-Methylnaphthalene	0.18	0.46	6.9	D
90-12-0-----	1-Methylnaphthalene	0.17	0.46	44	D
91-20-3-----	Naphthalene	0.18	0.46		UD
85-01-8-----	Phenanthrene	0.15	0.46	5.7	D
129-00-0-----	Pyrene	0.15	0.46		UD

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW02

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-05

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 0721905

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/24/08 15:20

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 08/04/08 19:07

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS:		UG/L	Q
		MDL	(ug/L or ug/Kg) RL CONC		
83-32-9-----	Acenaphthene	0.015	0.046	48	L
208-96-8-----	Acenaphthylene	0.015	0.046		U
120-12-7-----	Anthracene	0.015	0.046		U
56-55-3-----	Benzo (a) anthracene	0.015	0.046		U
205-99-2-----	Benzo (b) fluoranthene	0.015	0.046		U
207-08-9-----	Benzo (k) fluoranthene	0.015	0.046		U
191-24-2-----	Benzo (g, h, i) perylene	0.015	0.046		U
50-32-8-----	Benzo (a) pyrene	0.015	0.046		U
218-01-9-----	Chrysene	0.015	0.046		U
53-70-3-----	Dibenz (a, h) anthracene	0.015	0.046		U
206-44-0-----	Fluoranthene	0.015	0.046		U
86-73-7-----	Fluorene	0.015	0.046	39	L
193-39-5-----	Indeno (1, 2, 3-cd) pyrene	0.017	0.046		U
91-57-6-----	2-Methylnaphthalene	0.018	0.046	4.5	
90-12-0-----	1-Methylnaphthalene	0.017	0.046	27	L
91-20-3-----	Naphthalene	0.018	0.046		U
85-01-8-----	Phenanthrene	0.015	0.046	5.5	
129-00-0-----	Pyrene	0.015	0.046		U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW02DL

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-05DL

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 0721905D

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/24/08 15:20

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 08/05/08 17:55

Injection Volume: 2.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS:			UG/L Q
		MDL	(ug/L or ug/Kg) RL CONC	UG/L	
83-32-9-----	Acenaphthene	0.15	0.46	19	D
208-96-8-----	Acenaphthylene	0.15	0.46		UD
120-12-7-----	Anthracene	0.15	0.46		UD
56-55-3-----	Benzo (a) anthracene	0.15	0.46		UD
205-99-2-----	Benzo (b) fluoranthene	0.15	0.46		UD
207-08-9-----	Benzo (k) fluoranthene	0.15	0.46		UD
191-24-2-----	Benzo (g, h, i) perylene	0.15	0.46		UD
50-32-8-----	Benzo (a) pyrene	0.15	0.46		UD
218-01-9-----	Chrysene	0.15	0.46		UD
53-70-3-----	Dibenz (a, h) anthracene	0.15	0.46		UD
206-44-0-----	Fluoranthene	0.15	0.46	0.68	D
86-73-7-----	Fluorene	0.15	0.46	16	D
193-39-5-----	Indeno (1, 2, 3-cd) pyrene	0.17	0.46		UD
91-57-6-----	2-Methylnaphthalene	0.18	0.46	5.0	D
90-12-0-----	1-Methylnaphthalene	0.17	0.46	21	D
91-20-3-----	Naphthalene	0.18	0.46		UD
85-01-8-----	Phenanthrene	0.15	0.46	5.7	D
129-00-0-----	Pyrene	0.15	0.46		UD

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

351-2-MW02

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-06

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 0721906

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/25/08 12:00

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 08/04/08 19:46

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)			UG/L Q
		MDL	RL	CONC	
83-32-9-----	Acenaphthene	0.015	0.046		U
208-96-8-----	Acenaphthylene	0.015	0.046		U
120-12-7-----	Anthracene	0.015	0.046	0.028	I
56-55-3-----	Benzo (a) anthracene	0.015	0.046	0.035	I
205-99-2-----	Benzo (b) fluoranthene	0.015	0.046		U
207-08-9-----	Benzo (k) fluoranthene	0.015	0.046		U
191-24-2-----	Benzo (g, h, i) perylene	0.015	0.046		U
50-32-8-----	Benzo (a) pyrene	0.015	0.046		U
218-01-9-----	Chrysene	0.015	0.046	0.033	I
53-70-3-----	Dibenz (a, h) anthracene	0.015	0.046		U
206-44-0-----	Fluoranthene	0.015	0.046		U
86-73-7-----	Fluorene	0.015	0.046		U
193-39-5-----	Indeno (1, 2, 3-cd) pyrene	0.017	0.046		U
91-57-6-----	2-Methylnaphthalene	0.018	0.046	0.046	
90-12-0-----	1-Methylnaphthalene	0.017	0.046	0.068	
91-20-3-----	Naphthalene	0.018	0.046		U
85-01-8-----	Phenanthrene	0.015	0.046	0.053	
129-00-0-----	Pyrene	0.015	0.046	0.041	I

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

351-2-MW04

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002
 Matrix: (soil/water) WATER Lab Sample ID: 0807219-07
 Sample wt/vol: 1080 (g/mL) ML Lab File ID: 0721907
 % Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/25/08 12:33
 Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08
 Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 08/04/08 20:24
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)			UG/L Q
		MDL	RL	CONC	
83-32-9-----	Acenaphthene	0.015	0.046		U
208-96-8-----	Acenaphthylene	0.015	0.046		U
120-12-7-----	Anthracene	0.015	0.046	0.032	I
56-55-3-----	Benzo (a) anthracene	0.015	0.046		U
205-99-2-----	Benzo (b) fluoranthene	0.015	0.046		U
207-08-9-----	Benzo (k) fluoranthene	0.015	0.046		U
191-24-2-----	Benzo (g, h, i) perylene	0.015	0.046		U
50-32-8-----	Benzo (a) pyrene	0.015	0.046	0.023	I
218-01-9-----	Chrysene	0.015	0.046		U
53-70-3-----	Dibenz (a, h) anthracene	0.015	0.046		U
206-44-0-----	Fluoranthene	0.015	0.046		U
86-73-7-----	Fluorene	0.015	0.046		U
193-39-5-----	Indeno (1, 2, 3-cd) pyrene	0.017	0.046		U
91-57-6-----	2-Methylnaphthalene	0.018	0.046		U
90-12-0-----	1-Methylnaphthalene	0.017	0.046		U
91-20-3-----	Naphthalene	0.018	0.046		U
85-01-8-----	Phenanthrene	0.015	0.046	0.061	U
129-00-0-----	Pyrene	0.015	0.046		U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

351-2-MW01

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-08

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 0721908

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/25/08 13:10

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 08/04/08 21:02

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L
MDL RL CONC Q

CAS NO.	COMPOUND	MDL	RL	CONC	Q
83-32-9-----	Acenaphthene	0.015	0.046	0.041	I
208-96-8-----	Acenaphthylene	0.015	0.046		U
120-12-7-----	Anthracene	0.015	0.046		U
56-55-3-----	Benzo (a) anthracene	0.015	0.046		U
205-99-2-----	Benzo (b) fluoranthene	0.015	0.046		U
207-08-9-----	Benzo (k) fluoranthene	0.015	0.046		U
191-24-2-----	Benzo (g, h, i) perylene	0.015	0.046		U
50-32-8-----	Benzo (a) pyrene	0.015	0.046		U
218-01-9-----	Chrysene	0.015	0.046		U
53-70-3-----	Dibenz (a, h) anthracene	0.015	0.046		U
206-44-0-----	Fluoranthene	0.015	0.046		U
86-73-7-----	Fluorene	0.015	0.046		U
193-39-5-----	Indeno (1, 2, 3-cd) pyrene	0.017	0.046		U
91-57-6-----	2-Methylnaphthalene	0.018	0.046		U
90-12-0-----	1-Methylnaphthalene	0.017	0.046		U
91-20-3-----	Naphthalene	0.018	0.046		U
85-01-8-----	Phenanthrene	0.015	0.046		U
129-00-0-----	Pyrene	0.015	0.046		U

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

	CLIENT SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	SBLK0730BW1	108	102	97						0
02	SBLK0730BW1L	116*	102	97						1
03	SBLK0730BW1L	110	100	89						0
04	A+D-RW01	84	77	75						0
05	A+D-RW04	94	96	97						0
06	A+D-1406-16	94	110	82						0
07	A+D-RW03	78	148*	105						1
08	A+D-RW02	86	188*	106						1
09	351-2-MW02	90	85	93						0
10	351-2-MW04	89	78	86						0
11	351-2-MW01	82	69	69						0
12	A+D-RW03DL	164D	101D	75D						0
13	A+D-RW02DL	149D	74D	83D						0
14										
15										
16										
17										
18										
19										
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24										
25										
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27										
28										
29										
30										

	EL	SPIKE
	QC LIMITS	CONC (ug/L)
S1 (NBZ) = Nitrobenzene-d5	(30-110)	1.0
S2 (FBP) = 2-Fluorobiphenyl	(35-110)	1.0
S3 (TPH) = Terphenyl-d14	(55-125)	1.0

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogate results reported from a diluted analysis

FORM 3
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix Spike - Client Sample No.: SBLK0730BW1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Acenaphthene	1.000	0.0000	1.093	109	35-120
Acenaphthylene	1.000	0.0000	0.9587	96	40-115
Anthracene	1.000	0.0000	0.9256	92	45-120
Benzo (a) anthracene	1.000	0.0000	0.9806	98	45-120
Benzo (b) fluoranthene	1.000	0.0000	0.9196	92	35-130
Benzo (k) fluoranthene	1.000	0.0000	0.8339	83	30-135
Benzo (g, h, i) perylene	1.000	0.0000	0.9553	96	25-135
Benzo (a) pyrene	1.000	0.0000	0.7446	74	45-120
Chrysene	1.000	0.0000	0.9644	96	45-120
Dibenz (a, h) anthracene	1.000	0.0000	0.8940	89	30-140
Fluoranthene	1.000	0.0000	1.240	124	45-125
Fluorene	1.000	0.0000	1.078	108	40-120
Indeno (1, 2, 3-cd) pyrene	1.000	0.0000	0.9059	90	30-140
2-Methylnaphthalene	1.000	0.0000	1.205	120*	35-115
1-Methylnaphthalene	1.000	0.0000	1.156	116*	35-115
Naphthalene	1.000	0.0000	1.042	104	30-115
Phenanthrene	1.000	0.0000	1.024	102	40-130
Pyrene	1.000	0.0000	0.9825	98	35-140

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix Spike - Client Sample No.: SBLK0730BW1

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Acenaphthene	1.000	1.093	109	0	40	35-120
Acenaphthylene	1.000	0.9640	96	0	40	40-115
Anthracene	1.000	0.8863	89	4	40	45-120
Benzo (a) anthracene	1.000	0.9287	93	5	40	45-120
Benzo (b) fluoranthene	1.000	0.8164	82	12	40	35-130
Benzo (k) fluoranthene	1.000	0.8351	84	0	40	30-135
Benzo (g, h, i) perylene	1.000	0.9494	95	1	40	25-135
Benzo (a) pyrene	1.000	0.7442	74	0	40	45-120
Chrysene	1.000	0.9220	92	4	40	45-120
Dibenz (a, h) anthracene	1.000	0.9135	91	2	40	30-140
Fluoranthene	1.000	1.147	115	8	40	45-125
Fluorene	1.000	1.089	109	1	40	40-120
Indeno (1, 2, 3-cd) pyrene	1.000	0.9067	91	0	40	30-140
2-Methylnaphthalene	1.000	1.189	119*	1	40	35-115
1-Methylnaphthalene	1.000	1.083	108	6	40	35-115
Naphthalene	1.000	1.048	105	0	40	30-115
Phenanthrene	1.000	1.010	101	1	40	40-130
Pyrene	1.000	0.9232	92	6	40	35-140

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 18 outside limits
Spike Recovery: 3 out of 36 outside limits

COMMENTS: _____

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

SBLK0730BW1

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Lab File ID: S1BW0730 Lab Sample ID: SBLK0730BW1

Instrument ID: BNA3 Date Extracted: 07/30/08

Matrix: (soil/water) WATER Date Analyzed: 08/04/08

Level: (low/med) LOW GPC Cleanup: (Y/N) N Time Analyzed: 1205

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	=====	=====	=====	=====
01	SBLK0730BW1L	SBLK0730BW1LCS	S1LW0730	08/04/08
02	SBLK0730BW1L	SBLK0730BW1LCS	S1DW0730	08/04/08
03	A+D-RW01	0807219-01	0721901	08/04/08
04	A+D-RW04	0807219-02	0721902	08/04/08
05	A+D-1406-16	0807219-03	0721903	08/04/08
06	A+D-RW03	0807219-04	0721904	08/04/08
07	A+D-RW02	0807219-05	0721905	08/04/08
08	351-2-MW02	0807219-06	0721906	08/04/08
09	351-2-MW04	0807219-07	0721907	08/04/08
10	351-2-MW01	0807219-08	0721908	08/04/08
11	A+D-RW03DL	0807219-04DL	0721904D	08/05/08
12	A+D-RW02DL	0807219-05DL	0721905D	08/05/08
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14				
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COMMENTS:

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SBLK0730BW1

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: SBLK0730BW1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S1BW0730

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: _____

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 08/04/08 12:05

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS:		UG/L Q
		MDL	(ug/L or ug/Kg) RL CONC	
83-32-9-----	Acenaphthene	0.016	0.050	U
208-96-8-----	Acenaphthylene	0.016	0.050	U
120-12-7-----	Anthracene	0.016	0.050	U
56-55-3-----	Benzo (a) anthracene	0.016	0.050	U
205-99-2-----	Benzo (b) fluoranthene	0.016	0.050	U
207-08-9-----	Benzo (k) fluoranthene	0.016	0.050	U
191-24-2-----	Benzo (g, h, i) perylene	0.016	0.050	U
50-32-8-----	Benzo (a) pyrene	0.016	0.050	U
218-01-9-----	Chrysene	0.016	0.050	U
53-70-3-----	Dibenz (a, h) anthracene	0.016	0.050	U
206-44-0-----	Fluoranthene	0.016	0.050	U
86-73-7-----	Fluorene	0.016	0.050	U
193-39-5-----	Indeno (1, 2, 3-cd) pyrene	0.018	0.050	U
91-57-6-----	2-Methylnaphthalene	0.019	0.050	U
90-12-0-----	1-Methylnaphthalene	0.018	0.050	U
91-20-3-----	Naphthalene	0.020	0.050	U
85-01-8-----	Phenanthrene	0.016	0.050	U
129-00-0-----	Pyrene	0.016	0.050	U

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMPIRICAL LABS Contract:

Lab Code: Case No.: SAS No.: NA SDG No.: SDGA92299

Lab File ID: DF0114B2 DFTPP Injection Date: 01/14/08

Instrument ID: BNA3 DFTPP Injection Time: 1734

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	42.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	47.3
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	55.2
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	7.2
275	10.0 - 30.0% of mass 198	26.6
365	Greater than 1.0% of mass 198	3.08
441	Present, but less than mass 443	9.6
442	Greater than 40.0% of mass 198	55.7
443	17.0 - 23.0% of mass 442	11.2 (20.1)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	LPAHCAL30PPM	LPAHCAL30PPM	LPAHCAL8	01/14/08	1754
02	LPAHCAL20PPM	LPAHCAL20PPM	LPAHCAL7	01/14/08	1834
03	LPAHCAL10PPM	LPAHCAL10PPM	LPAHCAL6	01/14/08	1914
04	LPAHCAL5PPM	LPAHCAL5PPM	LPAHCAL5	01/14/08	1953
05	LPAHCAL1PPM	LPAHCAL1PPM	LPAHCAL4	01/14/08	2033
06	LPAHCAL0.4PP	LPAHCAL0.4PPM	LPAHCAL3	01/14/08	2113
07	LPAHCAL0.2PP	LPAHCAL0.2PPM	LPAHCAL2	01/14/08	2152
08	LPAHCAL0.1PP	LPAHCAL0.1PPM	LPAHCAL1	01/14/08	2232
09	LPAHICV5PPM	LPAHICV5PPM	LPAHICV	01/14/08	2311
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21					
22					

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Lab File ID: DF0804B1 DFTPP Injection Date: 08/04/08

Instrument ID: BNA3 DFTPP Injection Time: 0911

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	48.3
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	49.0
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	26.3
365	Greater than 1.0% of mass 198	2.99
441	Present, but less than mass 443	9.3
442	Greater than 40.0% of mass 198	58.3
443	17.0 - 23.0% of mass 442	10.4 (17.9)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	LOWPAH5PPM	LOWPAH5PPM	LPAHCCV	08/04/08	0931
02	SBLK0730BW1	SBLK0730BW1	S1BW0730	08/04/08	1205
03	SBLK0730BW1L	SBLK0730BW1LCS	S1LW0730	08/04/08	1243
04	SBLK0730BW1L	SBLK0730BW1LCS	S1DW0730	08/04/08	1322
05	A+D-RW01	0807219-01	0721901	08/04/08	1634
06	A+D-RW04	0807219-02	0721902	08/04/08	1712
07	A+D-1406-16	0807219-03	0721903	08/04/08	1750
08	A+D-RW03	0807219-04	0721904	08/04/08	1829
09	A+D-RW02	0807219-05	0721905	08/04/08	1907
10	351-2-MW02	0807219-06	0721906	08/04/08	1946
11	351-2-MW04	0807219-07	0721907	08/04/08	2024
12	351-2-MW01	0807219-08	0721908	08/04/08	2102
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Lab File ID: DF0805B1 DFTPP Injection Date: 08/05/08

Instrument ID: BNA3 DFTPP Injection Time: 0910

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	49.2
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	40.0 - 60.0% of mass 198	49.0
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	7.3
275	10.0 - 30.0% of mass 198	25.9
365	Greater than 1.0% of mass 198	3.14
441	Present, but less than mass 443	8.1
442	Greater than 40.0% of mass 198	46.1
443	17.0 - 23.0% of mass 442	8.9 (19.3)2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	LOWPAH5PPM	LOWPAH5PPM	LPAHCCV	08/05/08	0929
02	A+D-RW03DL	0807219-04DL	0721904D	08/05/08	1716
03	A+D-RW02DL	0807219-05DL	0721905D	08/05/08	1755
04					
05					
06					
07					
08					
09					
10					
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12					
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19					
20					
21					
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FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002
 Lab File ID (Standard): LPAHCCV Date Analyzed: 08/04/08
 Instrument ID: BNA3 Time Analyzed: 0931

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	36403	2.71	135231	5.74	74939	9.85
UPPER LIMIT	72806	3.21	270462	6.24	149878	10.35
LOWER LIMIT	18202	2.21	67616	5.24	37470	9.35
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 SBLK0730BW1	36615	2.71	126406	5.75	68962	9.86
02 SBLK0730BW1L	38523	2.71	143980	5.74	84682	9.86
03 SBLK0730BW1L	41728	2.71	153597	5.75	87622	9.86
04 A+D-RW01	33777	2.71	125553	5.75	74820	9.86
05 A+D-RW04	40093	2.70	148025	5.75	77389	9.88
06 A+D-1406-16	38819	2.71	137949	5.74	75018	9.87
07 A+D-RW03	37025	2.72	137750	5.78	55045	9.92
08 A+D-RW02	48842	2.72	173291	5.77	52456	9.92
09 351-2-MW02	49596	2.72	171932	5.76	105154	9.87
10 351-2-MW04	41926	2.71	142429	5.75	86862	9.87
11 351-2-MW01	40038	2.71	144185	5.75	97718	9.86
12						
13						
14						
15						
16						
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19						
20						
21						
22						

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: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Lab File ID (Standard): LPAHCCV Date Analyzed: 08/04/08

Instrument ID: BNA3 Time Analyzed: 0931

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	131234	13.20	143494	19.29	114316	22.34
UPPER LIMIT	262468	13.70	286988	19.79	228632	22.84
LOWER LIMIT	65617	12.70	71747	18.79	57158	21.84
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 SBLK0730BW1	116851	13.20	125875	19.30	100495	22.34
02 SBLK0730BW1L	151146	13.20	167866	19.31	149525	22.33
03 SBLK0730BW1L	158523	13.20	176445	19.30	155750	22.34
04 A+D-RW01	123763	13.20	132567	19.32	122260	22.34
05 A+D-RW04	295596*	13.26	215112	19.46	193633	22.46
06 A+D-1406-16	217490	13.22	241492	19.36	155196	22.39
07 A+D-RW03	231980	13.36	119010	19.54	164150	22.53
08 A+D-RW02	250550	13.34	206989	19.58	187356	22.62
09 351-2-MW02	180429	13.22	203042	19.32	179479	22.36
10 351-2-MW04	149283	13.21	159714	19.32	146601	22.36
11 351-2-MW01	131596	13.22	158433	19.33	157126	22.37
12						
13						
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18						
19						
20						
21						
22						

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 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT

Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002

Lab File ID (Standard): LPAHCCV Date Analyzed: 08/05/08

Instrument ID: BNA3 Time Analyzed: 0929

	IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	47290	2.68	178666	5.72	98764	9.82
UPPER LIMIT	94580	3.18	357332	6.22	197528	10.32
LOWER LIMIT	23645	2.18	89333	5.22	49382	9.32
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 A+D-RW03DL	42301	2.67	159822	5.72	84875	9.83
02 A+D-RW02DL	45040	2.67	171675	5.71	104685	9.83
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22						

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: EMPIRICAL LABS Contract: TETRATECH-MAYPORT
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002
 Lab File ID (Standard): LPAHCCV Date Analyzed: 08/05/08
 Instrument ID: BNA3 Time Analyzed: 0929

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	166120	13.15	170989	19.26	128263	22.30
UPPER LIMIT	332240	13.65	341978	19.76	256526	22.80
LOWER LIMIT	83060	12.65	85495	18.76	64132	21.80
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 A+D-RW03DL	177836	13.18	236782	19.30	191532	22.32
02 A+D-RW02DL	184606	13.17	232692	19.30	177968	22.33
03						
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18						
19						
20						
21						
22						

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 6
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:
 Lab Code: Case No.: SAS No.: NA SDG No.: SDGA70651
 Instrument ID: BNA3 Calibration Date(s): 01/14/08 01/14/08
 Column: FUSED SILICA ID: 0.25 (mm) Calibration Time(s): 1754 2232
 LAB FILE ID: RF0.1: LPAHCAL1 RF0.2: LPAHCAL2 RF0.4: LPAHCAL3
 RF1: LPAHCAL4 RF5: LPAHCAL5

COMPOUND	RF0.1	RF0.2	RF0.4	RF1	RF5
Acenaphthene	1.038	1.001	0.977	1.052	1.058
Acenaphthylene	0.936	1.010	1.049	1.338	1.582
Anthracene	0.581	0.641	0.684	0.938	1.051
Benzo (a) anthracene	0.455	0.466	0.525	0.704	0.915
Benzo (b) fluoranthene	0.706	0.790	0.792	0.965	1.151
Benzo (k) fluoranthene	1.043	0.912	1.043	1.395	1.532
Benzo (g,h,i) perylene	0.616	0.629	0.685	0.862	1.047
Benzo (a) pyrene	0.568	0.490	0.509	0.764	1.099
Chrysene	1.082	1.122	1.078	1.177	1.080
Dibenz (a,h) anthracene	0.376	0.377	0.446	0.601	0.886
Fluoranthene	0.563	0.642	0.700	0.903	1.073
Fluorene	0.708	0.756	0.846	1.003	1.137
Indeno (1,2,3-cd) pyrene	0.338	0.318	0.513	0.450	0.755
2-Methylnaphthalene	0.380	0.371	0.400	0.447	0.493
1-Methylnaphthalene	0.469	0.445	0.451	0.498	0.509
Naphthalene	0.918	0.853	0.860	0.888	0.874
Phenanthrene	1.108	1.066	1.049	1.132	1.122
Pyrene	1.117	1.015	1.073	1.215	1.223
Nitrobenzene-d5	0.140	0.153	0.170	0.208	0.262
2-Fluorobiphenyl	1.245	1.225	1.203	1.308	1.277
Terphenyl-d14	0.832	0.730	0.766	0.862	0.866

FORM 6
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:

Lab Code: Case No.: SAS No.: NA SDG No.: SDGA70651

Instrument ID: BNA3 Calibration Date(s): 01/14/08 01/14/08

Column: FUSED SILICA ID: 0.25 (mm) Calibration Time(s): 1754 2232

LAB FILE ID: RF10: LPAHCAL6 RF20: LPAHCAL7 RF30: LPAHCAL8

COMPOUND	RF10	RF20	RF30
=====	=====	=====	=====
Acenaphthene	1.067	1.049	0.993
Acenaphthylene	1.618	1.659	1.557
Anthracene	1.070	1.051	1.008
Benzo (a) anthracene	0.977	1.049	1.051
Benzo (b) fluoranthene	1.287	1.379	1.325
Benzo (k) fluoranthene	1.530	1.408	1.409
Benzo (g, h, i) perylene	1.020	0.903	0.964
Benzo (a) pyrene	1.171	1.201	1.197
Chrysene	1.068	1.062	1.041
Dibenz (a, h) anthracene	0.888	0.888	0.904
Fluoranthene	1.093	1.076	1.037
Fluorene	1.138	1.161	1.102
Indeno (1, 2, 3-cd) pyrene	0.797	0.816	0.890
2-Methylnaphthalene	0.484	0.478	0.468
1-Methylnaphthalene	0.500	0.489	0.480
Naphthalene	0.858	0.838	0.807
Phenanthrene	1.122	1.059	1.028
Pyrene	1.315	1.238	1.226
=====	=====	=====	=====
Nitrobenzene-d5	0.263	0.277	0.277
2-Fluorobiphenyl	1.261	1.254	1.166
Terphenyl-d14	0.913	0.894	0.898

FORM 6
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:
 Lab Code: Case No.: SAS No.: NA SDG No.: SDGA70651
 Instrument ID: BNA3 Calibration Date(s): 01/14/08 01/14/08
 Column: FUSED SILICA ID: 0.25 (mm) Calibration Time(s): 1754 2232

COMPOUND	CURVE	COEFFICIENTS		%RSD OR R ²
		A0	A1	
=====	=====	=====	=====	=====
Acenaphthene	AVRG		1.02950848	3.3
Acenaphthylene	LINR	0.00000000	1.59123098	0.998
Anthracene	LINR	0.00000000	1.02541699	0.999
Benzo (a) anthracene	LINR	0.00000000	1.04339882	0.999
Benzo (b) fluoranthene	LINR	0.00000000	1.33538156	0.999
Benzo (k) fluoranthene	LINR	0.00000000	1.42019837	0.999
Benzo (g, h, i) perylene	LINR	0.00000000	0.95332202	0.998
Benzo (a) pyrene	LINR	0.00000000	1.19454344	1.000
Chrysene	AVRG		1.08898009	3.9
Dibenz (a, h) anthracene	LINR	0.00000000	0.89793055	1.000
Fluoranthene	LINR	0.00000000	1.05271841	0.999
Fluorene	LINR	0.00000000	1.12226395	0.999
Indeno (1, 2, 3-cd) pyrene	LINR	0.00000000	0.86214757	0.996
2-Methylnaphthalene	AVRG		0.44026924	11.2
1-Methylnaphthalene	AVRG		0.48037708	4.9
Naphthalene	AVRG		0.86201971	3.8
Phenanthrene	AVRG		1.08579490	3.6
Pyrene	AVRG		1.17792752	8.4
=====	=====	=====	=====	=====
Nitrobenzene-d5	LINR	0.20450048	0.27826515	1.000
2-Fluorobiphenyl	AVRG		1.24226628	3.5
Terphenyl-d14	AVRG		0.84499758	7.8

SEMIVOLATILE INITIAL CALIBRATION VERIFICATION

Lab Name: EMPIRICAL LABS Contract:
 Lab Code: Case No.: SAS No.: NA SDG No.: SDGA70651
 Instrument ID: BNA3 Calibration Date: 01/14/08 Time: 2311
 Lab File ID: LPAHICV Init. Calib. Date(s): 01/14/08 01/14/08
 Init. Calib. Times: 1754 2232

COMPOUND	RRF	RRF5	CURVE AMOUNT	CCAL AMOUNT	MIN RRF	CURVE	%D	MAX %D
Acenaphthene	1.029	1.102	5.000	5.351		AVRG	7.0	25.0
Acenaphthylene	1.344	1.589	5.000	4.994		LINR	-0.1	25.0
Anthracene	0.878	1.071	5.000	5.224		LINR	4.5	25.0
Benzo (a) anthracene	0.768	1.037	5.000	4.970		LINR	-0.6	25.0
Benzo (b) fluoranthene	1.049	1.381	5.000	5.171		LINR	3.4	25.0
Benzo (k) fluoranthene	1.284	1.652	5.000	5.816		LINR	16.3	25.0
Benzo (g, h, i) perylene	0.841	0.945	5.000	4.956		LINR	-0.9	25.0
Benzo (a) pyrene	0.875	1.145	5.000	4.793		LINR	-4.1	25.0
Chrysene	1.089	1.135	5.000	5.212		AVRG	4.2	25.0
Dibenz (a, h) anthracene	0.671	0.799	5.000	4.449		LINR	-11.0	25.0
Fluoranthene	0.886	1.115	5.000	5.296		LINR	5.9	25.0
Fluorene	0.981	1.196	5.000	5.329		LINR	6.6	25.0
Indeno (1, 2, 3-cd) pyrene	0.610	0.670	5.000	3.887		LINR	-22.3	25.0
2-Methylnaphthalene	0.440	0.523	5.000	5.938		AVRG	18.8	25.0
1-Methylnaphthalene	0.480	0.496	5.000	5.168		AVRG	3.4	25.0
Naphthalene	0.862	0.915	5.000	5.308		AVRG	6.2	25.0
Phenanthrene	1.086	1.106	5.000	5.093		AVRG	1.8	25.0
Pyrene	1.178	1.395	5.000	5.920		AVRG	18.4	25.0
Nitrobenzene-d5	0.219	0.262	5.000	0.0000		LINR	-99.9	25.0
2-Fluorobiphenyl	1.242	1.277	5.000	0.0000		AVRG	2.8	25.0
Terphenyl-d14	0.845	0.866	5.000	0.0000		AVRG	2.5	25.0

ICV SV

FORM 7
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: EMPIRICAL LABS Contract: TETRATECH-MAYPORT
 Lab Code: NA Case No.: NA SAS No.: NA SDG No.: MAYPORT_002
 Instrument ID: BNA3 Calibration Date: 08/04/08 Time: 0931
 Lab File ID: LPAHCCV Init. Calib. Date(s): 01/14/08 01/14/08
 Init. Calib. Times: 1754 2232

COMPOUND	RRF	RRF5	CURVE AMOUNT	CCAL AMOUNT	MIN RRF	CURVE	%D	MAX %D
Acenaphthene	1.029	1.087	5.000	5.278		AVRG	5.6	20.0
Acenaphthylene	1.344	1.670	5.000	5.249		LINR	5.0	20.0
Anthracene	0.878	0.972	5.000	4.739		LINR	-5.2	20.0
Benzo (a) anthracene	0.768	0.946	5.000	4.535		LINR	-9.3	20.0
Benzo (b) fluoranthene	1.049	1.168	5.000	4.375		LINR	-12.5	20.0
Benzo (k) fluoranthene	1.284	1.341	5.000	4.721		LINR	-5.6	20.0
Benzo (g, h, i) perylene	0.841	1.021	5.000	5.353		LINR	7.1	20.0
Benzo (a) pyrene	0.875	1.029	5.000	4.306		LINR	-13.9	20.0
Chrysene	1.089	1.044	5.000	4.795		AVRG	-4.1	20.0
Dibenz (a, h) anthracene	0.671	0.915	5.000	5.094		LINR	1.9	20.0
Fluoranthene	0.886	1.134	5.000	5.387		LINR	7.7	20.0
Fluorene	0.981	1.157	5.000	5.154		LINR	3.1	20.0
Indeno (1, 2, 3-cd) pyrene	0.610	0.816	5.000	4.733		LINR	-5.3	20.0
2-Methylnaphthalene	0.440	0.512	5.000	5.821		AVRG	16.4	20.0
1-Methylnaphthalene	0.480	0.549	5.000	5.710		AVRG	14.2	20.0
Naphthalene	0.862	0.892	5.000	5.174		AVRG	3.5	20.0
Phenanthrene	1.086	1.019	5.000	4.691		AVRG	-6.2	20.0
Pyrene	1.178	1.117	5.000	4.740		AVRG	-5.2	20.0
Nitrobenzene-d5	0.219	0.304	5.000	5.676		LINR	13.5	
2-Fluorobiphenyl	1.242	1.337	5.000	5.382		AVRG	7.6	
Terphenyl-d14	0.845	0.783	5.000	4.631		AVRG	-7.4	

Sequence Name: C:\HPCHEM\1\SEQUENCE\011408B3.S
 Comment: SW846 - 8270C/625
 Operator: ADM
 Data Path: F:\HPCHEM\1\DATA\011408b3\
 Pre-Seq Cmd:
 Post-Seq Cmd:

346 M111418

Method Sections To Run On A Barcode Mismatch
 (X) Full Method (X) Inject Anyway
 () Reprocessing Only () Don't Inject

Line Type	Vial	DataFile	Method	Sample Name
1	Blank		DFTPPBN3	
2	DailyCal	100	BLANK	
3	DFTPP	2	PRIMER	IXBN3 BNACCV50PPM;;;;;SV4270
4	DailyCal	1	DF0114B1	DFTPPBN3 DF0114B1;;;;;SV4242 8:09, 1/14
5	Sample	2	CCV050	IXBN3 BNACCV50PPM;;;;;SV4270
6	Sample	3	MDLCKW1	IXBN3 mdlchk-1ppm;1;1000;1000;1;UG/
7	Sample	4	MDLCKW2	IXBN3 mdlchk-2ppm;1;1000;1000;1;UG/
8	Sample	5	MDLCKW10	IXBN3 mdlchk-10ppm;1;1000;1000;1;UG
9	Sample	6	MDLCKS10	IXBN3 mdlchk-10ppm;1;15;1000;1;UG/K
10	Sample	7	MDLCKS2	IXBN3 mdlchk-2ppm;1;15;1000;1;UG/KG
11	Sample	8	MDLCKS1	IXBN3 mdlchk-1ppm;1;15;1000;1;UG/KG
12	Sample	9	0101902D	IXBN3 0801019-02;5;1060;1000;1;UG/L
13	Sample	10	0104005	IXBN3 0801040-05;1;1080;1000;1;UG/L
14	Sample	11	0104006	IXBN3 0801040-06;1;1080;1000;1;UG/L
15	Sample	12	0104007	IXBN3 0801040-07;1;1080;1000;1;UG/L
16	Sample	13	0104008	IXBN3 0801040-08;1;1070;1000;1;UG/L
17	Sample	14	0103208	IXBN3 0801032-08;1;1000;1000;1;UG/L
18	Sample	35	0103208D	IXBN3 0801032-08;5;1000;1000;1;UG/L
19	Blank	15	0103209	IXBN3 0801032-09;1;1020;1000;1;UG/L 15:42, 1/14
20	Blank	100	BLANK	DFTPPLOW
21	Blank	100	BLANK	DFTPPLOW
22	DailyCal	100	BLANK	DFTPPLOW
23	Sample	99	PRIMER1	PAHLOW LPAHCCV5PPM;;;;;SV4282
24	Sample	16	DF0114B2	DFTPPLOW DF0114B2;;;;;SV4283 17:36, 1/14
25	Sample	17	LPAHCAL8	PAHLOW LPAHCAL30PPM;;;;;SV4285-8
26	Sample	18	LPAHCAL7	PAHLOW LPAHCAL20PPM;;;;;SV4285-7
27	Sample	19	LPAHCAL6	PAHLOW LPAHCAL10PPM;;;;;SV4285-6
28	Sample	20	LPAHCAL5	PAHLOW LPAHCAL5PPM;;;;;SV4285-5
29	Sample	21	LPAHCAL4	PAHLOW LPAHCAL1PPM;;;;;SV4285-4
30	Sample	22	LPAHCAL3	PAHLOW LPAHCAL0.4PPM;;;;;SV4285-3
31	Sample	23	LPAHCAL2	PAHLOW LPAHCAL0.2PPM;;;;;SV4285-2
32	Sample	24	LPAHCAL1	PAHLOW LPAHCAL0.1PPM;;;;;SV4285-1
33	DailyCal	25	LPAHICV	PAHLOW LPAHICV5PPM;;;;;SV4286
34	Spike	99	LPAHCCV1	PAHLOW LPAHCCV5PPM;;;;;SV4282
35	Spike	26	MDLLPHS1	PAHLOW mdlchkslpah;1;15;500;1;UG/KG;
36	Spike	27	MDLLPHW1	PAHLOW mdlchkwlpah;1;1000;500;1;UG/L
37	Blank	28	S1LW1220	PAHLOW SBLK1220BW1LCS;1;1000;500;1;U
38	Spike	29	S1BW1220	PAHLOW SBLK1220BW1;1;1000;500;1;UG/L
39	Spike	30	S1LW1226	PAHLOW SBLK1226BW1LCS;1;1000;500;1;U
40	Blank	31	S1DW1226	PAHLOW SBLK1226BW1LCS;1;1000;500;1;UG/L
		32	S1BW1226	PAHLOW SBLK1226BW1;1;1000;500;1;UG/L 4:27, 1/15

MDC LINES
H2O/soil

LL PATTI'S

Sequence Name: C:\HPCHEM\1\SEQUENCE\011408B3.S
 Comment: SW846-8270C/625
 Operator: ADM
 Data Path: F:\HPCHEM\1\DATA\011408b3\
 Pre-Seq Cmd:
 Post-Seq Cmd:

3217

Method Sections To Run On A Barcode Mismatch
 (X) Full Method (X) Inject Anyway
 () Reprocessing Only () Don't Inject

Line	Sample Name/Misc Info
1	Type: Blank Vial: 100 Meth: DFTPPBN3.M Barcode: Data: BLANK.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
2	BNACCV50PPM;;;;;SV4270 ;2;;;;;all.sub;4269 Type: DailyCal Vial: 2 Meth: IXBN3.M Barcode: Data: PRIMER.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
3	DF0114B1;;;;;SV4242 ;3;DFTPP;;;;; Type: DFTPP Vial: 1 Meth: DFTPPBN3.M Barcode: Data: DF0114B1.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
4	BNACCV50PPM;;;;;SV4270 ;2;;;;;all.sub;4269 Type: DailyCal Vial: 2 Meth: IXBN3.M Barcode: Data: CCV050.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
5	mdlchk-1ppm;1;1000;1000;1;UG/L;10-JAN-2008 ;3;;;;;011008BW1;ppbna.sub;4276 Type: Sample Vial: 3 Meth: IXBN3.M Barcode: Data: MDLCKW1.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
6	mdlchk-2ppm;1;1000;1000;1;UG/L;10-JAN-2008 ;3;;;;;011008BW1;ppbna.sub;4276 Type: Sample Vial: 4 Meth: IXBN3.M Barcode: Data: MDLCKW2.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
7	mdlchk-10ppm;1;1000;1000;1;UG/L;10-JAN-2008 ;3;;;;;011008BW1;ppbna.sub;4276 Type: Sample Vial: 5 Meth: IXBN3.M Barcode: Data: MDLCKW10.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method

3218

8 Type: Sample mdlchk-10ppm;1;15;1000;1;UG/KG;10-JAN-2008
 Vial: 6 ;3;;;011008BS1;ppbna.sub;4276
 Meth: IXBN3.M Barcode:
 Data: MDLCKS10.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

9 Type: Sample mdlchk-2ppm;1;15;1000;1;UG/KG;10-JAN-2008
 Vial: 7 ;3;;;011008BS1;ppbna.sub;4276
 Meth: IXBN3.M Barcode:
 Data: MDLCKS2.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

10 Type: Sample mdlchk-1ppm;1;15;1000;1;UG/KG;10-JAN-2008
 Vial: 8 ;3;;;011008BS1;ppbna.sub;4276
 Meth: IXBN3.M Barcode:
 Data: MDLCKS1.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

11 Type: Sample 0801019-02;5;1060;1000;1;UG/L;09-JAN-2008
 Vial: 9 ch2.b01019;0;;;010908BW1;ppbna.sub;4276
 Meth: IXBN3.M Barcode:
 Data: 0101902.D Samp Amt: 0 Multiplr: 5
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

12 Type: Sample 0801040-05;1;1080;1000;1;UG/L;09-JAN-2008
 Vial: 10 ch2.b01040;0;;;010908BW1;ppbna.sub;4276
 Meth: IXBN3.M Barcode:
 Data: 0104005.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

13 Type: Sample 0801040-06;1;1080;1000;1;UG/L;09-JAN-2008
 Vial: 11 ch2.b01040;0;;;010908BW1;ppbna.sub;4276
 Meth: IXBN3.M Barcode:
 Data: 0104006.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

14 Type: Sample 0801040-07;1;1080;1000;1;UG/L;09-JAN-2008
 Vial: 12 ch2.b01040;0;;;010908BW1;ppbna.sub;4276
 Meth: IXBN3.M Barcode:
 Data: 0104007.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

15 Type: Sample 0801040-08;1;1070;1000;1;UG/L;09-JAN-2008
 Vial: 13 ch2.b01040;0;;;010908BW1;ppbna.sub;4276
 Meth: IXBN3.M Barcode:
 Data: 0104008.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

16 Type: Sample 0801032-08;1;1000;1000;1;UG/L;09-JAN-2008
 Vial: 14 ch2.b01032;0;;;010908BW1;ppbna.sub;4276
 Meth: IXBN3.M Barcode:
 Data: 0103208.D Samp Amt: 0 Multiplr: 1

Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

17 Type: Sample 0801032-08;5;1000;1000;1;UG/L;09-JAN-2008
 Vial: 35 ch2.b01032;0;;;010908BW1;ppbna.sub;4276
 Meth: IXBN3.M Barcode:
 Data: 0103208D.D Samp Amt: 0 Multiplr: 5
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

3219

18 Type: Sample 0801032-09;1;1020;1000;1;UG/L;09-JAN-2008
 Vial: 15 ch2.b01032;0;;;010908BW1;ppbna.sub;4276
 Meth: IXBN3.M Barcode:
 Data: 0103209.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

19 Type: Blank
 Vial: 100
 Meth: DFTPLOW.M Barcode:
 Data: BLANK.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

20 Type: Blank
 Vial: 100
 Meth: DFTPLOW.M Barcode:
 Data: BLANK.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

21 Type: Blank
 Vial: 100
 Meth: DFTPLOW.M Barcode:
 Data: BLANK.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

22 Type: DailyCal LPAHCCV5PPM;;;;;SV4282
 Vial: 99 ;2;;;;;pahsurr.sub;4277
 Meth: PAHLOW.M Barcode:
 Data: PRIMER1.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

23 Type: Sample DF0114B2;;;;;SV4283
 Vial: 16 ;;DFTPP;;;;
 Meth: DFTPLOW.M Barcode:
 Data: DF0114B2.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

24 Type: Sample LPAHCAL30PPM;;;;;SV4285-8
 Vial: 17 ;;;;;;pahsurr.sub;4277
 Meth: PAHLOW.M Barcode:
 Data: LPAHCAL8.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

25 Type: Sample LPAHCAL20PPM;;;;;SV4285-7

3220

Vial: 18 ;;;;;;pahsurr.sub;4277
 Meth: PAHLOW.M Barcode:
 Data: LPAHCAL7.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

26 Type: Sample LPAHCAL10PPM;;;;;SV4285-6
 Vial: 19 ;;;;;;pahsurr.sub;4277
 Meth: PAHLOW.M Barcode:
 Data: LPAHCAL6.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

27 Type: Sample LPAHCAL5PPM;;;;;SV4285-5
 Vial: 20 ;;;;;;pahsurr.sub;4277
 Meth: PAHLOW.M Barcode:
 Data: LPAHCAL5.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

28 Type: Sample LPAHCAL1PPM;;;;;SV4285-4
 Vial: 21 ;;;;;;pahsurr.sub;4277
 Meth: PAHLOW.M Barcode:
 Data: LPAHCAL4.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

29 Type: Sample LPAHCAL0.4PPM;;;;;SV4285-3
 Vial: 22 ;;;;;;pahsurr.sub;4277
 Meth: PAHLOW.M Barcode:
 Data: LPAHCAL3.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

30 Type: Sample LPAHCAL0.2PPM;;;;;SV4285-2
 Vial: 23 ;;;;;;pahsurr.sub;4277
 Meth: PAHLOW.M Barcode:
 Data: LPAHCAL2.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

31 Type: Sample LPAHCAL0.1PPM;;;;;SV4285-1
 Vial: 24 ;;;;;;pahsurr.sub;4277
 Meth: PAHLOW.M Barcode:
 Data: LPAHCAL1.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

32 Type: Sample LPAHICV5PPM;;;;;SV4286
 Vial: 25 ;;;;;;pahsurr.sub;4277
 Meth: PAHLOW.M Barcode:
 Data: LPAHICV.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method
 CR Database :per Method CR Spreadsheet :per Method

33 Type: DailyCal LPAHCCV5PPM;;;;;SV4282
 Vial: 99 ;2;;;;;pahsurr.sub;4277
 Meth: PAHLOW.M Barcode:
 Data: LPAHCCV1.D Samp Amt: 0 Multiplr: 1
 Area% Report :per Method Lib. Search Rep :per Method
 Quant Report :per Method Post-Quant Macro:per Method

CR Database	:per Method	CR Spreadsheet	:per Method
34 Type: Spike Vial: 26 Meth: PAHLOW.M Data: MDLLPHS1.D Area% Report Quant Report CR Database	mdlchkslpah;1;15;500;1;UG/KG;04-JAN-2008 ;3;;;010408BS2;pahsurr.sub;4277 Barcode: Samp Amt: 0	Multiplr: 1 Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method	
35 Type: Spike Vial: 27 Meth: PAHLOW.M Data: MDLLPHW1.D Area% Report Quant Report CR Database	mdlchkwlpah;1;1000;500;1;UG/L;04-JAN-2008 ;3;;;010408BW2;pahsurr.sub;4277 Barcode: Samp Amt: 0	Multiplr: 1 Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method	
36 Type: Spike Vial: 28 Meth: PAHLOW.M Data: S1LW1220.D Area% Report Quant Report CR Database	SBLK1220BW1LCS;1;1000;500;1;UG/L;20-DEC-2007 ;3;LCS;;;122007BW1;pahsurr.sub;4277 Barcode: Samp Amt: 0	Multiplr: 1 Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method	
37 Type: Blank Vial: 29 Meth: PAHLOW.M Data: S1BW1220.D Area% Report Quant Report CR Database	SBLK1220BW1;1;1000;500;1;UG/L;20-DEC-2007 ;3;BLANK;;;122007BW1;pahsurr.sub;4277 Barcode: Samp Amt: 0	Multiplr: 1 Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method	
38 Type: Spike Vial: 30 Meth: PAHLOW.M Data: S1LW1226.D Area% Report Quant Report CR Database	SBLK1226BW1LCS;1;1000;500;1;UG/L;26-DEC-2007 ;3;LCS;;;122607BW1;pahsurr.sub;4277 Barcode: Samp Amt: 0	Multiplr: 1 Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method	
39 Type: Spike Vial: 31 Meth: PAHLOW.M Data: S1DW1226.D Area% Report Quant Report CR Database	SBLK1226BW1LCS;1;1000;500;1;UG/L;26-DEC-2007 ;3;LCS;;;122607BW1;pahsurr.sub;4277 Barcode: Samp Amt: 0	Multiplr: 1 Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method	
40 Type: Blank Vial: 32 Meth: PAHLOW.M Data: S1BW1226.D Area% Report Quant Report CR Database	SBLK1226BW1;1;1000;500;1;UG/L;26-DEC-2007 ;3;BLANK;;;122607BW1;pahsurr.sub;4277 Barcode: Samp Amt: 0	Multiplr: 1 Lib. Search Rep :per Method Post-Quant Macro:per Method CR Spreadsheet :per Method	

3224

Sequence Name: C:\HPCHEM\1\SEQUENCE\080408B3.S

Comment: SW846-8270C/625

Operator: ADM

Data Path: F:\HPCHEM\1\DATA\080408b3\

Pre-Seq Cmd:

Post-Seq Cmd:

3640

M8/11/8

Method Sections To Run On A Barcode Mismatch
 (X) Full Method (X) Inject Anyway
 () Reprocessing Only () Don't Inject

LUPAH'S

Line Type	Vial	DataFile	Method	Sample Name
1 Sample	99	PRIMER	DFTPPLOW	
2 Sample	100	BLANK	DFTPPLOW	
3 DailyCal	2	PRIMER	PAHLOW1	LOWPAH5PPM;;;;; SV4460B
4 Sample	1	DF0804B1	DFTPPLOW	DF0804B1;;;;;SV4411 9:11, 8/4
5 DailyCal	2	LPAHCCV	PAHLOW1	LOWPAH5PPM;;;;; SV4460B
6 Blank	3	S1BW0729	PAHLOW1	SBLK0729BW1;1;1000;500;1;UG/L
7 Spike	4	S1LW0729	PAHLOW1	SBLK0729BW1LCS;1;1000;500;1;U
8 Spike	5	S1DW0729	PAHLOW1	SBLK0729BW1LCD;1;1000;500;1;U
9 Blank	6	S1BW0730	PAHLOW1	SBLK0730BW1;1;1000;500;1;UG/L
10 Spike	7	S1LW0730	PAHLOW1	SBLK0730BW1LCS;1;1000;500;1;U
11 Spike	8	S1DW0730	PAHLOW1	SBLK0730BW1LCD;1;1000;500;1;U
12 Sample	9	0721017	PAHLOW1	0807210-17;1;1080;500;1;UG/L;
13 Sample	10	0721018	PAHLOW1	0807210-18;1;1080;500;1;UG/L;
14 Sample	11	0721021	PAHLOW1	0807210-21;1;1080;500;1;UG/L;
15 Sample	12	0721022	PAHLOW1	0807210-22;1;1080;500;1;UG/L;
16 Sample	13	0721901	PAHLOW1	0807219-01;1;1080;500;1;UG/L;
17 Sample	14	0721902	PAHLOW1	0807219-02;1;1080;500;1;UG/L;
18 Sample	15	0721903	PAHLOW1	0807219-03;1;1080;500;1;UG/L;
19 Sample	16	0721904	PAHLOW1	0807219-04;1;1080;500;1;UG/L; - RE 10X
20 Sample	17	0721905	PAHLOW1	0807219-05;1;1080;500;1;UG/L; - RE 10X
21 Sample	18	0721906	PAHLOW1	0807219-06;1;1080;500;1;UG/L;
22 Sample	19	0721907	PAHLOW1	0807219-07;1;1080;500;1;UG/L;
23 Sample	20	0721908	PAHLOW1	0807219-08;1;1080;500;1;UG/L; 21:02, 8/4

Comment: SW846-8270C/625

Operator: ADM

Data Path: F:\HPCHEM\1\DATA\080408b3\

Pre-Seq Cmd:

Post-Seq Cmd:

3641

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Table with columns: Line, Sample Name/Misc Info. Contains 7 rows of sample data including vial numbers, methods (DFTPLOW.M, PAHLOW1.M, S1BW0729.D, S1LW0729.D), and various report options.

3642

8 Type: Spike SBLK0729BW1LCD;1;1000;500;1;UG/L;29-JUL-2008
Vial: 5 ;3;LCSD;;;072908BW1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: S1DW0729.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

9 Type: Blank SBLK0730BW1;1;1000;500;1;UG/L;30-JUL-2008
Vial: 6 ;3;BLANK;;;073008BW1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: S1BW0730.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

10 Type: Spike SBLK0730BW1LCS;1;1000;500;1;UG/L;30-JUL-2008
Vial: 7 ;3;LCS;;;073008BW1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: S1LW0730.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

11 Type: Spike SBLK0730BW1LCD;1;1000;500;1;UG/L;30-JUL-2008
Vial: 8 ;3;LCSD;;;073008BW1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: S1DW0730.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

12 Type: Sample 0807210-17;1;1080;500;1;UG/L;29-JUL-2008
Vial: 9 pip.b07210;0;;;072908BW1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: 0721017.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

13 Type: Sample 0807210-18;1;1080;500;1;UG/L;29-JUL-2008
Vial: 10 pip.b07210;0;;;072908BW1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: 0721018.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

14 Type: Sample 0807210-21;1;1080;500;1;UG/L;29-JUL-2008
Vial: 11 pip.b07210;0;;;072908BW1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: 0721021.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

15 Type: Sample 0807210-22;1;1080;500;1;UG/L;29-JUL-2008
Vial: 12 pip.b07210;0;;;072908BW1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: 0721022.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

16 Type: Sample 0807219-01;1;1080;500;1;UG/L;30-JUL-2008
Vial: 13 tet.b07219;0;;;073008BW1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: 0721901.D Samp Amt: 0 Multiplr: 50

	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method
17	Type: Sample	0807219-02;1;1080;500;1;UG/L;30-JUL-2008		
	Vial: 14	tet.b07219;0;;;073008BW1;pahsurr.sub;4432		
	Meth: PAHLOW1.M	Barcode:		
	Data: 0721902.D	Samp Amt: 0	Multiplr: 50	
	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method
18	Type: Sample	0807219-03;1;1080;500;1;UG/L;30-JUL-2008		
	Vial: 15	tet.b07219;0;;;073008BW1;pahsurr.sub;4432		
	Meth: PAHLOW1.M	Barcode:		
	Data: 0721903.D	Samp Amt: 0	Multiplr: 50	
	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method
19	Type: Sample	0807219-04;1;1080;500;1;UG/L;30-JUL-2008		
	Vial: 16	tet.b07219;0;;;073008BW1;pahsurr.sub;4432		
	Meth: PAHLOW1.M	Barcode:		
	Data: 0721904.D	Samp Amt: 0	Multiplr: 50	
	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method
20	Type: Sample	0807219-05;1;1080;500;1;UG/L;30-JUL-2008		
	Vial: 17	tet.b07219;0;;;073008BW1;pahsurr.sub;4432		
	Meth: PAHLOW1.M	Barcode:		
	Data: 0721905.D	Samp Amt: 0	Multiplr: 50	
	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method
21	Type: Sample	0807219-06;1;1080;500;1;UG/L;30-JUL-2008		
	Vial: 18	tet.b07219;0;;;073008BW1;pahsurr.sub;4432		
	Meth: PAHLOW1.M	Barcode:		
	Data: 0721906.D	Samp Amt: 0	Multiplr: 50	
	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method
22	Type: Sample	0807219-07;1;1080;500;1;UG/L;30-JUL-2008		
	Vial: 19	tet.b07219;0;;;073008BW1;pahsurr.sub;4432		
	Meth: PAHLOW1.M	Barcode:		
	Data: 0721907.D	Samp Amt: 0	Multiplr: 50	
	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method
23	Type: Sample	0807219-08;1;1080;500;1;UG/L;30-JUL-2008		
	Vial: 20	tet.b07219;0;;;073008BW1;pahsurr.sub;4432		
	Meth: PAHLOW1.M	Barcode:		
	Data: 0721908.D	Samp Amt: 0	Multiplr: 50	
	Area% Report	:per Method	Lib. Search Rep	:per Method
	Quant Report	:per Method	Post-Quant Macro	:per Method
	CR Database	:per Method	CR Spreadsheet	:per Method

3643

Sequence Name: C:\HPCHEM\1\SEQUENCE\080508B3.S
 Comment: SW846-8270C/625
 Operator: ADM
 Data Path: F:\HPCHEM\1\DATA\080508b3\
 Pre-Seq Cmd:
 Post-Seq Cmd:

3644

M 8/5/08

Method Sections To Run On A Barcode Mismatch
 (X) Full Method (X) Inject Anyway
 () Reprocessing Only () Don't Inject

LLPAH's

Line Type	Vial	DataFile	Method	Sample Name
1 Sample	99	PRIMER	DFTPPLOW	
2 Sample	100	BLANK	DFTPPLOW	
3 DailyCal	2	PRIMER	PAHLOW1	LOWPAH5PPM;;;;; SV4460B
4 Sample	1	DF0805B1	DFTPPLOW	DF0805B1;;;;; SV4411 9:10, 8/5
5 DailyCal	2	LPAHCCV	PAHLOW1	LOWPAH5PPM;;;;; SV4460B
6 Blank	3	S1BW0731	PAHLOW1	SBLK0731BW1;1;1000;500;1;UG/L
7 Spike	4	S1LW0731	PAHLOW1	SBLK0731BW1LCS;1;1000;500;1;U
8 Spike	5	S1DW0731	PAHLOW1	SBLK0731BW1LCD;1;1000;500;1;U
9 Blank	6	S1BS0804	PAHLOW1	SBLK0804BS1;1;15;500;1;UG/KG;
10 Spike	7	S1LS0804	PAHLOW1	SBLK0804BS1LCS;1;15;500;1;UG/
11 Spike	8	S1DS0804	PAHLOW1	SBLK0804BS1LCSD;1;15;500;1;UG
12 Sample	9	0724505	PAHLOW1	0807245-05;1;1000;500;1;UG/L;
13 Sample	10	0724506	PAHLOW1	0807245-06;1;1000;500;1;UG/L;
14 Sample	11	0724507	PAHLOW1	0807245-07;1;1000;500;1;UG/L;
15 Sample	12	0724508	PAHLOW1	0807245-08;1;1000;500;1;UG/L;
16 Sample	13	0724509	PAHLOW1	0807245-09;1;1000;500;1;UG/L;
17 Sample	14	0721904D	PAHLOW1	0807219-04;10;1080;500;1;UG/L
18 Sample	15	0721905D	PAHLOW1	0807219-05;10;1080;500;1;UG/L
19 Sample	16	0724501	PAHLOW1	0807245-01;1;15;500;1;UG/KG;0
20 Sample	17	0724502	PAHLOW1	0807245-02;1;15;500;1;UG/KG;0
21 Sample	18	0724503	PAHLOW1	0807245-03;1;15;500;1;UG/KG;0
22 Sample	19	0724504	PAHLOW1	0807245-04;1;15;500;1;UG/KG;0 20.29, 8/5

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Method Sections To Run On A Barcode Mismatch
 (X) Full Method (X) Inject Anyway
 () Reprocessing Only () Don't Inject

Line	Sample Name/Misc Info
1	Type: Sample Vial: 99 Meth: DFTPLOW.M Barcode: Data: PRIMER.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
2	Type: Sample Vial: 100 Meth: DFTPLOW.M Barcode: Data: BLANK.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
3	Type: DailyCal LOWPAH5PPM;;;;; SV4460B Vial: 2 ;2;;;;;pahsurr.sub;4432 Meth: PAHLOW1.M Barcode: Data: PRIMER.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
4	Type: Sample DF0805B1;;;;;SV4411 Vial: 1 ;3;DFTPP;;;;; Meth: DFTPLOW.M Barcode: Data: DF0805B1.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
5	Type: DailyCal LOWPAH5PPM;;;;; SV4460B Vial: 2 ;2;;;;;pahsurr.sub;4432 Meth: PAHLOW1.M Barcode: Data: LPAHCCV.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
6	Type: Blank SBLK0731BW1;1;1000;500;1;UG/L;31-JUL-2008 Vial: 3 ;3;BLANK;;;073108BW1;pahsurr.sub;4432 Meth: PAHLOW1.M Barcode: Data: S1BW0731.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method
7	Type: Spike SBLK0731BW1LCS;1;1000;500;1;UG/L;31-JUL-2008 Vial: 4 ;3;LCS;;;073108BW1;pahsurr.sub;4432 Meth: PAHLOW1.M Barcode: Data: S1LW0731.D Samp Amt: 0 Multiplr: 1 Area% Report :per Method Lib. Search Rep :per Method Quant Report :per Method Post-Quant Macro:per Method CR Database :per Method CR Spreadsheet :per Method

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8  Type: Spike          SBLK0731BW1LCD;1;1000;500;1;UG/L;31-JUL-2008
   Vial: 5              ;3;LCSD;;;073108BW1;pahsurr.sub;4432
   Meth: PAHLOW1.M     Barcode:
   Data: S1DW0731.D    Samp Amt: 0           Multiplr: 1
   Area% Report        :per Method          Lib. Search Rep :per Method
   Quant Report        :per Method          Post-Quant Macro:per Method
   CR Database         :per Method          CR Spreadsheet  :per Method
-----
9  Type: Blank          SBLK0804BS1;1;15;500;1;UG/KG;04-AUG-2008
   Vial: 6              ;3;BLANK;;;080408BS1;pahsurr.sub;4432
   Meth: PAHLOW1.M     Barcode:
   Data: S1BS0804.D    Samp Amt: 0           Multiplr: 1
   Area% Report        :per Method          Lib. Search Rep :per Method
   Quant Report        :per Method          Post-Quant Macro:per Method
   CR Database         :per Method          CR Spreadsheet  :per Method
-----
10 Type: Spike          SBLK0804BS1LCS;1;15;500;1;UG/KG;04-AUG-2008
   Vial: 7              ;3;LCS;;;080408BS1;pahsurr.sub;4432
   Meth: PAHLOW1.M     Barcode:
   Data: S1LS0804.D    Samp Amt: 0           Multiplr: 1
   Area% Report        :per Method          Lib. Search Rep :per Method
   Quant Report        :per Method          Post-Quant Macro:per Method
   CR Database         :per Method          CR Spreadsheet  :per Method
-----
11 Type: Spike          SBLK0804BS1LCSD;1;15;500;1;UG/KG;04-AUG-2008
   Vial: 8              ;3;LCSD;;;080408BS1;pahsurr.sub;4432
   Meth: PAHLOW1.M     Barcode:
   Data: S1DS0804.D    Samp Amt: 0           Multiplr: 1
   Area% Report        :per Method          Lib. Search Rep :per Method
   Quant Report        :per Method          Post-Quant Macro:per Method
   CR Database         :per Method          CR Spreadsheet  :per Method
-----
12 Type: Sample        0807245-05;1;1000;500;1;UG/L;31-JUL-2008
   Vial: 9              arc.b07245;0;;;073108BW1;pahsurr.sub;4432
   Meth: PAHLOW1.M     Barcode:
   Data: 0724505.D    Samp Amt: 0           Multiplr: 1
   Area% Report        :per Method          Lib. Search Rep :per Method
   Quant Report        :per Method          Post-Quant Macro:per Method
   CR Database         :per Method          CR Spreadsheet  :per Method
-----
13 Type: Sample        0807245-06;1;1000;500;1;UG/L;31-JUL-2008
   Vial: 10             arc.b07245;0;;;073108BW1;pahsurr.sub;4432
   Meth: PAHLOW1.M     Barcode:
   Data: 0724506.D    Samp Amt: 0           Multiplr: 1
   Area% Report        :per Method          Lib. Search Rep :per Method
   Quant Report        :per Method          Post-Quant Macro:per Method
   CR Database         :per Method          CR Spreadsheet  :per Method
-----
14 Type: Sample        0807245-07;1;1000;500;1;UG/L;31-JUL-2008
   Vial: 11             arc.b07245;0;;;073108BW1;pahsurr.sub;4432
   Meth: PAHLOW1.M     Barcode:
   Data: 0724507.D    Samp Amt: 0           Multiplr: 1
   Area% Report        :per Method          Lib. Search Rep :per Method
   Quant Report        :per Method          Post-Quant Macro:per Method
   CR Database         :per Method          CR Spreadsheet  :per Method
-----
15 Type: Sample        0807245-08;1;1000;500;1;UG/L;31-JUL-2008
   Vial: 12             arc.b07245;0;;;073108BW1;pahsurr.sub;4432
   Meth: PAHLOW1.M     Barcode:
   Data: 0724508.D    Samp Amt: 0           Multiplr: 1
   Area% Report        :per Method          Lib. Search Rep :per Method
   Quant Report        :per Method          Post-Quant Macro:per Method
   CR Database         :per Method          CR Spreadsheet  :per Method
-----
16 Type: Sample        0807245-09;1;1000;500;1;UG/L;31-JUL-2008
   Vial: 13             arc.b07245;0;;;073108BW1;pahsurr.sub;4432
   Meth: PAHLOW1.M     Barcode:
   Data: 0724509.D    Samp Amt: 0           Multiplr: 1
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Area% Report	:per Method	Lib. Search Rep	:per Method
Quant Report	:per Method	Post-Quant Macro	:per Method
CR Database	:per Method	CR Spreadsheet	:per Method

17 Type: Sample 0807219-04;10;1080;500;1;UG/L;30-JUL-2008
Vial: 14 tet.b07219;0;;;073008BW1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: 0721904D.D Samp Amt: 0 Multiplr: 10
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

18 Type: Sample 0807219-05;10;1080;500;1;UG/L;30-JUL-2008
Vial: 15 tet.b07219;0;;;073008BW1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: 0721905D.D Samp Amt: 0 Multiplr: 10
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

19 Type: Sample 0807245-01;1;15;500;1;UG/KG;04-AUG-2008
Vial: 16 arc.b07245;0;;;080408BS1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: 0724501.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

20 Type: Sample 0807245-02;1;15;500;1;UG/KG;04-AUG-2008
Vial: 17 arc.b07245;0;;;080408BS1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: 0724502.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

21 Type: Sample 0807245-03;1;15;500;1;UG/KG;04-AUG-2008
Vial: 18 arc.b07245;0;;;080408BS1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: 0724503.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

22 Type: Sample 0807245-04;1;15;500;1;UG/KG;04-AUG-2008
Vial: 19 arc.b07245;0;;;080408BS1;pahsurr.sub;4432
Meth: PAHLOW1.M Barcode:
Data: 0724504.D Samp Amt: 0 Multiplr: 1
Area% Report :per Method Lib. Search Rep :per Method
Quant Report :per Method Post-Quant Macro:per Method
CR Database :per Method CR Spreadsheet :per Method

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Empirical Laboratories
 EMPIRICAL LABORATORIES, LLC
 LABORATORY SAMPLE CUSTODY FORM
 WALK-IN REFRIGERATOR

Sample Log # (s)	Time/Date/Initials Removed	Time/Date/Initials Returned (Note if all Sample Used)	Notes/Comments	Task Performed
0807177	8:50 7-29-08 TES	KH 7/29/08 9:45		Metals
7210 77, 18, 21, 22	9:50 7/29/08 AF		Used all	ILPAH
7205-15, 16	↓		Used all	PIPUS
7205-15, 16 7198-5			Used all	BNA
7220-01-04	7/29/08 10:20 (CAL)	7/29/08 12:21 (CAL)		TSS/VSS
7095-01 7180-01 7177-01, 02 7205-15, 16	10:22 7/29/08 KBG	11:15 KBZ 7/29/08		Hg
7205-01-03 7205-04-03 7206-01-03	AH 10:50 7/29	7/29/08 14:30 (CAL)		AIK/VFA
7210-01-707, 09 7224-01 7072-01	12:00 KBZ 7/29/08	15:20 KOG 7/29/08		Anions
7150-01 7153-01	CT 8:15 7/28/08	CT 3:43 7/30/08		NH ₄
7157-01 7164-01 7168-01				
7187-01 7208-01-706				
7210-01-709 7254-0107				
6007, 01, 6012-01 6009-02, 5, 6	KH 9:15 7/30/08	KH 10:04 7/30/08		Metals
7219-1-B 7219-1-0	(CAL) 9:24 7/30/08	Used all		FLEPRO ILPAH
7234-01-04	7/30/08 11:05 (CAL)	7/30/08 13:00 (CAL)		VSS/TSS
7150-01 7153-01				
7108-01 7164-01 7187-01				
7208-01-706 7210-01-709	CT 6:10 7/31/08	CT 7:31/08 7:33		NH ₄ Averance
7205-0107 7145-01A				
7249-01-04	7/31/08 0900 (CAL)	7/31/08 14:30 (CAL)		BOD/CBOD

HOBART SAMPLE EXTRACT CUSTODY FORM

Sample Log #	Matrix	Time/Date/Initial		Procedure for Sample Handling						
		Inscribed	Removed	Sealing/Clipping	RE-TEST	Analysis	Preparation	Preparation	Preparation	Preparation
7176 1-12	EXP	7126108 d 910	7126108 0605			X				
7196-1-35-9	EPH	2:45 AF 7128/08								Y
7209-1-10 7220-1-3	EVP	3:40 AF 7178/08								Y
7205-1-14	PIPCB	4:22 AF 7125/08								6
7200-1-2			7129108 9:15 AF taken to analyst			X				
7076-10,11 7135-2-7	DRO	1:20 / J.H. 7-29-08	1:00 / J.H. 7-29-08		X					
7191-1-4 7201-01	PCB	1:15 / J.H. 7-29-08	1:40 / J.H. 7-29-08			X				
7209-1-10 7220-1-3	EXPL	4:15 / J.H. 7-29-08	1:40 / J.H. 7-29-08			X				
7118-22	EXP		1:14 / J.H. 7-29-08							Y
7205-15,16	PIPCB	3:25 AF 7129108								X
7198-5 7205-15,16 7205-17,14	BNA	3:25 AF 7129108								X
7210-11,18,21,22 7227-1-13	UPAH	4:00 AF 7129108								X
7227-1-13	LL PART	15:10 7/30/08 B7D	5:25 / 130/08							✓
7220-1-3	RB	1:15 / J.H. 7-30-08	1:30 / J.H. 7-30-08 AF taken to analyst			X				
7219-1-8 7217-1-8	UPAH PACED	5:09 7/30/08								

HOBART SAMPLE EXTRACT CUSTODY FORM

Sample ID	Fraction	Time/Date/Initials		Comments (to describe the sample)					
		Inserted	Removed	Sealing/Chilling	Re-Analysed	Analysis	Storage	Returned to Lab	Returned to Custodian
7196-1-3, 5-9 7196-10, 11	TN EPH	8/1/08 1450	J.H. 5:25 PM / 7-30-08			X			
7227-1-13 7236-1-3	LL PAH	07:20 8/01/08 BTA	5:00 7/31/08			✓			
7205-15, 16, 7198-5 7202-1-14	SWA	07:20 8/01/08 BTA	↓			✓			
7230-1	Exp	8AM 7/31/08 AP							X
7230-01	Exp	147/31/08 1545	147/31/08 1330			X			
7231-01 7242-1-4 7241-1-4 7243-1-2 7244-1		↓	TARBENTU ANALYST 147/31/08 BTA			X			
7252-1-6	PCB	1140 AP 7/31/08 ✓							X
7252-1-6	PCB	500 J.H. 5 PM / 7-31-08	710 J.H. 7 PM / 7-31-08	X		X			
7245-1-4 7252-7-10 7245-5-9	LLPAH	10:4:17 7/31/08							
7249-01-04 7229-01-01 7222-1	PCB	↓							
7219-01-08 7210-17, 18, 21, 22	LLPAH	8-1-08 1:15 PM (8M)	06:45 8/01/08 BTA			X			
7253-07-10	LLPAH	↓	↓			X			
7118-22	Exp	14 7/1/08 1511	147 8/1/08 1400			X			
7242-3 7241-01-02, 04	Exp	↓	147 8/1/08 1410			X		X	
7231-01	Exp	147 8/1/08 1630	147 8/1/08 1511			X			

HOBART SAMPLE EXTRACT CUSTODY FORM

Sample Log #'s	Fraction	Time/Date/Initials		Reasons for Inserting/Removal						
		Inserted	Removed	Screening/Cleanup	Re-Analysis	Analysis	Dilution	Begin Inserted in Process	Extract Inserted Completed	
8007-509-01	OCB Waste	3:53 8/5/08								
8001-4 8014-2 8002-1 8012-1-3	PIRB	4:05 AF 8/5/08								X
8002-1 8014-2	BNA	4:05 AF 8/5/08								X
8018-14.5	Evy	11/8/5/08 1625	8/5/08 11:15				X			
7205-12 8002-01 7257-01 8014-02	BNA		06:45 8/6/08 BTD				X			
8017-11,12 8022-01	LLPAH		↓				X			
7252-07-10 Dilutions x2, x10	LLPAH		↓				X			
7118-19, 20, 26 8001-04; 8002-01 8002-1-3; 8014-02	P/P		11:00 J.H. 8/6-08		X	X				
7205-1-14 7205-15,14	P/P		↓				X			
7219-1-8	FL FLO		12:45 J.H. 8/6-08				X			
8017-13-14 8002-12-4	LLPAH	1:27 8/6/08								

added to 080408BWI ←

FORM 1
 PRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-1406-16

Lab Name: EMPIRICAL LABS Contract: TETRATECH
 Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002
 Matrix: (soil/water) WATER Lab Sample ID: 0807219-03
 Sample wt/vol: 1080 (g/mL) ML Lab File ID: 010R0101
 % Moisture: _____ decanted: (Y/N) ____ Date Sampled: 07/24/08 13:55
 Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08
 Concentrated Extract Volume: 2.0 (mL) Date Analyzed: 08/06/08 19:23
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L			
		MDL	RL	CONC	Q
PRO-8-40-----	Petroleum Range _____	0.16	0.46	3.5	

FORM 1
 PRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW04

Lab Name: EMPIRICAL LABS Contract: TETRATECH

Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-02

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 009R0101

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/24/08 12:28

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 2.0 (mL) Date Analyzed: 08/06/08 18:41

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L
 MDL RL CONC Q

CAS NO.	COMPOUND	MDL	RL	CONC	Q
PRO-8-40-----	Petroleum Range _____	0.16	0.46	10	

FORM 1
 PRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW01

Lab Name: EMPIRICAL LABS Contract: TETRATECH

Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-01

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 008R0101

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/24/08 11:35

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 2.0 (mL) Date Analyzed: 08/06/08 17:58

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L
 MDL RL CONC Q

CAS NO.	COMPOUND	MDL	RL	CONC	Q
PRO-8-40-----	Petroleum Range _____	0.16	0.46	0.27	I

FORM 1
 PRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW03

Lab Name: EMPIRICAL LABS Contract: TETRATECH

Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-04

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 003R0101

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/24/08 14:25

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 2.0 (mL) Date Analyzed: 08/07/08 12:45

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L
 MDL RL CONC Q

CAS NO.	COMPOUND	MDL	RL	CONC	Q
PRO-8-40-----	Petroleum Range _____	1.6	4.6	34	D

FORM 1
 PRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A+D-RW02

Lab Name: EMPIRICAL LABS Contract: TETRATECH

Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-05

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 004R0101

% Moisture: _____ decanted: (Y/N) ____ Date Sampled: 07/24/08 15:20

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 2.0 (mL) Date Analyzed: 08/07/08 13:27

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:		
		MDL	(ug/L or ug/Kg) RL CONC	MG/L Q

PRO-8-40-----Petroleum Range _____	1.6	4.6	30	D
------------------------------------	-----	-----	----	---

FORM 1
 PRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

351-2-MW02

Lab Name: EMPIRICAL LABS Contract: TETRATECH

Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-06

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 013R0101

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/25/08 12:00

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 2.0 (mL) Date Analyzed: 08/06/08 21:31

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L
 MDL RL CONC Q

CAS NO.	COMPOUND	MDL	RL	CONC	Q
PRO-8-40-----	Petroleum Range _____	0.16	0.46		U

FORM 1
 PRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

351-2-MW04

Lab Name: EMPIRICAL LABS Contract: TETRATECH

Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-07

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 014R0101

% Moisture: _____ decanted: (Y/N)____ Date Sampled: 07/25/08 12:33

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 2.0 (mL) Date Analyzed: 08/06/08 22:13

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:	(ug/L or ug/Kg)	MG/L
		MDL	RL	CONC
				Q

PRO-8-40-----Petroleum Range _____	0.16	0.46		U
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FORM 1
 PRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

351-2-MW01

Lab Name: EMPIRICAL LABS Contract: TETRATECH

Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: 0807219-08

Sample wt/vol: 1080 (g/mL) ML Lab File ID: 015R0101

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: 07/25/08 13:10

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 2.0 (mL) Date Analyzed: 08/06/08 22:56

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS:	(ug/L or ug/Kg)	MG/L
		MDL	RL	CONC
				Q

PRO-8-40-----Petroleum Range _____	0.16	0.46	0.85	
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FORM 2
WATER PRO SURROGATE RECOVERY

Lab Name: EMPIRICAL LABS Contract: TETRATECH

Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002

Column(1) : ZB-5 ID: 0.32 (mm)

	CLIENT SAMPLE NO.	S1 %REC #	FBP %REC #	S3 %REC #	S4 %REC #	S5 %REC #	S6 %REC #	TOT OUT
01	FW1BLK0730	97	83					0
02	FW1BLK0730LC	95	86					0
03	FW1BLK0730LC	99	91					0
04	A+D-RW01	101	84					0
05	A+D-RW04	114	106					0
06	A+D-1406-16	92	82					0
07	351-2-MW02	104	84					0
08	351-2-MW04	96	81					0
09	351-2-MW01	96	74					0
10	A+D-RW03	84D	60D					0
11	A+D-RW02	85D	84D					0
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

		EL	SPIKE
		QC LIMITS	CONC (mg/L)
S1	= Ortho-Terphenyl	(30-140)	0.050
S2 (FBP)	= 2-Fluorobiphenyl	(50-150)	0.050

Column to be used to flag recovery values
 * Values outside of QC limits
 D Surrogate results reported from a diluted analysis

FORM 3
WATER PRO LAB CONTROL SAMPLE

Lab Name: EMPIRICAL LABS Contract: TETRATECH
 Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002
 Matrix Spike - Client Sample No.: FW1BLK0730

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC #	QC. LIMITS REC.
Petroleum Range	3.200	0.0000	3.129	98	55-118

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC #	% RPD #	QC LIMITS RPD	REC.
Petroleum Range	3.200	3.189	100	2	30	55-118

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits
 Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

FORM 4
 PRO METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

FW1BLK0730

Lab Name: EMPIRICAL LABS Contract: TETRATECH

Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002

Lab Sample ID: FW1BLK0730 Lab File ID: 005R0101

Matrix (soil/water) WATER Extraction: (SepF/Cont/Sonc/Soxh) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 07/30/08

Date Analyzed (1): 08/06/08 Date Analyzed (2):

Time Analyzed (1): 1556 Time Analyzed (2):

Instrument ID (1): GCTCDFID Instrument ID (2):

Column (1): ZB-5 ID: 0.32 (mm) Column (2): ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	FW1BLK0730LC	FW1BLK0730LCS	08/06/08	
02	FW1BLK0730LC	FW1BLK0730LCSD	08/06/08	
03	A+D-RW01	0807219-01	08/06/08	
04	A+D-RW04	0807219-02	08/06/08	
05	A+D-1406-16	0807219-03	08/06/08	
06	351-2-MW02	0807219-06	08/06/08	
07	351-2-MW04	0807219-07	08/06/08	
08	351-2-MW01	0807219-08	08/06/08	
09	A+D-RW03	0807219-04	08/07/08	
10	A+D-RW02	0807219-05	08/07/08	
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: _____

FORM 1
 PRO ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

FW1BLK0730

Lab Name: EMPIRICAL LABS Contract: TETRATECH

Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002

Matrix: (soil/water) WATER Lab Sample ID: FW1BLK0730

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 005R0101

% Moisture: _____ decanted: (Y/N) _____ Date Sampled: _____

Extraction: (SepF/Cont/Sonc/Soxh) SEPF Date Extracted: 07/30/08

Concentrated Extract Volume: 2.0 (mL) Date Analyzed: 08/06/08 15:56

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: NA Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) MG/L
 MDL RL CONC Q

CAS NO.	COMPOUND	MDL	RL	CONC	Q
PRO-8-40-----	Petroleum Range _____	0.17	0.50		U

FORM 6
PRO ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:
 Lab Code: EL Case No.: SAS No.: NA SDG No.: SDGA38549
 Instrument ID: GCTCDFID Calibration Date(s): 07/05/08 07/05/08
 Column: ZB-5 ID: 0.32 (mm) Calibration Time(s): 1511 1843
 LAB FILE ID: RF8500: 002R0201 RF5950: 003R0201 RF4250: 004R0201
 RF2550: 005R0201 RF850: 006R0201

COMPOUND	RF8500	RF5950	RF4250	RF2550	RF850
Petroleum Range	x 755.251	o 746.226	811.872	x 834.559	x 898.141
Ortho-Terphenyl	1387.280	1346.960	x 1438.440	1493.880	1476.320
2-Fluorobiphenyl	o 1435.040	x 1364.880	o 1359.560	o 1384.400	o 1326.960

J.H. 7.7.08
B70 7/8/8

FORM 6
PRO ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:

Lab Code: EL Case No.: SAS No.: NA SDG No.: SDGA38549

Instrument ID: GCTCDFID Calibration Date(s): 07/05/08 07/05/08

Column: ZB-5 ID: 0.32 (mm) Calibration Time(s): 1511 1843

RF85: 007R0201

COMPOUND	RF85	CURVE	COEFFICIENT A1	%RSD OR R ²
Petroleum Range	952.059	AVRG	833.018031	9.7
Ortho-Terphenyl	1653.600	AVRG	1466.08000	7.3
2-Fluorobiphenyl	1425.160	AVRG	1382.66667	3.0

FORM 6
PRO ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:

Lab Code: EL Case No.: SAS No.: NA SDG No.: SDGA38549

Instrument ID: GCTCDFID Calibration Date(s): 07/05/08 07/05/08

Column: ZB-5 ID: 0.32 (mm) Calibration Time(s): 1511 1843

LAB FILE ID: RT1: 002R0201 RT2: 003R0201 RT3: 004R0201
RT4: 005R0201 RT5: 006R0201

COMPOUND	RT1	RT2	RT3	RT4	RT5
=====	=====	=====	=====	=====	=====
Petroleum Range	15.439	15.439	15.439	15.439	15.439
=====	=====	=====	=====	=====	=====
Ortho-Terphenyl	14.570	14.567	14.567	14.567	14.563
2-Fluorobiphenyl	8.420	8.417	8.417	8.417	8.417

FORM 6
PRO ORGANICS INITIAL CALIBRATION DATA

Lab Name: EMPIRICAL LABS Contract:
 Lab Code: EL Case No.: SAS No.: NA SDG No.: SDGA38549
 Instrument ID: GCTCDFID Calibration Date(s): 07/05/08 07/05/08
 Column: ZB-5 ID: 0.32 (mm) Calibration Time(s): 1511 1843

RT6: 007R0201

COMPOUND	RT6	MEAN RT	RT WINDOW	
			FROM	TO
Petroleum Range	15.439	15.439	1.137	29.740
Ortho-Terphenyl	14.567	14.567	14.427	14.707
2-Fluorobiphenyl	8.417	8.417	8.367	8.467

Data File: 008R0201.D
Report Date: 06-Jul-2008 18:41

J.H. 7.7.08
BTD 7/8/08

Empirical Laboratories, LLC

ICV ~~CONTINUING CALIBRATION~~ COMPOUNDS

Instrument ID: gctcdfid.i Injection Date: 05-JUL-2008 19:26
Lab File ID: 008R0201.D Init. Cal. Date(s): 16-MAR-2007 05-JUL-2008
Analysis Type: SOIL Init. Cal. Times: 10:21 18:43
Lab Sample ID: PRO ICV #7020 Quant Type: ESTD
Method: \\ELABNSH05\TARGET\chem\gctcdfid.i\070508.b\070508.b\FLPROR.m

COMPOUND	RRF	RF4250	MIN RRF	%D	MAX %D
S 1 Petroleum Range	833	872	0.010	11.2	20.0

Data File: 004R0101.D
Report Date: 07-Aug-2008 12:22

J.H. 8-7-08
14 8/7/08

Empirical Laboratories, LLC
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gctcdfid.i Injection Date: 06-AUG-2008 14:42
Lab File ID: 004R0101.D Init. Cal. Date(s): 16-MAR-2007 05-JUL-2008
Analysis Type: Init. Cal. Times: 10:21 18:43
Lab Sample ID: PRO 4250 #7055G Quant Type: ESTD
Method: \\ELABNSH05\TARGET\chem\gctcdfid.i\080608.b\080608.b\FLPROR.m

COMPOUND	RRF	RF4250	MIN RRF	%D	MAX %D
S 1 Petroleum Range	833	X 855	0.010	2.6	25.0
\$ 2 2-Fluorobiphenyl	1383	- 1300	0.010	-6.0	25.0
\$ 3 Ortho-Terphenyl	1466	1413	0.010	-3.6	25.0

Data File: 016R0101.D
Report Date: 07-Aug-2008 12:22

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J.H. 8-7-08
4/2/08

Empirical Laboratories, LLC
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gctcdfid.i Injection Date: 06-AUG-2008 23:39
Lab File ID: 016R0101.D Init. Cal. Date(s): 16-MAR-2007 05-JUL-2008
Analysis Type: Init. Cal. Times: 10:21 18:43
Lab Sample ID: PRO 4250 #7055G Quant Type: ESTD
Method: \\ELABNSH05\TARGET\chem\gctcdfid.i\080608.b\080608.b\FLPROR.m

COMPOUND	RRF	RF4250	MIN RRF	%D	MAX %D
S 1 Petroleum Range	833	857	0.010	2.8	25.0
\$ 2 2-Fluorobiphenyl	1383	X 1322	0.010	-4.4	25.0
\$ 3 Ortho-Terphenyl	1466	1390	0.010	-5.2	25.0

Empirical Laboratories, LLC
CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gctcdfid.i Injection Date: 07-AUG-2008 12:02
Lab File ID: 002R0101.D Init. Cal. Date(s): 16-MAR-2007 05-JUL-2008
Analysis Type: Init. Cal. Times: 10:21 18:43
Lab Sample ID: PRO 4250 #7055G Quant Type: ESTD
Method: \\ELABNSH05\TARGET\chem\gctcdfid.i\080708.b\080708.b\FLPROR.m

COMPOUND	RRF	RF4250	MIN RRF	%D	MAX %D
S 1 Petroleum Range	833	837	0.010	0.5	25.0
\$ 2 2-Fluorobiphenyl	1383	1215	0.010	-12.1	25.0
\$ 3 Ortho-Terphenyl	1466	X 1347	0.010	-8.1	25.0

Data File: 005R0101.D
Report Date: 07-Aug-2008 14:56

Page 2

J.H. 8.7.08
14/9/17/07

Empirical Laboratories, LLC

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gctcdfid.i Injection Date: 07-AUG-2008 14:10
Lab File ID: 005R0101.D Init. Cal. Date(s): 16-MAR-2007 05-JUL-2008
Analysis Type: Init. Cal. Times: 10:21 18:43
Lab Sample ID: PRO 4250 #7055G Quant Type: ESTD
Method: \\ELABNSH05\TARGET\chem\gctcdfid.i\080708.b\080708.b\FLPROR.m

COMPOUND	RRF	RF4250	MIN RRF	%D	MAX %D
S 1 Petroleum Range	833	X 876	0.010	5.1	25.0
\$ 2 2-Fluorobiphenyl	1383	1379	0.010	-0.3	25.0
\$ 3 Ortho-Terphenyl	1466	1451	0.010	-1.0	25.0

FORM 8
PRO ANALYTICAL SEQUENCE

Lab Name: EMPIRICAL LABS Contract:

Lab Code: EL Case No.: SAS No.: NA SDG No.: SDGA38549

Column: ZB-5 ID: 0.32 (mm) Cont. Calib. Date(s): 07/05/08

Instrument ID: GCTCDFID

THE ANALYTICAL SEQUENCE OF PERFORMANCE BLANKS, AND SAMPLES
GIVEN BELOW:

SURROGATE RT FROM CONTINUING CALIBRATION					
S1 : 14.57 S2 : 8.42					
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
=====					
01	PRO 8500 #70	07/05/08	1511	14.57	8.42
02	PRO 5950 #70	07/05/08	1553	14.57	8.42
03	PRO 4250 #70	07/05/08	1636	14.57	8.42
04	PRO 2550 #70	07/05/08	1718	14.57	8.42
05	PRO 850 #705	07/05/08	1801	14.56	8.42
06	PRO 85 #7055	07/05/08	1843	14.57	8.42
07	PRO ICV #702	07/05/08	1926		
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

QC LIMITS

S1 = Ortho-Terphenyl (+/- 0.14 MINUTES)

S2 = 2-Fluorobiphenyl (+/- 0.05 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PRO ANALYTICAL SEQUENCE

Lab Name: EMPIRICAL LABS Contract: TETRATECH
 Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002
 Column: ZB-5 ID: 0.32 (mm) Cont. Calib. Date(s): 08/06/08
 Instrument ID: GCTCDFID

THE ANALYTICAL SEQUENCE OF PERFORMANCE BLANKS, AND SAMPLES
GIVEN BELOW:

SURROGATE RT FROM CONTINUING CALIBRATION					
		S1 : 14.57		S2 : 8.42	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
=====	=====	=====	=====	=====	=====
01	PRO 4250 #70	08/06/08	1442	14.57	8.42
02	FW1BLK0730	08/06/08	1556	14.57	8.43
03	FW1BLK0730LC	08/06/08	1633	14.57	8.43
04	FW1BLK0730LC	08/06/08	1716	14.57	8.42
05	A+D-RW01	08/06/08	1758	14.57	8.43
06	A+D-RW04	08/06/08	1841	14.57	8.42
07	A+D-1406-16	08/06/08	1923	14.57	8.42
08	351-2-MW02	08/06/08	2131	14.57	8.43
09	351-2-MW04	08/06/08	2213	14.57	8.43
10	351-2-MW01	08/06/08	2256	14.57	8.42
11	PRO 4250 #70	08/06/08	2339	14.57	8.42
12					

QC LIMITS

S1 = Ortho-Terphenyl (+/- 0.14 MINUTES)
 S2 = 2-Fluorobiphenyl (+/- 0.05 MINUTES)

Column used to flag retention time values with an asterisk.
 * Values outside of QC limits.

FORM 8
PRO ANALYTICAL SEQUENCE

Lab Name: EMPIRICAL LABS Contract: TETRATECH

Lab Code: EL Case No.: SAS No.: NA SDG No.: MAYPORT_002

Column: ZB-5 ID: 0.32 (mm) Cont. Calib. Date(s): 08/07/08

Instrument ID: GCTCDFID

THE ANALYTICAL SEQUENCE OF PERFORMANCE BLANKS, AND SAMPLES
GIVEN BELOW:

SURROGATE RT FROM CONTINUING CALIBRATION					
		S1 : 14.57		S2 : 8.42	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
=====	=====	=====	=====	=====	=====
01		PRO 4250 #70	08/07/08	1202	14.57 8.42
02	A+D-RW03	0807219-04	08/07/08	1245	14.56 8.43
03	A+D-RW02	0807219-05	08/07/08	1327	14.56 8.43
04		PRO 4250 #70	08/07/08	1410	14.57 8.42
05					

QC LIMITS

S1 = Ortho-Terphenyl (+/- 0.14 MINUTES)

S2 = 2-Fluorobiphenyl (+/- 0.05 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.



Empirical Laboratories
 EMPIRICAL LABORATORIES, LLC
 LABORATORY SAMPLE CUSTODY FORM
 WALK-IN REFRIGERATOR

Sample Log # (s)	Time/Date/Initials Removed	Time/Date/Initials Returned (Note if all Sample Used)	Notes/ Comments	Task Performed
0807177	8:50 7-29-08 TES	KH 7/29/08 9:40		Metals
7210-77, 8, 21, 22	9:50 7/29/08 AF		Used all	LLPAH
7205-15, 16	↓		Used all	PIPES
7205-15, 16 7198-5	↓		Used all	BNA
7220-01-04	7/29/08 10:20 (CAL)	7/29/08 12:21 (CAL)		TSS/VSS
7095-01 7180-01 7177-01, 02 7205-15, 16	10:22 7/29/08 KAG	11:15 KBZ 7/29/08		Hg
7203-01-03 7223-01-03 7226-01-03	AH 10:50 7/29	7/29/08 14:30 (CAL)		AIR/VFA
7210-01-707, 09 7224-01 7072-01	12:00 KBZ 7/29/08	15:20 KAG 7/29/08		Anions
7150-01 7153-01	CA 8:15 CA 7/25/08	CA 3:43 7/30/08		NH ₄
7157-01 7167-01 7148-01 7157-01 7258-01-706				
7210-01-709 7255-0107				
6007-01-6012-01 6009-02-5, 6	KH 9:15 7/30/08	KH 10:04 7/30/08		Metals
7219-1-8 7219-1-9	(CAL) 9:24 7/30/08	Used all		FLUORO LLPAH
7234-01-04	7/30/08 11:05 (CAL)	7/30/08 13:00 (CAL)		VSS/TSS
7150-01 7153-01 7157-01 7158-01 7157-01				
7208-01-706 7210-01-709	CA 6:10 7/31/08	CA 7/31/08 7:33		NH ₄ al/crane
725-0107 7145-01A				
7249-01-04	7/31/08 0900 (CAL)	7/31/08 14:30 (CAL)		BOD/CBOD

HOBART SAMPLE EXTRACT CUSTODY FORM

Sample Log #s	Fraction	Time/Date/Initial		Remaining/Overfilling/Removal										
		Inserted	Removed	Sealing	Cleaning	Re-analysis	Analysis	Dilution	Extraction	Insertion in	Prep	Extraction	Insertion in	Completed
080-509-04	008 waste	3:53 8/5/08												
8001-4 8014-2 8002-1 8012-1-3	P/AB	4:05 AF 8/5/08												X
8002-1 8014-2	BNA	4:05 AF 8/5/08												X
8018-14.5	FV	11/8/5/08 1625	8/5/08 14 1115											
7205-12 8002-01 7257-01 8014-02	BNA	14:50 8/6/8 B7A	06:45 8/6/08 B7D											X
8017-11,12 8022-01	LLPAA	10:35 8/7/8 B7D	↓											X
7252-07-10 Dilutions x2, x10	LLPAA	↓	↓											X
7118-19, 20, 26 8001-04, 8002-01 8002-1-3, 8014-02	P/P	5:15 5pm 8/6/08	11am 8/6/08											X
7205-1-14 7205-15,14	P/P	↓	↓											X
7219-1-8	FL FRO	↓	12:45 J.H. 9pm 8/6/08											X
8017-13-14 8002-12-4	LLPAA	1:27 8/6/08												
8019-1-6 P	EPH	5:03 8/6/08												
8019-01-06	EPH	14 8/6/08 1030	14 8/6/08 1715											X
8017-13,14 8022-2-4	LLPAA		5:45 8/7/08											✓
8001-4 8014-2 8002-1 7229-04 8012-1-3	P B	14 8/7/08 1050	9 8/7/08 905											X

added to 080408BWI

5th 8/6/08

EMPIRICAL LABORATORIES

Fraction: EPH / PRO / DRO Matrix: Water / Soil

Logbook # EX085 Supervisor

#	Client	Lab No.	Date Extracted	Setup Initials	pH	Initial g/ml	Final Volume	Surr Added	Surr Initials	Spike Added	Spike Initials	KD	10ml Conc.	15ml Conc.	Conc. Initials	Solvent Lot/Vendor	MeCl2	Hexane	Na2SO4 Lot Used	Cartridge Lot Used	Fract. Surr. Added	Fract. Date	Fract. Initials	Notes/Comments	
1	1710100033-20.01	02	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
2	1710100033-20.01	03	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
3	1710100033-20.01	04	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
4	1710100033-20.01	05	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
5	1710100033-20.01	06	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
6	1710100033-20.01	07	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
7	1710100033-20.01	08	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
8	1710100033-20.01	09	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
9	1710100033-20.01	10	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
10	1710100033-20.01	11	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
11	1710100033-20.01	12	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
12	1710100033-20.01	13	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
13	1710100033-20.01	14	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
14	1710100033-20.01	15	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
15	1710100033-20.01	16	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
16	1710100033-20.01	17	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
17	1710100033-20.01	18	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
18	1710100033-20.01	19	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
19	1710100033-20.01	20	12.00	12	12.00	2.0ml	1.0ml	1.0ml	12	1.0ml	12	5115	NA	NA	NA	1710100033	NA	NA	1710100033	NA	SAS	SAS	SAS	SAS	1710100033
20	1710100033-20.01																								

Note: All volumes are in milliliters and weights are in grams.

GCTCS.FID\FID.R\070508\FLPRO

PLA.118

Paul J. Hill
7-7-08

```

NAME SeqFileMacro
DELSEQUENCE
VERSION 3
SETPARAMS "KP", "", 0, 0, 1
SETDATAPATH "070508"
SETMETHODPATH
SETPRESEQ ""
SETPOSTSEQ ""
SETCOMMENT
SETNAMEMODE 1
SETSIG1FLEX "SIG1", "0001"
SETSIG2FLEX "SIG2", "0001"
SETSEQLINE 1,1,"",-1,-1,-1,-1
SETSEQLINE 2,1,"FLPROR",1,1,2,-1
SETSEQLINE 2,2,"FLPROR",2,69,1,-1
DELSAMPLE 1,100
SETSAMPLE 1,"MECL2 Blank",,,,
SETINFO 1
SETINFO 1,";;;;;;;;;"
SETSAMPLE 2,"PRO 8500 #7055A",,,,
SETINFO 2
SETINFO 2,";;;;;;;;;"
SETSAMPLE 3,"PRO 5950 #7055B",,,,
SETINFO 3
SETINFO 3,";;;;;;;;;"
SETSAMPLE 4,"PRO 4250 #7055C",,,,
SETINFO 4
SETINFO 4,";;;;;;;;;"
SETSAMPLE 5,"PRO 2550 #7055D",,,,
SETINFO 5
SETINFO 5,";;;;;;;;;"
SETSAMPLE 6,"PRO 850 #7055E",,,,
SETINFO 6
SETINFO 6,";;;;;;;;;"
SETSAMPLE 7,"PRO 85 #7055F",,,,
SETINFO 7
SETINFO 7,";;;;;;;;;"
SETSAMPLE 8,"PRO ICV #7020",,,,
SETINFO 8
SETINFO 8,";;;;;;;;;"
SETSAMPLE 9,"PRO 4250 #7055G",,,, ID.#7239
SETINFO 9
SETINFO 9,";;;;;;;;;"
SETSAMPLE 10,"FW1BLK0626",,,, 4268.1-5; 4281.1-4
SETINFO 10
SETINFO 10,"ch2.f06268;1000;2;062608FW1|mg/L;;;26-Jun-2008\"
SETSAMPLE 11,"FW1BLK0626LCS",,,,
SETINFO 11
SETINFO 11,"ch2.f06268;1000;2;062608FW1;mg/L;;;26-Jun-2008\"
SETSAMPLE 12,"0806268-01",,,,
SETINFO 12
SETINFO 12,"ch2.f06268;1080;2;062608FW1;mg/L;;;26-Jun-2008\"
SETSAMPLE 13,"0806268-02",,,,
SETINFO 13
SETINFO 13,"ch2.f06268;1080;2;062608FW1;mg/L;;;26-Jun-2008\"
SETSAMPLE 14,"0806268-03",,,,
SETINFO 14

```

x |
↓

Paula Hall
8.7.08

```

NAME SeqFileMacro
DELSEQUENCE
VERSION 3
SETPARAMS "JH", "", 0, 0, 1
SETDATAPATH "080608"
SETMETHODPATH
SETPRESEQ ""
SETPOSTSEQ ""
SETCOMMENT
SETNAMEMODE 1
SETSIG1FLEX "SIG1", "0001"
SETSIG2FLEX "SIG2", "0001"
SETSEQLINE 1,1,"",-1,-1,-1,-1
SETSEQLINE 2,1,"FLPROR",1,27,1,-1
DELSAMPLE 1,100
SETSAMPLE 1,"MECL2 Blank",,,
SETINFO 1
SETINFO 1,";;;;;;;;;"
SETSAMPLE 2,"SyringeTest otp",,,
SETINFO 2
SETINFO 2,";;;;;;;;;"
SETSAMPLE 3,"SyringeTest lcs",,,
SETINFO 3
SETINFO 3,";;;;;;;;;"
SETSAMPLE 4,"PRO 4250 #7055G",,,
SETINFO 4
SETINFO 4,";;;;;;;;;"
SETSAMPLE 5,"FW1BLK0730",,, 7219.1-8
SETINFO 5
SETINFO 5,"Mayport_002;1000;2;073008TW1;mg/L;;;30-Jul-2008\"
SETSAMPLE 6,"FW1BLK0730LCS",,,
SETINFO 6
SETINFO 6,"Mayport_002;1000;2;073008TW1;mg/L;;;30-Jul-2008\"
SETSAMPLE 7,"FW1BLK0730LCSD",,,
SETINFO 7
SETINFO 7,"Mayport_002;1000;2;073008TW1;mg/L;;;30-Jul-2008\"
SETSAMPLE 8,"0807219-01",,,
SETINFO 8
SETINFO 8,"Mayport_002;1080;2;073008TW1;mg/L;;;30-Jul-2008\"
SETSAMPLE 9,"0807219-02",,,
SETINFO 9
SETINFO 9,"Mayport_002;1080;2;073008TW1;mg/L;;;30-Jul-2008\"
SETSAMPLE 10,"0807219-03",,,
SETINFO 10
SETINFO 10,"Mayport_002;1080;2;073008TW1;mg/L;;;30-Jul-2008\"
SETSAMPLE 11,"0807219-04",,,
SETINFO 11
SETINFO 11,"Mayport_002;1080;2;073008TW1;mg/L;;;30-Jul-2008\"
SETSAMPLE 12,"0807219-05",,,
SETINFO 12
SETINFO 12,"Mayport_002;1080;2;073008TW1;mg/L;;;30-Jul-2008\"
SETSAMPLE 13,"0807219-06",,,
SETINFO 13
SETINFO 13,"Mayport_002;1080;2;073008TW1;mg/L;;;30-Jul-2008\"
SETSAMPLE 14,"0807219-07",,,
SETINFO 14
SETINFO 14,"Mayport_002;1080;2;073008TW1;mg/L;;;30-Jul-2008\"
SETSAMPLE 15,"0807219-08",,,

```

x |

Paul Hill
8-7-08

SETINFO 15
 SETINFO 15, "Mayport_002;1080;2;073008TW1;mg/L;;;30-Jul-2008\
 SETSAMPLE 16, "PRO 4250 #7055G",,,
 SETINFO 16
 SETINFO 16, ";;;;;;\
 SETSAMPLE 17, "EPH 4250 #7272G",,,
 SETINFO 17
 SETINFO 17, ";;;;;;\
 SETSAMPLE 18, "TS1BLK0806",,, 8019.1-4
 SETINFO 18
 SETINFO 18, "env.t08019;25.0;1;080608TS1;mg/Kg;;;06-Aug-2008\
 SETSAMPLE 19, "TS1BLK0806LCS",,,
 SETINFO 19
 SETINFO 19, "env.t08019;25.0;1;080608TS1;mg/Kg;;;06-Aug-2008\
 SETSAMPLE 20, "TS1BLK0806LCSD",,,
 SETINFO 20
 SETINFO 20, "env.t08019;25.0;1;080608TS1;mg/Kg;;;06-Aug-2008\
 SETSAMPLE 21, "0808019-01",,,
 SETINFO 21
 SETINFO 21, "env.t08019;25.0;1;080608TS1;mg/Kg;;;06-Aug-2008\
 SETSAMPLE 22, "0808019-02",,,
 SETINFO 22
 SETINFO 22, "env.t08019;25.0;1;080608TS1;mg/Kg;;;06-Aug-2008\
 SETSAMPLE 23, "0808019-03",,,
 SETINFO 23
 SETINFO 23, "env.t08019;25.0;1;080608TS1;mg/Kg;;;06-Aug-2008\
 SETSAMPLE 24, "0808019-04",,,
 SETINFO 24
 SETINFO 24, "env.t08019;25.0;1;080608TS1;mg/Kg;;;06-Aug-2008\
 SETSAMPLE 25, "0808019-05",,,
 SETINFO 25
 SETINFO 25, "env.t08019;25.0;1;080608TS1;mg/Kg;;;06-Aug-2008\
 SETSAMPLE 26, "0808019-06",,,
 SETINFO 26
 SETINFO 26, "env.t08019;25.0;1;080608TS1;mg/Kg;;;06-Aug-2008\
 SETSAMPLE 27, "EPH 4250 #7272G",,,
 SETINFO 27
 SETINFO 27, ";;;;;;\
 RETURN

x |



APPENDIX K
BMS REPORT



BMS, Inc.

July 8, 2010

Kevin Weichert
Tetra Tech
8640 Philips Hwy, Suite 16
Jacksonville, FL 32256

Re: Mayport Naval Station
Mayport, FL

Dear Mr. Weichert:

BioManagement Services, Inc. (BMS) conducted a BIOX injection campaign from June 4, 2010 to June 18, 2010 at the above referenced location. The BIOX amendment fluids were introduced into the subsurface via direct push technology using 2 foot vertical lifts.

The BIOX injection campaign was conducted over an area of approximately 1925 square feet with a vertical extent of 3 feet below ground surface (bgs) to 20 feet bgs. BMS had selected an injection point spacing of 4.5 feet for this project resulting in a total of 95 injection points. A total of 7125 gallons of BIOX amendment fluids were introduced into the subsurface during the injection campaign. A site map depicting the approximate injection point locations is included as **Attachment A**.

The staff at BMS would like to thank you for the opportunity to have worked with you on this project. Should you have any questions or require additional information, please contact our office.

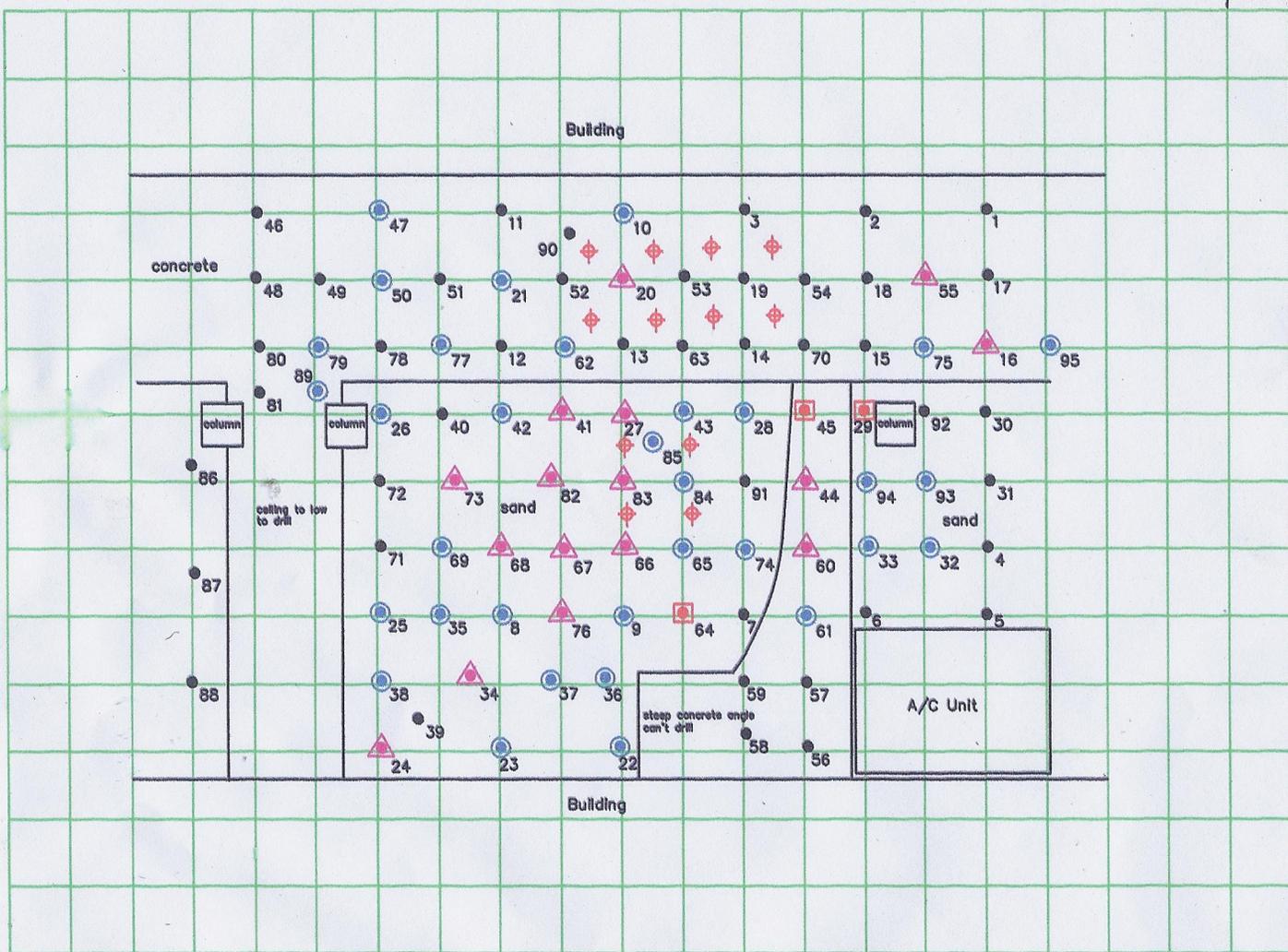
Best Regards,

John L. Kiest
President

BioManagement Services, Inc.
1692 Sunnyslope Dr.. Crown Point, Indiana 46307
P: (888) 477-0550 (219) 988-2401 F: (219) 988-5923

Attachment A

4.5'
4.5'



LEGEND

- ◆ MONITORING WELL
- INJECTION POINT
- INJECTION POINT W/light odor
- ▲ INJECTION POINT W/medium odor
- INJECTION POINT W/strong odor

95 injection points
7,125 total gals. Biox

Holes 46,48,80,81,86,87,
88,90,95 were relocated

Blomanagement Service 1692 Sunnyslope Dr. Crownpoint, IN 46307 Off. (888) 477-0550 Fax. (219) 988-5923	
BMS Inc.	
BIOX INJECTION AREA	
Mayport Naval Station Mayport, FL.	
Scale: N.T.S.	File: 963-R2
Revised: 6/22/10	Drawn By: LH

APPENDIX L
POST-INJECTION FIELD DATA SHEETS



TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER

2153

PAGE

OF

PROJECT NO: 11260 2801
 FACILITY: NAVSTA
 Maysport Site 351-a

SAMPLERS (SIGNATURE)
 XSK

PROJECT MANAGER
 Dave Sietken

FIELD OPERATIONS LEADER
 Jeff Krone

CARRIER/WAYBILL NUMBER
 8660 1730 2013

PHONE NUMBER
 404 334-7260

PHONE NUMBER
 904 699-7473

LABORATORY NAME AND CONTACT:
 Empirical Labs / Brian Richard

ADDRESS
 601 Mainstream Drive Suite 270

CITY, STATE
 Nashville, TN 37008

STANDARD TAT
 RUSH TAT

24 hr. 48 hr. 72 hr. 7 day 14 day

DATE	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, GC, ETC.)	COLLECTION METHOD	GRAB (G) COMP (G)	NO. OF CONTAINERS	TYPE OF ANALYSIS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	COMMENTS
4/13	1050	MPT-351-a-MW015-20110413				GW	G	G	11	Vac (8208)	X	X	Cool to 40c
4/13	1131	MPT-351-a-MW025-20110413				GW	G	G	11	Vac (8208)	X	X	
4/13	1313	MPT-351-a-MW035-20110413				GW	G	G	11	Vac (8208)	X	X	
4/13	1228	MPT-351-a-MW040-20110413				GW	G	G	11	Vac (8208)	X	X	
		MPT-351-a-MW055-2011											
		MPT-351-a-MW065-2011											
4/13	1500	MPT-351-a-MW075-20110413				GW	G	G	11	Vac (8208)	X	X	
4/13	1409	MPT-351-a-MW085-20110413				GW	G	G	11	Vac (8208)	X	X	
		Trip Blank				QC	G	G	2		X		

1. RELINQUISHED BY [Signature] DATE 4/13/11 TIME 1745 1. RECEIVED BY DATE TIME

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)

NAUSTA Mayport CTO Jm 33 Site 1343 Groundwater Sampling 14 Apr 11

Personnel: Jeff Krone
 Truck: 2006 F-250
 PPE: Level D
 Weather: Partly Cloudy 79°
 Objective: Quarterly GW sampling

0805 Departed office for Mayport.
 0855 Arrived at Site 351-2, commenced equipment calibration
 0927 completed calibration, commenced sampling of remaining wells. See table below for details.

Well ID	Sample ID	Start	Stop	Sample time	Analyses
mw05\$	MPT-351-2-mw05\$-20110414	0930	0951	0956	1,2,3,4,5,6
mw-06\$	MPT-351-2-mw06\$-20110414	0935	1026	1032	1,2,3,4,5,6

Analysis Key 1=VOCs 2=PAH 3=TRPH, 4=Ammonia 5=TDS Nitrate/sulfate
 6: metals All samples cooled to 4°C

1130 Packed up equipment and samples, departed Site 351
 1145 Arrived at Site 1343, uncapped wells for measurements.
 1215 Commenced groundwater measurements.
 1235 Completed measurements, began sampling event. See table below for details.

Well ID	Sample ID	Start	Stop	Sample time	Analyses
mw-10\$	MPT-1343-Gw-mw10\$-20110414	1240	1306	1314	1,2,3
mw-08\$	MPT-1343-Gw-mw08\$-20110414	1250	1346	1353	1,2,3
mw-01\$	MPT-1343-Gw-mw01\$-20110414	1335	1431	1434	1,2,3

Analysis Key 1=VOCs 2=TRPH 3=PAH Samples cooled to 4°C

1515 Completed sampling for the day, Departed Site.
 1600 Transferred IDW to Tote 2 ~ 10gal, conducted weekly IDW inspection, departed NAUSTA
 1820 Relinquished samples to Empirical via Fedex Airbill
 1830 Arrived at office

X
 JSK

Personnel: Jeff Krone

Truck: 2006 F-250

PPE: Level D

Weather: Sunny 75°

Objective: Quarterly groundwater sampling

0835 Departed office for Mayport

0915 Arrived at NAVSTA, began uncapping wells and calibrating equipment

0945 Began groundwater measurements

1015 Completed measurements and calibration, commenced sampling event. See table below for details.

Well ID	Sample ID	Start	Stop	Sample time	Analyses
MW-01\$	MPT-351-2-MW01\$-20110413	1020	1046	1052	1,2,3,4,5,6
MW-02\$	MPT-351-2-MW02\$-20110413	1035	1126	1131	1,2,3,4,5,6
MW-040	MPT-351-2-MW040-20110413	1135	1221	1228	1,2,3,4,5,6
MW-03\$	MPT-351-2-MW03\$-20110413	1210	1306	1313	1,2,3,4,5,6
MW-08\$	MPT-351-2-MW08\$-20110413	1255	1401	1409	1,2,3,4,5,6
MW-07\$	MPT-351-2-MW07\$-20110413	1355	1456	1502	1,2,3,4,5,6

Analysis Key 1=VOCs 2=TPH, 3=PAH 4=Ammonia 5=Metals 6=TDS

1600 Completed sampling for the day, packed up equipment and samples for transport.

1645 Transferred IDW to Tote 2 ~ 10 gal. Departed NAVSTA

1820 Relinquished samples to Empirical Labs via FedEx Airbill 8660 1730 2013.

1835 Arrived at office.

y

EMPIRICAL LABORATORIES, LLC BOTTLE KIT FORM

Completed By: KAK Project: CTO JM33 NAS Mayport 351-2 Quarterly
 Client / Job#: TTNUS/CTOJM33 Shipping Contact / Address / Tel#:

Contact Name/#: Jeff Krone

Jeff Krone
 Tetra Tech NUS 8640

Shipping Method: Fed Ex Ground

Phillips HWY Suite 16
 Jacksonville, FL 32256
 904-636-6125

Date to Client By: 3/31/2011

VOC Trip Blank Sets Needed: 3
 Org. Free Water Litres Needed:

Number of Coolers Required:

MS/MSD Required: yes *Please include blank labels, COCs, custody seals,*
 Navy Stds. Bottle COA Required: yes *temperature blanks, and return address labels.*

Bottle Kit Method Listing

Individual Methods or Group of Methods	Matrix	# of Samples	# of Cont. per Sample	Container Type / Preservative	Initials (Kit Prep)	2nd Check (Kit Prep)
VOC's 8260B (BTEX + MTBE)	water	9	3	40mL vial/ HCL cool @ 4 degrees C		
8270C Low PAH +1&2 Methylnaphthalene	water	9	2	1L. glass/ Cool @ 4 degrees C		
FLPRO	water	9	2	1L glass/ HCL Cool @ 4 degrees C		
Ammonia	water	9	1	250mL Plastic/H2SO4 cool @ 4 degrees C		
Metals 6010C (Fe, Na)	water	9	1	250mL Plastic/HNO3 cool @ 4 degrees C		
Nitrate/Sulfate (300.0)/ TDS	water	9	2	250mL Plastic/ cool @ 4 degrees C		

Special Instructions:

Make sure coolers are in good condition. Questions, contact Brian Richard @ 877-345-1113

3-29

**Form FD 9000-24
GROUNDWATER SAMPLING LOG**

SITE NAME: Building 351-2	SITE LOCATION: NAVSTA Mayport
WELL NO: 351-2-MW02S	SAMPLE ID: MPT-351-2-MW02S-20110413
DATE: 4/13/2011	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 3.5 feet to 13.5 feet	STATIC DEPTH TO WATER (feet): 5.41	PURGE PUMP TYPE OR BAILER: Peristaltic Pump
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (13.5 feet - 5.41 feet) X .605 liters/foot = 4.89 liters				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = _____ liters + (_____ liters/foot X _____ feet) + _____ liters = _____ liters				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6	PURGING INITIATED AT: 1035	PURGING ENDED AT: 1126	TOTAL VOLUME PURGED (liters): 6.1

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1035	—	—	100	5.41	—	—	—	—	—	—	—
1120	4.5	4.5	100	5.42	7.65	20.26	385	1.58	0.07	—	—
1123	.3	4.8	100	5.42	7.66	20.25	384	1.58	0.03	—	—
1126	.3	5.1	100	5.42	7.66	20.24	384	1.58	0.01	—	—
1131	Sample time										

WELL CAPACITY (Liters Per Foot): 0.75" = 0.0757; 1" = 0.151; 1.25" = 0.227; 2" = 0.605; 3" = 0.37; 4" = 1.40; 5" = 3.861; 6" = 5.564; 12" = 22.25
 TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): 1/8" = 0.00227; 3/16" = 0.00529; 1/4" = 0.00984; 5/16" = 0.0151; 3/8" = 0.0227; 1/2" = 0.0378; 5/8" = 0.0605
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Krone/TINUS			SAMPLER(S) SIGNATURE(S): 			SAMPLING INITIATED AT: 1131		SAMPLING ENDED AT: 1200	
PUMP OR TUBING DEPTH IN WELL (feet): 6			TUBING MATERIAL CODE: Teflon Poly (circle one)			FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>		FILTER SIZE: _____ μm	
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>			TUBING Y <input checked="" type="checkbox"/> N (replaced) <input type="checkbox"/>			DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
PP	3	CG	40 ML	HCL	NONE	<2	VOCs (BTEX + MTBE) 8260B	RFPP	
PP	2	AG	1L	COOL TO 4°C	NONE	--	Low PAHs + 1&2 methylnaphthalene/827	APP	
PP	2	AG	1L	HCL	NONE	--	TRPH/FL-PRO	APP	
PP	1	PE	250 or 500	H2SO4	None		Ammomonia	APP	
PP	2	PE	250 or 500	HNO3	NONE		Total dissolved solids (TDS) Nitrate/Sulfate	APP	
PP	1	PE	250 or 500	COOL TO 4°C	NONE		Metals 6010C (Fe, Na)	APP	
REMARKS:									

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
 SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

**Form FD 9000-24
GROUNDWATER SAMPLING LOG**

SITE NAME: Building 351-2		SITE LOCATION: NAVSTA Mayport	
WELL NO: 351-2-MW03S	SAMPLE ID: MPT-351-2-MW03S-201104 13	DATE: 4/ 13 /2011	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 3 feet to 13 feet	STATIC DEPTH TO WATER (feet): 5.39	PURGE PUMP TYPE OR BAILER: Peristaltic Pump
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
 (only fill out if applicable)
 = (**13** feet - **5.39** feet) X **.605** liters/foot = **4.6** liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 (only fill out if applicable)
 = _____ liters + (_____ liters/foot X _____ feet) + _____ liters = _____ liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6	PURGING INITIATED AT: 1210	PURGING ENDED AT: 1306	TOTAL VOLUME PURGED (liters): 5.6
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1210	—	—	100	5.39	—	—	—	—	—	—	—
1300	5.0	5.0	100	5.55	7.22	22.88	393	0.19	7.24	—	—
1303	.3	5.3	100	5.55	7.22	22.86	392	0.19	6.93	—	—
1306	.3	5.6	100	5.55	7.23	22.86	392	0.19	6.77	—	—
1313	Sample time										

WELL CAPACITY (Liters Per Foot): 0.75" = 0.0757; 1" = 0.151; 1.25" = 0.227; 2" = 0.605; 3" = 0.37; 4" = 1.40; 5" = 3.861; 6" = 5.564; 12" = 22.25
TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): 1/8" = 0.00227; 3/16" = 0.00529; 1/4" = 0.00984; 5/16" = 0.0151; 3/8" = 0.0227; 1/2" = 0.0378; 5/8" = 0.0605
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Krone/TtNUS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1313	SAMPLING ENDED AT: 1335
PUMP OR TUBING DEPTH IN WELL (feet): 6	TUBING MATERIAL CODE (Teflon Poly (circle one))	FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP Y <input checked="" type="radio"/> N <input type="radio"/>	TUBING Y <input checked="" type="radio"/> N (replaced) <input type="radio"/>	DUPLICATE: Y <input checked="" type="radio"/> N <input type="radio"/>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
PP	3	CG	40 ML	HCL	NONE	<2	VOCs (BTX + MTBE) 8260B	RFPP	
PP	2	AG	1L	COOL TO 4°C	NONE	--	Low PAHs + 1&2 methylanthalene/827	APP	
PP	2	AG	1L	HCL	NONE	--	TRPH/FL-PRO	APP	
PP	1	PE	250 or 500	H2SO4	None		Ammonia	APP	
PP	2	PE	250 or 500	HNO3	NONE		Total dissolved solids (TDS) Nitrate/Sulfate	APP	
PP	1	PE	250 or 500	COOL TO 4°C	NONE		Metals 6010C (Fe, Na)	APP	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

**Form FD 9000-24
GROUNDWATER SAMPLING LOG**

SITE NAME: Building 351-2	SITE LOCATION: NAVSTA Mayport
WELL NO: 351-2-MW04D	SAMPLE ID: MPT-351-2-MW04D-20110413
DATE: 4/13/2011	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 24.4 feet to 29.4 feet	STATIC DEPTH TO WATER (feet): 5.95	PURGE PUMP TYPE OR BAILER: Peristaltic Pump
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet - feet) X liters/foot = liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= **1** liters + (**.00599** liters/foot X **39** feet) + **3** liters = **3.5** liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 26	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 26	PURGING INITIATED AT: 1135	PURGING ENDED AT: 1221	TOTAL VOLUME PURGED (liters): 4.6
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1135	—	—	100	5.95	—	—	—	—	—	—	—
1215	4.0	4.0	100	5.97	8.18	23.20	763	0.31	0.07	—	—
1218	.3	4.3	100	5.97	8.18	23.24	764	0.30	0.03	—	—
1221	.3	4.6	100	5.97	8.18	23.23	764	0.31	0.03	—	—
1228 Sample time											

WELL CAPACITY (Liters Per Foot): 0.75" = 0.0757; 1" = 0.151; 1.25" = 0.227; 2" = 0.605; 3" = 0.37; 4" = 1.40; 5" = 3.861; 6" = 5.564; 12" = 22.25
TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): 1/8" = 0.00227; 3/16" = 0.00529; 1/4" = 0.00984; 5/16" = 0.0151; 3/8" = 0.0227; 1/2" = 0.0378; 5/8" = 0.0605

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Krone/TINUS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1228	SAMPLING ENDED AT: 1250
PUMP OR TUBING DEPTH IN WELL (feet): 26	TUBING MATERIAL CODE (Teflon Poly (circle one))	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	Filtration Equipment Type: <input checked="" type="checkbox"/>
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	TUBING Y <input checked="" type="checkbox"/> N (replaced) <input type="checkbox"/>	DUPLICATE: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
PP	3	CG	40 ML	HCL	NONE	<2	VOCs (BTEX + MTBE) 8260B	RFPP	
PP	2	AG	1L	COOL TO 4°C	NONE	--	Low PAHs + 1&2 methylnaphthalena/827	APP	
PP	2	AG	1L	HCL	NONE	--	TRPH/FL-PRO	APP	
PP	1	PE	250 or 500	H2SO4	None		Ammomonia	APP	
PP	2	PE	250 or 500	HNO3	NONE		Total dissolved solids (TDS) Nitrate/Sulfate	APP	
PP	1	PE	250 or 500	COOL TO 4°C	NONE		Metals 6010C (Fe, Na)	APP	

REMARKS:

MATERIAL CODES: AG = Amber Glass, CG = Clear Glass, PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

**Form FD 9000-24
GROUNDWATER SAMPLING LOG**

SITE NAME: Building 351-2	SITE LOCATION: NAVSTA Mayport
WELL NO: 351-2-MW05S	SAMPLE ID: MPT-351-2-MW05S-20110414
DATE: 4/14/2011	

PURGING DATA

WELL DIAMETER (inches): 0.75	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 0.5 feet to 10.5 feet	STATIC DEPTH TO WATER (feet): 6.46	PURGE PUMP TYPE OR BAILER: Peristaltic Pump
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
 (only fill out if applicable)
 = (**10.5 - 6.46**) feet X **605.075** liters/foot = **2.44** liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 (only fill out if applicable)
 = _____ liters + (_____ liters/foot X _____ feet) + _____ liters = _____ liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7	PURGING INITIATED AT: 0930	PURGING ENDED AT: 0951	TOTAL VOLUME PURGED (liters): 4.2
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0930	—	—	200	6.46	—	—	—	—	—	—	—
0945	3.0	3.0	200	6.49	7.53	21.10	649	0.91	2.60	—	—
0948	.6	3.6	200	6.49	7.54	21.11	650	0.89	2.52	—	—
0951	.6	4.2	200	6.49	7.54	21.11	651	0.88	2.13	—	—
0956	Sample time										

WELL CAPACITY (Liters Per Foot): 0.75" = 0.0757; 1" = 0.151; 1.25" = 0.227; 2" = 0.605; 3" = 0.37; 4" = 1.40; 5" = 3.861; 6" = 5.564; 12" = 22.25
 TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): 1/8" = 0.00227; 3/16" = 0.00529; 1/4" = 0.00984; 5/16" = 0.0151; 3/8" = 0.0227; 1/2" = 0.0378; 5/8" = 0.0605
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Krone/TINUS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0956	SAMPLING ENDED AT: 1015
PUMP OR TUBING DEPTH IN WELL (feet): 7	TUBING MATERIAL CODE: Teflon Poly (circle one)	FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP Y <input checked="" type="radio"/> N <input type="radio"/>	TUBING Y <input checked="" type="radio"/> N (replaced) <input type="radio"/>	DUPLICATE: Y <input checked="" type="radio"/> N <input type="radio"/>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
PP	3	CG	40 ML	HCL	NONE	<2	VOCs (BTEX + MTBE) 8260B	RFPP	
PP	2	AG	1L	COOL TO 4°C	NONE	--	Low PAHs + 1&2 methyl naphthalene/827	APP	
PP	2	AG	1L	HCL	NONE	--	TRPH/FL-PRO	APP	
PP	1	PE	250 or 500	H2SO4	None		Ammomonia	APP	
PP	2	PE	250 or 500	HNO3	NONE		Total dissolved solids (TDS) Nitrate/Sulfate	APP	
PP	1	PE	250 or 500	COOL TO 4°C	NONE		Metals 6010C (Fe, Na)	APP	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
 SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

**Form FD 9000-24
GROUNDWATER SAMPLING LOG**

SITE NAME: Building 351-2	SITE LOCATION: NAVSTA Mayport
WELL NO: 351-2-MW06S	SAMPLE ID: MPT-351-2-MW06S-20110414
DATE: 4/14/2011	

PURGING DATA

WELL DIAMETER (inches): 0.75	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: .5 feet to 10.5 feet	STATIC DEPTH TO WATER (feet): 6.34	PURGE PUMP TYPE OR BAILER: Peristaltic Pump
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
 (only fill out if applicable)
 = (**10.5** feet - **6.34** feet) X **.0757** liters/foot = **.31** liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 (only fill out if applicable)
 = _____ liters + (_____ liters/foot X _____ feet) + _____ liters = _____ liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7	PURGING INITIATED AT: 0935	PURGING ENDED AT: 1026	TOTAL VOLUME PURGED (liters): 5.1
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0935	—	—	100	6.34	—	—	665	—	—	—	—
1020	4.5	4.5	100	6.51	7.51	21.05	0.45	0.45	0.38	—	—
1023	.3	4.8	100	6.51	7.52	21.06	665	0.44	0.40	—	petro
1026	.3	5.1	100	6.51	7.52	21.06	665	0.45	0.37	—	petro
1032	<i>Sample time</i>										

WELL CAPACITY (Liters Per Foot): 0.75" = 0.0757; 1" = 0.151; 1.25" = 0.227; 2" = 0.605; 3" = 0.37; 4" = 1.40; 5" = 3.861; 6" = 5.564; 12" = 22.25
TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): 1/8" = 0.00227; 3/16" = 0.00529; 1/4" = 0.00984; 5/16" = 0.0151; 3/8" = 0.0227; 1/2" = 0.0378; 5/8" = 0.0605
PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Krone/TtNUS	SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>	SAMPLING INITIATED AT: 1032	SAMPLING ENDED AT: 1100
PUMP OR TUBING DEPTH IN WELL (feet): 7	TUBING MATERIAL CODE: Teflon <input checked="" type="radio"/> Poly (circle one)	FIELD-FILTERED: Y <input checked="" type="radio"/> N	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP Y <input checked="" type="radio"/> N	TUBING Y <input checked="" type="radio"/> N (replaced)	DUPLICATE: Y <input checked="" type="radio"/> N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
PP	3	CG	40 ML	HCL	NONE	<2	VOCs (BTEX + MTBE) 8260B	RFPP	
PP	2	AG	1L	COOL TO 4°C	NONE	--	Low PAHs + 1&2 methylnaphthalene/827	APP	
PP	2	AG	1L	HCL	NONE	--	TRPH/FL-PRO.	APP	
PP	1	PE	250 or 500	H2SO4	None		Ammomonia	APP	
PP	2	PE	250 or 500	HNO3	NONE		Total dissolved solids (TDS) Nitrate/Sulfate	APP	
PP	1	PE	250 or 500	COOL TO 4°C	NONE		Metals 6010C (Fe, Na)	APP	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

- NOTES:** 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
 2. **STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)**
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

**Form FD 9000-24
GROUNDWATER SAMPLING LOG**

SITE NAME: Building 351-2	SITE LOCATION: NAVSTA Mayport
WELL NO: 351-2-MW07S	SAMPLE ID: MPT-351-2-MW07S-20110413
DATE: 4/13/2011	

PURGING DATA

WELL DIAMETER (inches): 0.75	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 0.5 feet to 10.5 feet	STATIC DEPTH TO WATER (feet): 6.39	PURGE PUMP TYPE OR BAILER: Peristaltic Pump
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
 (only fill out if applicable)
 = (**10.5** feet - **6.39** feet) X **0.605** liters/foot = **2.48** liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 (only fill out if applicable)
 = _____ liters + (_____ liters/foot X _____ feet) + _____ liters = _____ liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7	PURGING INITIATED AT: 1355	PURGING ENDED AT: 1456	TOTAL VOLUME PURGED (liters): 6.1
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TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1355	—	—	100	—	—	—	—	—	—	—	—
1450	5.5	5.5	100	6.43	8.20	20.9	415	0.28	0.09	clear	—
1453	.3	5.8	100	6.43	8.20	20.9	415	0.28	0.06	clear	—
1456	.3	6.1	100	6.43	8.20	20.9	415	0.28	0.03	clear	—
1502 Sample Time											

WELL CAPACITY (Liters Per Foot): 0.75" = 0.0757; 1" = 0.151; 1.25" = 0.227; 2" = 0.605; 3" = 0.37; 4" = 1.40; 5" = 3.861; 6" = 5.564; 12" = 22.25
 TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): 1/8" = 0.00227; 3/16" = 0.00529; 1/4" = 0.00984; 5/16" = 0.0151; 3/8" = 0.0227; 1/2" = 0.0378; 5/8" = 0.0605

PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Krone/TINUS	SAMPLER(S) SIGNATURE(S): 	SAMPLING INITIATED AT: 1502	SAMPLING ENDED AT: 1530
PUMP OR TUBING DEPTH IN WELL (feet): 7	TUBING MATERIAL CODE (Teflon Poly (circle one))	FIELD-FILTERED: Y <input checked="" type="radio"/> N <input checked="" type="radio"/>	FILTER SIZE: _____ μm
FIELD DECONTAMINATION: PUMP Y <input checked="" type="radio"/> TUBING Y <input checked="" type="radio"/> (replaced)	DUPLICATE: Y <input checked="" type="radio"/> N <input checked="" type="radio"/>		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
PP	3	CG	40 ML	HCL	NONE	<2	VOCs (BTEX + MTBE) 8260B	RFPP	
PP	2	AG	1L	COOL TO 4°C	NONE	--	Low PAHs + 1&2 methylnaphthalene/827	APP	
PP	2	AG	1L	HCL	NONE	--	TRPH/FL-PRO	APP	
PP	1	PE	250 or 500	H2SO4	None		Ammomonia	APP	
PP	2	PE	250 or 500	HNO3	NONE		Total dissolved solids (TDS) Nitrate/Sulfate	APP	
PP	1	PE	250 or 500	COOL TO 4°C	NONE		Metals 6010C (Fe, Na)	APP	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

**Form FD 9000-24
GROUNDWATER SAMPLING LOG**

SITE NAME: Building 351-2	SITE LOCATION: NAVSTA Mayport
WELL NO: 351-2-MW08S	SAMPLE ID: MPT-351-2-MW08S-20110413
DATE: 4/ 13 /2011	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 0.5 feet to 10.5 feet	STATIC DEPTH TO WATER (feet): 5.79	PURGE PUMP TYPE OR BAILER: Peristaltic Pump							
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (10.5 ^{10.5} feet - 5.79 feet) X 605 liters/foot = 2.84 liters											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = _____ liters + (_____ liters/foot X _____ feet) + _____ liters = _____ liters											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6	PURGING INITIATED AT: 1255	PURGING ENDED AT: 1401	TOTAL VOLUME PURGED (liters): 6.6							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1255	—	—	100	5.79	—	—	—	—	—	—	—
1355	6.0	6.0	100	5.84	7.08	21.49	391	0.21	2.04	—	—
1358	.3	6.3	100	5.84	7.08	21.48	391	0.21	1.91	—	—
1401	3	6.6	100	5.84	7.08	21.49	391	0.21	1.76	—	—
1409 Sample time											
WELL CAPACITY (Liters Per Foot): 0.75" = 0.0757; 1" = 0.151; 1.25" = 0.227; 2" = 0.605; 3" = 0.37; 4" = 1.40; 5" = 3.861; 6" = 5.564; 12" = 22.25 TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): 1/8" = 0.00227; 3/16" = 0.00529; 1/4" = 0.00984; 5/16" = 0.0151; 3/8" = 0.0227; 1/2" = 0.0378; 5/8" = 0.0605 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Krone/TtNUS				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1409		SAMPLING ENDED AT: 1430		
PUMP OR TUBING DEPTH IN WELL (feet): 6				TUBING MATERIAL CODE: Teflon Poly (circle one)				FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/>		FILTER SIZE: _____ μm		
FIELD DECONTAMINATION: PUMP Y <input type="radio"/> N <input checked="" type="radio"/>				TUBING Y <input type="radio"/> N (replaced) <input checked="" type="radio"/>				DUPLICATE: Y <input type="radio"/> N <input checked="" type="radio"/>				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
PP	3	CG	40 ML	HCL	NONE	<2	VOCs (BTEX + MTBE) 8260B		RFPP			
PP	2	AG	1L	COOL TO 4°C	NONE	--	Low PAHs + 1&2 methylnaphthalene/827		APP			
PP	2	AG	1L	HCL	NONE	--	TRPH/FL-PRO		APP			
PP	1	PE	250 or 500	H2SO4	None		Ammomnia		APP			
PP	2	PE	250 or 500	HNO3	NONE		Total dissolved solids (TDS) Nitrate/Sulfate		APP			
PP	1	PE	250 or 500	COOL TO 4°C	NONE		Metals 6010C (Fe, Na)		APP			
REMARKS:												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify) SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

APPENDIX M
POST-INJECTION GROUNDWATER ANALYTICAL RESULTS



ANALYTICAL SUMMARY DATA PACKAGE
SDG # CTOJM33_013

PROJECT NAME: NAS MAYPORT CTO JM33 2010
PROJECT LOCATION: MAYPORT, FLORIDA
CONTRACT #: N62470-08-D-1001

SUBMITTAL TO:

Tobrena Sedlmeyer
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220

SUBMITTAL BY:

Empirical Laboratories, LLC (EL)
621 Mainstream Drive, Suite 270
Nashville, TN 37228
Tel (615)345-1115
Fax (866)417-0548

LABORATORY CONTACT PERSON:

Project Manager: Brian Richard
Tel (615)345-1115
Fax (866)417-0548
Email: brichard@empirlabs.com

Original Report Date: April 27, 2011
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 172

THIS DOCUMENT MEETS DoD QSM 4.1 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

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Sample Delivery Group Case Narrative

Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision

This is an original submittal of the final report package.

Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

- A:** The peak was manually integrated as it was not integrated in the original chromatogram.
- B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
- C:** The peak was manually integrated to correct the baseline from the original chromatogram.
- D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
- E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:

No anomalies or deviations are noted.

SW8270C:

No anomalies or deviations are noted.

FLPRO:

The surrogate o-Terphenyl exceeded criteria with a negative bias in 1D19026-BLK1, -BS1, -BSD1, 1104144-01, -02, -03, -04, -05, and -06. The surrogate 2-Fluorobiphenyl exceeded the retention time window in 1D19026-BLK1, 1104144-02, -04, and -05. The

result bias due to the retention time shift was determined to be negligible for all affected samples and batch QC.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C:

The continuing calibration blank 1D11034-CCB6 has a positive result for Sodium.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Wet Chemistry:

No anomalies or deviations are noted.

Data Qualifiers

As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

- MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).
- LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.
- LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.
- *:** An exceeding quality control criteria is associated with the reported result.
- B:** The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**
- D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".
- E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**
- H1:** The result was analyzed outside of the EPA recommended holding time.

- H2:** The result was extracted outside of the EPA recommended holding time.
- H3:** The sample for this analyte was received outside of the EPA recommended holding time.
- J:** The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**
- M:** Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.
- N:** The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.
- P:** The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.
- Q:** The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.
- S:** The associated internal standard failed criteria.
- U:** The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.
- X:** The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.
- Y:** The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.
- Z:** The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

- BLK:** LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.
- BS:** LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.
- MS:** The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.
- IDs:** The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "RE" implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:

I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

Organic Calculations:

GC/MS Volatiles

$$\text{Final Concentration} = \frac{\text{On-column(ug/L or ug/Kg)} * \text{Expected Vol/Weight (mL or g)} * \text{Dilution}}{\text{Initial Vol/Weight (mL or g)} * (\text{Percent Solids}/100) \text{ (if applicable)}}$$

Note - Expected Vol/Weight value is found in "Final Vol" column of Preparation Batch Summary.

GC/MS Extractables

$$\begin{aligned} \text{Final Concentration} &= \frac{\text{On-column(ng/uL)} * \text{Final Vol (ml)} * \text{Dilution} * (1000\text{uL/mL})}{\text{Initial Vol/Weight (mL or g)} * (\text{Percent Solids}/100) \text{ (if applicable)}} \\ &= \text{ng/mL or ng/g} \\ &= \text{ug/L or ug/kg} \end{aligned}$$

GC or LC Extractables

$$\begin{aligned} \text{Final Concentration} &= \frac{\text{On-column(ng/mL)} * \text{Final Vol (mL)} * \text{Dilution}}{\text{Initial Vol/Weight (mL or g)} * (\text{Percent Solids}/100) \text{ (if applicable)}} \\ &= \text{ng/mL or ng/g} \\ &= \text{ug/L or ug/kg} \end{aligned}$$

Sample Receipt Information



TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER **NO. 2153**

PAGE **1** OF **1**

PROJECT NO. **11260 9801**
FACILITY: **NAVSTA**
SAMPLERS (SIGNATURE) **Mupost 514-351-2**

PROJECT MANAGER **Dave Steffen**
FIELD OPERATIONS LEADER **Jeff Krone**
CARRIER/WAYBILL NUMBER **866017302013**

PHONE NUMBER **904 331-7960**
PHONE NUMBER **904 699-7423**

LABORATORY NAME AND CONTACT: **Empirical Labs / Brian Richard**
ADDRESS **621 Mainstream Drive**
CITY, STATE **Nashville, TN 37203**
SUITE **270**

STANDARD TAT RUSH TAT 24 hr. 48 hr. 72 hr. 7 day 14 day

CONTAINER TYPE **PLASTIC (P) or GLASS (G)**
PRESERVATIVE **USED**
HCL 1
HCL 1
HNO3 1

DATE YEAR	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	COMMENTS
4/13	1052	MPT-351-2-MW015-20110413				GW	G	11	VOC (8360B) METEX PAH Low + High TRPH FL PPD Ammonia Fe & Ni Nitrate Nitrite Nitrogen	Cool to 40°C
4/13	1131	MPT-351-2-MW025-20110413				GW	G	11		2011-2012
4/13	1313	MPT-351-2-MW035-20110413				GW	G	11		
4/13	1028	MPT-351-2-MW040-20110413				GW	G	11		
4/13		MPT-351-2-MW055-2011					G			
4/13	1502	MPT-351-2-MW075-20110413				GW	G	11		
4/13	1409	MPT-351-2-MW085-20110413				GW	G	11		
		Trip Blank				QC	G	2		2014

1. RELINQUISHED BY **[Signature]**
2. RELINQUISHED BY **[Signature]**
3. RELINQUISHED BY

DATE **4/13/11**

TIME **1745**

1. RECEIVED BY
2. RECEIVED BY
3. RECEIVED BY

DATE
DATE
DATE

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) FORM NO. TNUS-001 4/02R

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1104/44 Number of Coolers: 1 of 3

Client: Tetra Tech Nhs Project: NAVSTA Mayport Sit 351-2

Date/Time Received: 4.14.11 0845 Date cooler(s) opened: 4.14.11

Opened By (print): Reynold Talley (signature): Reynold Talley

Circle response below as appropriate

1. How did the samples arrive? FedEx UPS DHL Hand Delivered
 EL Courier Other: _____

If applicable, enter airbill number here: 2601

2. Were custody seals on outside of cooler(s)? Yes No
How many: 2 Seal date: 4.13.11 Seal Initials: ?

- 3. Were custody seals unbroken and intact at the date and time of arrival? Yes No N/A
- 4. Were custody papers sealed in a plastic bag included in the sample cooler? Yes No N/A
- 5. Were custody papers filled out properly (ink, signed, etc.)? Yes No N/A
- 6. Did you sign custody papers in the appropriate place for acceptance? Yes No N/A
- 7. Was project identifiable from custody papers? Yes No N/A
- 8. If required, was enough ice present in the cooler(s)? Yes No N/A

Type of Coolant: WET DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 27 °C Correction Factor: -0.3 °C Final Value: 24 °C

Dates samples were logged-in: 4-14-11
9. Initial this form to acknowledge login of sample(s): (Name): [Signature] (Initial): as

- 10. Were all bottle lids intact and sealed tightly? Yes No N/A
- 11. Did all bottles arrive unbroken? Yes No N/A
- 12. Was all required bottle label information complete? Yes No N/A
- 13. Did all bottle labels agree with custody papers? Yes No N/A
- 14. Were correct containers used for the analyses indicated? Yes No N/A
- 15. Were preservative levels correct in all applicable sample containers? Yes No N/A
- 16. Was residual chlorine present in any applicable sample containers? Yes No N/A
- 17. Was sufficient amount of sample sent for the analyses required? Yes No N/A
- 18. Was headspace present in any included VOA vials? Yes No N/A

If Non-Conformance issues were present, list by sample ID: _____

* Ph 22 for all metals, ammonia, & FLPA samples

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1104149 Number of Coolers: 2 of 3
Client: Tetra Tech NYS Project: Mayport Site 351.2
Date/Time Received: 4.14.11 0845 Date cooler(s) opened: 4.14.11
Opened By (print): Reginald Talley (signature): Reginald Talley

Circle response below as appropriate

1. How did the samples arrive? FedEx UPS DHL Hand Delivered
 EL Courier Other: _____

If applicable, enter airbill number here: 2013

2. Were custody seals on outside of cooler(s)? Yes No

How many: 2 Seal date: 4.13.11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? Yes No N/A

4. Were custody papers sealed in a plastic bag included in the sample cooler? Yes No N/A

5. Were custody papers filled out properly (ink, signed, etc.)? Yes No N/A

6. Did you sign custody papers in the appropriate place for acceptance? Yes No N/A

7. Was project identifiable from custody papers? Yes No N/A

8. If required, was enough ice present in the cooler(s)? Yes No N/A

Type of Coolant: WET DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 1.5 °C Correction Factor: -0.3 °C Final Value: 1.2 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly? Yes No N/A

11. Did all bottles arrive unbroken? Yes No N/A

12. Was all required bottle label information complete? Yes No N/A

13. Did all bottle labels agree with custody papers? Yes No N/A

14. Were correct containers used for the analyses indicated? Yes No N/A

15. Were preservative levels correct in all applicable sample containers? Yes No N/A

16. Was residual chlorine present in any applicable sample containers? Yes No N/A

17. Was sufficient amount of sample sent for the analyses required? Yes No N/A

18. Was headspace present in any included VOA vials? Yes No N/A

If Non-Conformance issues were present, list by sample ID: _____

see 10FB

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1104144 Number of Coolers: 3 of 3
Client: Tetra Tech NWS Project: Mayport Site 351-2
Date/Time Received: 4.14.11 0845 Date cooler(s) opened: 4.14.11
Opened By (print): Reginald Talley (signature): Reginald Talley

Circle response below as appropriate

1. How did the samples arrive? FedEx UPS DHL Hand Delivered
 EL Courier Other: _____

If applicable, enter airbill number here: 2612

2. Were custody seals on outside of cooler(s)? Yes No
How many: 2 Seal date: 4.13.11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? Yes No N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler? Yes No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? Yes No N/A
6. Did you sign custody papers in the appropriate place for acceptance? Yes No N/A
7. Was project identifiable from custody papers? Yes No N/A
8. If required, was enough ice present in the cooler(s)? Yes No N/A

Type of Coolant: WET DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.3 °C Correction Factor: -0.3 °C Final Value: 2.0 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____
10. Were all bottle lids intact and sealed tightly? Yes No N/A
11. Did all bottles arrive unbroken? Yes No N/A
12. Was all required bottle label information complete? Yes No N/A
13. Did all bottle labels agree with custody papers? Yes No N/A
14. Were correct containers used for the analyses indicated? Yes No N/A
15. Were preservative levels correct in all applicable sample containers? Yes No N/A
16. Was residual chlorine present in any applicable sample containers? Yes No N/A
17. Was sufficient amount of sample sent for the analyses required? Yes No N/A
18. Was headspace present in any included VOA vials? Yes No N/A

If Non-Conformance issues were present, list by sample ID: _____

See 1 of 3

WORK ORDER

1104144

Printed: 4/27/2011 5:35:41PM

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
 Project: NAS Mayport CTO JM33 2010

Project Manager: Brian Richard
 Project Number: TET_CTOJM33

Report To:

Tetra Tech NUS, Inc. (T010)
 Tobrena Skeen
 Foster Plaza 7, 661 Anderson Drive
 Pittsburgh, PA 15220
 Phone: (412) 921-8182
 Fax: (412) 921-4040

Invoice To:

Tetra Tech NUS, Inc. (T010)
 Accounts Payable
 661 Anderson Drive
 Pittsburgh, PA 15220-2745
 Phone : (412) 921-8182
 Fax: (412) 921-4040

Date Due: 04/26/2011 16:00 (8 day TAT)
 Received By: Chris Donald
 Logged In By: Chris Donald

Date Received: 04/14/2011 08:45
 Date Logged In 04/14/2011 11:38

Samples Received at: 2.4°C
 Custody Seals Yes Received On Ice Yes
 Containers Intact Yes
 COC/Labels Agree Yes
 Preservation Confr. Yes

Analysis	Due	TAT	Expires	Version	Comments
1104144-01 MPT-351-2-MWW01S-20110413 [Water] Sampled 04/13/2011 10:52 Eastern					
E300.0	04/22/2011 14:00	8	05/11/2011 09:52		SO4
FLPRO	04/22/2011 14:00	8	04/20/2011 09:52		
SW8270C	04/22/2011 14:00	8	04/20/2011 09:52		
SW6010C	04/22/2011 14:00	8	10/10/2011 09:52	Fe & Na	see version
SM4500NH3BG	04/22/2011 14:00	8	05/11/2011 09:52		
E300.0	04/22/2011 14:00	8	04/15/2011 09:52		NO3
SM2540C	04/22/2011 14:00	8	04/20/2011 09:52		
SW8260B	04/22/2011 14:00	8	04/27/2011 09:52		BTEX & MTBE

WORK ORDER

1104144

Empirical Laboratories, LLC

Printed: 4/27/2011 5:35:41PM

Client: Tetra Tech NUS, Inc. (T010)
 Project: NAS Mayport CTO JM33 2010

Project Manager: Brian Richard
 Project Number: TET_CTOJM33

Analysis	Due	TAT	Expires	Version	Comments
1104144-02 MPT-351-2-MW02S-20110413 [Water] Sampled 04/13/2011 11:31					
Eastern					
SM4500NH3BG	04/22/2011 14:00	8	05/11/2011 10:31		
SW6010C	04/22/2011 14:00	8	10/10/2011 10:31	Fe & Na	see version
FLPRO	04/22/2011 14:00	8	04/20/2011 10:31		
SW8260B	04/22/2011 14:00	8	04/27/2011 10:31	BTEX & MTBE	
E300.0	04/22/2011 14:00	8	05/11/2011 10:31	SO4	
E300.0	04/22/2011 14:00	8	04/15/2011 10:31	NO3	
SM2540C	04/22/2011 14:00	8	04/20/2011 10:31		
SW8270C	04/22/2011 14:00	8	04/20/2011 10:31		
1104144-03 MPT-351-2-MW03S-20110413 [Water] Sampled 04/13/2011 13:13					
Eastern					
SM4500NH3BG	04/22/2011 14:00	8	05/11/2011 12:13		
SW8260B	04/22/2011 14:00	8	04/27/2011 12:13	BTEX & MTBE	
E300.0	04/22/2011 14:00	8	05/11/2011 12:13	SO4	
SW6010C	04/22/2011 14:00	8	10/10/2011 12:13	Fe & Na	see version
E300.0	04/22/2011 14:00	8	04/15/2011 12:13	NO3	
SM2540C	04/22/2011 14:00	8	04/20/2011 12:13		
FLPRO	04/22/2011 14:00	8	04/20/2011 12:13		
SW8270C	04/22/2011 14:00	8	04/20/2011 12:13		

WORK ORDER

1104144

Empirical Laboratories, LLC

Printed: 4/27/2011 5:35:41PM

Client: Tetra Tech NUS, Inc. (T010)
 Project: NAS Mayport CTO JM33 2010

Project Manager: Brian Richard
 Project Number: TET_CTOJM33

Analysis	Due	TAT	Expires	Version	Comments
1104144-04 MPT-351-2-MW04D-20110413 [Water] Sampled 04/13/2011 12:28					
Eastern					
E300.0	04/22/2011 14:00	8	04/15/2011 11:28		NO3
E300.0	04/22/2011 14:00	8	05/11/2011 11:28		SO4
SM2540C	04/22/2011 14:00	8	04/20/2011 11:28		
SW8270C	04/22/2011 14:00	8	04/20/2011 11:28		
FLPRO	04/22/2011 14:00	8	04/20/2011 11:28		
SW8260B	04/22/2011 14:00	8	04/27/2011 11:28		BTEX & MTBE
SM4500NH3BG	04/22/2011 14:00	8	05/11/2011 11:28		
SW6010C	04/22/2011 14:00	8	10/10/2011 11:28	Fe & Na	see version
1104144-05 MPT-351-2-MW07S-20110413 [Water] Sampled 04/13/2011 15:02					
Eastern					
SW8260B	04/22/2011 14:00	8	04/27/2011 14:02		BTEX & MTBE
SW6010C	04/22/2011 14:00	8	10/10/2011 14:02	Fe & Na	see version
FLPRO	04/22/2011 14:00	8	04/20/2011 14:02		
SW8270C	04/22/2011 14:00	8	04/20/2011 14:02		
SM2540C	04/22/2011 14:00	8	04/20/2011 14:02		
E300.0	04/22/2011 14:00	8	04/15/2011 14:02		NO3
E300.0	04/22/2011 14:00	8	05/11/2011 14:02		SO4
SM4500NH3BG	04/22/2011 14:00	8	05/11/2011 14:02		

WORK ORDER

1104144

Printed: 4/27/2011 5:35:41PM

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
 Project: NAS Mayport CTO JM33 2010

Project Manager: Brian Richard
 Project Number: TET_CTOJM33

Analysis	Due	TAT	Expires	Version	Comments
1104144-06 MPT-351-2-MW08S-20110413 [Water] Sampled 04/13/2011 14:09 Eastern					
SM2540C	04/22/2011 14:00	8	04/20/2011 13:09		
SW6010C	04/22/2011 14:00	8	10/10/2011 13:09	Fe & Na	see version
FLPRO	04/22/2011 14:00	8	04/20/2011 13:09		
SW8270C	04/22/2011 14:00	8	04/20/2011 13:09		
SW8260B	04/22/2011 14:00	8	04/27/2011 13:09		BTEX & MTBE
SM4500NH3BG	04/22/2011 14:00	8	05/11/2011 13:09		
E300.0	04/22/2011 14:00	8	05/11/2011 13:09		SO4
E300.0	04/22/2011 14:00	8	04/15/2011 13:09		NO3
1104144-07 Trip Blank [Water] Sampled 04/13/2011 00:00 Eastern					
SW8260B	04/22/2011 14:00	8	04/26/2011 23:00		BTEX & MTBE

Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
 PROJECT NAME: NAS Mayport CTO JM33 2010
 SDG #: CTOJM33_013
 MATRIX: Water

QC LEVEL: Level IV
 Report Due: 4/26/2011
 Client Sample Count: 6

Sample Type	Sampled	Received	Lab ID	Client ID	E300.0	FLPRO	SM2540C	SM4500NH3BG	SW6010C	SW8260B	SW8270C
Client Sample	4/13/2011	4/14/2011	1104144-01	MPT-351-2-MW01S-20110413	X	X	X	X	X	X	X
Client Sample	4/13/2011	4/14/2011	1104144-02	MPT-351-2-MW02S-20110413	X	X	X	X	X	X	X
Client Sample	4/13/2011	4/14/2011	1104144-03	MPT-351-2-MW03S-20110413	X	X	X	X	X	X	X
Client Sample	4/13/2011	4/14/2011	1104144-04	MPT-351-2-MW04D-20110413	X	X	X	X	X	X	X
Client Sample	4/13/2011	4/14/2011	1104144-05	MPT-351-2-MW07S-20110413	X	X	X	X	X	X	X
Client Sample	4/13/2011	4/14/2011	1104144-06	MPT-351-2-MW08S-20110413	X	X	X	X	X	X	X
Trip Blank	4/13/2011	4/14/2011	1104144-07	Trip Blank	X	X	X	X	X	X	X

Data for SW8260B Forms

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D10810

Instrument: MS-VOA5

Calibration: 1110001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (1D10810-ICV2) ug/L			Lab File ID: 0415ICV2.D			Analyzed: 04/15/11 14:01		
Bromofluorobenzene	30.00	98.0	80 - 120	12.249		12.2490	+/-1.000	*
Dibromofluoromethane	30.00	104	80 - 120	6.89		6.8900	+/-1.000	*
1,2-Dichloroethane-d4	30.00	105	80 - 120	7.393		7.3930	+/-1.000	*
Toluene-d8	30.00	98.4	80 - 120	9.619		9.6190	+/-1.000	*

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: 1D10913

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-VOA5
 Calibration: 1110001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1D10913-CCV1) ug/L			Lab File ID: 0418CC1E.D		Analyzed: 04/18/11 20:09			
Bromofluorobenzene	30.00	96.4	80 - 120	12.235	12.235	0.0000	+/-1.000	
Dibromofluoromethane	30.00	104	80 - 120	6.886	6.886	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	106	80 - 120	7.379	7.379	0.0000	+/-1.000	
Toluene-d8	30.00	98.4	80 - 120	9.605	9.605	0.0000	+/-1.000	
LCS (1D18015-BS1) ug/L			Lab File ID: 0418LS1E.D		Analyzed: 04/18/11 20:34			
Bromofluorobenzene	30.00	102	75 - 120	12.234	12.235	-0.0010	+/-1.000	
Dibromofluoromethane	30.00	103	85 - 115	6.886	6.886	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	98.2	70 - 120	7.388	7.379	0.0090	+/-1.000	
Toluene-d8	30.00	103	85 - 120	9.604	9.605	-0.0010	+/-1.000	
Blank (1D18015-BLK1) ug/L			Lab File ID: 0418BL1E.D		Analyzed: 04/18/11 21:49			
Bromofluorobenzene	30.00	104	75 - 120	12.245	12.235	0.0100	+/-1.000	
Dibromofluoromethane	30.00	97.4	85 - 115	6.887	6.886	0.0010	+/-1.000	
1,2-Dichloroethane-d4	30.00	105	70 - 120	7.389	7.379	0.0100	+/-1.000	
Toluene-d8	30.00	104	85 - 120	9.615	9.605	0.0100	+/-1.000	
Trip Blank (1104144-07) ug/L			Lab File ID: 0414407.D		Analyzed: 04/18/11 23:03			
Bromofluorobenzene	30.00	101	75 - 120	12.234	12.235	-0.0010	+/-1.000	
Dibromofluoromethane	30.00	98.6	85 - 115	6.885	6.886	-0.0010	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	7.378	7.379	-0.0010	+/-1.000	
Toluene-d8	30.00	107	85 - 120	9.604	9.605	-0.0010	+/-1.000	
MPT-351-2-MW01S-20110413 (1104144-01) ug/L			Lab File ID: 0414401.D		Analyzed: 04/19/11 03:36			
Bromofluorobenzene	30.00	104	75 - 120	12.235	12.235	0.0000	+/-1.000	
Dibromofluoromethane	30.00	101	85 - 115	6.887	6.886	0.0010	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	7.389	7.379	0.0100	+/-1.000	
Toluene-d8	30.00	102	85 - 120	9.615	9.605	0.0100	+/-1.000	
MPT-351-2-MW02S-20110413 (1104144-02) ug/L			Lab File ID: 0414402.D		Analyzed: 04/19/11 04:01			
Bromofluorobenzene	30.00	105	75 - 120	12.235	12.235	0.0000	+/-1.000	
Dibromofluoromethane	30.00	97.3	85 - 115	6.887	6.886	0.0010	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	7.389	7.379	0.0100	+/-1.000	
Toluene-d8	30.00	108	85 - 120	9.615	9.605	0.0100	+/-1.000	
MPT-351-2-MW03S-20110413 (1104144-03) ug/L			Lab File ID: 0414403.D		Analyzed: 04/19/11 04:26			
Bromofluorobenzene	30.00	101	75 - 120	12.24	12.235	0.0050	+/-1.000	
Dibromofluoromethane	30.00	96.9	85 - 115	6.881	6.886	-0.0050	+/-1.000	
1,2-Dichloroethane-d4	30.00	99.8	70 - 120	7.383	7.379	0.0040	+/-1.000	
Toluene-d8	30.00	104	85 - 120	9.61	9.605	0.0050	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: 1D10913

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-VOA5
 Calibration: 1110001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
MPT-351-2-MW04D-20110413 (1104144-04) ug/L			Lab File ID: 0414404.D			Analyzed: 04/19/11 04:51		
Bromofluorobenzene	30.00	103	75 - 120	12.24	12.235	0.0050	+/-1.000	
Dibromofluoromethane	30.00	98.7	85 - 115	6.881	6.886	-0.0050	+/-1.000	
1,2-Dichloroethane-d4	30.00	100	70 - 120	7.383	7.379	0.0040	+/-1.000	
Toluene-d8	30.00	107	85 - 120	9.61	9.605	0.0050	+/-1.000	
MPT-351-2-MW07S-20110413 (1104144-05) ug/L			Lab File ID: 0414405.D			Analyzed: 04/19/11 05:16		
Bromofluorobenzene	30.00	103	75 - 120	12.238	12.235	0.0030	+/-1.000	
Dibromofluoromethane	30.00	98.4	85 - 115	6.88	6.886	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	95.8	70 - 120	7.382	7.379	0.0030	+/-1.000	
Toluene-d8	30.00	105	85 - 120	9.608	9.605	0.0030	+/-1.000	
MPT-351-2-MW08S-20110413 (1104144-06) ug/L			Lab File ID: 0414406.D			Analyzed: 04/19/11 05:40		
Bromofluorobenzene	30.00	103	75 - 120	12.242	12.235	0.0070	+/-1.000	
Dibromofluoromethane	30.00	99.8	85 - 115	6.883	6.886	-0.0030	+/-1.000	
1,2-Dichloroethane-d4	30.00	105	70 - 120	7.386	7.379	0.0070	+/-1.000	
Toluene-d8	30.00	104	85 - 120	9.612	9.605	0.0070	+/-1.000	

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D18015

Laboratory ID: 1D18015-BS1

Preparation: 5030B

Initial/Final: 5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Benzene	50.00	52.0	104	80 - 120
Ethylbenzene	50.00	53.1	106	75 - 125
Methyl t-Butyl Ether	50.00	53.5	107	65 - 125
Toluene	50.00	51.6	103	75 - 120
Xylenes (total)	150.0	155	103	75 - 130

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D18015 Batch Matrix: Water

Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW01S-20110413	1104144-01	04/18/11 00:00	5.00	5.00
MPT-351-2-MW02S-20110413	1104144-02	04/18/11 00:00	5.00	5.00
MPT-351-2-MW03S-20110413	1104144-03	04/18/11 00:00	5.00	5.00
MPT-351-2-MW04D-20110413	1104144-04	04/18/11 00:00	5.00	5.00
MPT-351-2-MW07S-20110413	1104144-05	04/18/11 00:00	5.00	5.00
MPT-351-2-MW08S-20110413	1104144-06	04/18/11 00:00	5.00	5.00
Trip Blank	1104144-07	04/18/11 00:00	5.00	5.00
Blank	1D18015-BLK1	04/18/11 00:00	5.00	5.00
LCS	1D18015-BS1	04/18/11 00:00	5.00	5.00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Lab File ID: 0415TU1.D

Injection Date: 04/15/11

Instrument ID: MS-VOA5

Injection Time: 08:29

Sequence: 1D10810

Lab Sample ID: 1D10810-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	18.4	PASS
75	30 - 60% of 95	38.6	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.52	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	101	PASS
175	5 - 9% of 174	7.11	PASS
176	95 - 101% of 174	95.6	PASS
177	5 - 9% of 176	5.75	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Lab File ID: 0418TU1E.D

Injection Date: 04/18/11

Instrument ID: MS-VOA5

Injection Time: 19:44

Sequence: 1D10913

Lab Sample ID: 1D10913-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	23.4	PASS
75	30 - 60% of 95	43.1	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.71	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	79	PASS
175	5 - 9% of 174	7.76	PASS
176	95 - 101% of 174	96.8	PASS
177	5 - 9% of 176	6.21	PASS

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D10810

Instrument: MS-VOA5

Calibration: 1110001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1D10810-TUN1	0415TU1.D	04/15/11 08:29
Cal Standard	1D10810-CAL1	0415CAL1.D	04/15/11 09:53
Cal Standard	1D10810-CAL2	0415CAL2.D	04/15/11 10:18
Cal Standard	1D10810-CAL3	0415CAL3.D	04/15/11 10:43
Cal Standard	1D10810-CAL4	0415CAL4.D	04/15/11 11:07
Cal Standard	1D10810-CAL5	0415CAL5.D	04/15/11 11:32
Cal Standard	1D10810-CAL6	0415CAL6.D	04/15/11 11:57
Cal Standard	1D10810-CAL7	0415CAL7.D	04/15/11 12:22
Cal Standard	1D10810-CAL8	0415CAL8.D	04/15/11 12:47
Cal Standard	1D10810-CAL9	0415CAL9.D	04/15/11 13:12
Initial Cal Check	1D10810-ICV2	0415ICV2.D	04/15/11 14:01
Cal Standard	1D10810-CALA	0415CALA.D	04/15/11 14:26
Cal Standard	1D10810-CALB	0415CALB.D	04/15/11 14:51
Cal Standard	1D10810-CALC	0415CALC.D	04/15/11 15:16
Cal Standard	1D10810-CALD	0415CALD.D	04/15/11 15:41
Cal Standard	1D10810-CALE	0415CALE.D	04/15/11 16:05
Cal Standard	1D10810-CALF	0415CALF.D	04/15/11 16:30
Cal Standard	1D10810-CALG	0415CALG.D	04/15/11 16:55
Cal Standard	1D10810-CALH	0415CALH.D	04/15/11 17:20
Cal Standard	1D10810-CALI	0415CALI.D	04/15/11 17:45

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D10913

Instrument: MS-VOA5

Calibration: 1110001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1D10913-TUN1	0418TU1E.D	04/18/11 19:44
Calibration Check	1D10913-CCV1	0418CC1E.D	04/18/11 20:09
LCS	1D18015-BS1	0418LS1E.D	04/18/11 20:34
Blank	1D18015-BLK1	0418BL1E.D	04/18/11 21:49
Trip Blank	1104144-07	0414407.D	04/18/11 23:03
MPT-351-2-MW01S-20110413	1104144-01	0414401.D	04/19/11 03:36
MPT-351-2-MW02S-20110413	1104144-02	0414402.D	04/19/11 04:01
MPT-351-2-MW03S-20110413	1104144-03	0414403.D	04/19/11 04:26
MPT-351-2-MW04D-20110413	1104144-04	0414404.D	04/19/11 04:51
MPT-351-2-MW07S-20110413	1104144-05	0414405.D	04/19/11 05:16
MPT-351-2-MW08S-20110413	1104144-06	0414406.D	04/19/11 05:40

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D10810

Instrument: MS-VOA5

Calibration: 1110001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (1D10810-ICV2)		Lab File ID: 04151CV2.D			Analyzed: 04/15/11 14:01				
Fluorobenzene	1321805	7.915				50 - 200	7.9150	+/-0.50	*
Chlorobenzene-d5	586921	11.047				50 - 200	11.0470	+/-0.50	*
1,4-Dichlorobenzene-d4	520980	13.451				50 - 200	13.4510	+/-0.50	*

**INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B**

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: ID10913

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-VOA5
 Calibration: 1110001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (ID10913-CCV1)									
Lab File ID: 0418CC1E.D					Analyzed: 04/18/11 20:09				
Fluorobenzene	1292132	7.911	1328259	7.92	97	50 - 200	-0.0090	+/-0.50	
Chlorobenzene-d5	580009	11.043	600438	11.052	97	50 - 200	-0.0090	+/-0.50	
1,4-Dichlorobenzene-d4	499308	13.447	522137	13.456	96	50 - 200	-0.0090	+/-0.50	
LCS (ID18015-BS1)									
Lab File ID: 0418LS1E.D					Analyzed: 04/18/11 20:34				
Fluorobenzene	1340366	7.91	1292132	7.911	104	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	552867	11.042	580009	11.043	95	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	494962	13.446	499308	13.447	99	50 - 200	-0.0010	+/-0.50	
Blank (ID18015-BLK1)									
Lab File ID: 0418BL1E.D					Analyzed: 04/18/11 21:49				
Fluorobenzene	1420421	7.911	1292132	7.911	110	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	592606	11.043	580009	11.043	102	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	518252	13.447	499308	13.447	104	50 - 200	0.0000	+/-0.50	
Trip Blank (1104144-07)									
Lab File ID: 0414407.D					Analyzed: 04/18/11 23:03				
Fluorobenzene	1363486	7.909	1292132	7.911	106	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5	562953	11.042	580009	11.043	97	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	483772	13.445	499308	13.447	97	50 - 200	-0.0020	+/-0.50	
MPT-351-2-MW01S-20110413 (1104144-01)									
Lab File ID: 0414401.D					Analyzed: 04/19/11 03:36				
Fluorobenzene	1392777	7.911	1292132	7.911	108	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	571161	11.043	580009	11.043	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	502752	13.447	499308	13.447	101	50 - 200	0.0000	+/-0.50	
MPT-351-2-MW02S-20110413 (1104144-02)									
Lab File ID: 0414402.D					Analyzed: 04/19/11 04:01				
Fluorobenzene	1398817	7.911	1292132	7.911	108	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	555786	11.044	580009	11.043	96	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	492885	13.447	499308	13.447	99	50 - 200	0.0000	+/-0.50	
MPT-351-2-MW03S-20110413 (1104144-03)									
Lab File ID: 0414403.D					Analyzed: 04/19/11 04:26				
Fluorobenzene	1377062	7.915	1292132	7.911	107	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5	573846	11.048	580009	11.043	99	50 - 200	0.0050	+/-0.50	
1,4-Dichlorobenzene-d4	491423	13.441	499308	13.447	98	50 - 200	-0.0060	+/-0.50	
MPT-351-2-MW04D-20110413 (1104144-04)									
Lab File ID: 0414404.D					Analyzed: 04/19/11 04:51				
Fluorobenzene	1406853	7.915	1292132	7.911	109	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5	571468	11.048	580009	11.043	99	50 - 200	0.0050	+/-0.50	
1,4-Dichlorobenzene-d4	502893	13.441	499308	13.447	101	50 - 200	-0.0060	+/-0.50	
MPT-351-2-MW07S-20110413 (1104144-05)									
Lab File ID: 0414405.D					Analyzed: 04/19/11 05:16				
Fluorobenzene	1444661	7.914	1292132	7.911	112	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5	579589	11.046	580009	11.043	100	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	502527	13.44	499308	13.447	101	50 - 200	-0.0070	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: 1D10913

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-VOA5
 Calibration: 1110001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MPT-351-2-MW08S-20110413 (1104144-06)			Lab File ID: 0414406.D			Analyzed: 04/19/11 05:40			
Fluorobenzene	1388149	7.918	1292132	7.911	107	50 - 200	0.0070	+/-0.50	
Chlorobenzene-d5	582016	11.05	580009	11.043	100	50 - 200	0.0070	+/-0.50	
1,4-Dichlorobenzene-d4	499632	13.453	499308	13.447	100	50 - 200	0.0060	+/-0.50	

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Calibration: 1110001
 Matrix: Water

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-VOA5
 Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF										
Acetone												
Acrolein	2.501	7.345248E-02	5.002	0.0629605	10	7.600379E-02	25.01	4.266429E-02	50.02	4.401047E-02	250.1	4.491028E-02
Acrylonitrile	2.499	9.808561E-02	4.998	0.109848	9.996	8.699726E-02	24.99	8.799322E-02	49.98	8.802525E-02	249.9	9.420532E-02
Benzene	0.5	0.8000888	1	0.9156609	2	0.8803617	5	0.7934592	10	0.7359414	50	0.800176
Bromobenzene	0.5	0.641056	1	0.6621863	2	0.5914626	5	0.6467631	10	0.579489	50	0.6402908
Bromochloromethane	0.5	0.1093716	1	0.1692393	2	0.140701	5	0.1313986	10	0.112671	50	0.1315389
Tert-Amyl Methyl Ether	0.5	0.6306069	1	0.7326989	2	0.6863854	5	0.6084636	10	0.594319	50	0.6639212
Bromodichloromethane	0.5	0.3849176	1	0.3212413	2	0.3108098	5	0.3016333	10	0.2722413	50	0.3183873
Bromoform	0.5	0.3945924	1	0.3386649	2	0.3466746	5	0.3226988	10	0.33363	50	0.3812498
Bromomethane	0.5	0.1684676	1	0.1779699	2	0.192281	5	0.1780457	10	0.1785955	50	0.2262205
Bromofluorobenzene												
n-Butylbenzene	0.5	1.615764	1	1.620222	2	1.568309	5	1.533788	10	1.313584	50	1.538153
2-Butanone												
sec-Butylbenzene	0.5	2.182433	1	2.042219	2	2.12414	5	1.9027	10	1.740465	50	1.975233
tert-Butylbenzene	0.5	1.42206	1	1.934084	2	1.652871	5	1.639224	10	1.426676	50	1.647677
Carbon disulfide	0.5	0.6700777	1	0.7146108	2	0.6935102	5	0.6335915	10	0.6337523	50	0.6850653
Carbon tetrachloride	0.5	0.2142449	1	0.2502996	2	0.2321267	5	0.2296175	10	0.2145385	50	0.245885
Chlorobenzene	0.5	1.326671	1	1.439744	2	1.348718	5	1.242116	10	1.218162	50	1.309918
Chloroethane	0.5	0.2639473	1	0.3176148	2	0.2371905	5	0.2382983	10	0.229075	50	0.2546896
Chloroform	0.5	0.4713124	1	0.525224	2	0.4449954	5	0.3898242	10	0.3843343	50	0.4034271
2-Chloroethyl vinyl ether	0.9975	0.1757648	1.995	0.1714589	3.99	0.1786886	9.975	0.1651317	19.95	0.1499097	99.75	0.1703667
Chloromethane	0.5	0.4048956	1	0.522269	2	0.5269472	5	0.4844209	10	0.4433077	50	0.4808374
1-Chlorohexane	0.501	1.585962	1.002	1.589005	2.004	1.398023	5.01	1.274661	10.02	1.22227	50.1	1.31726
2-Chlorotoluene	0.5	1.32624	1	1.808458	2	1.659932	5	1.543797	10	1.385015	50	1.54863
4-Chlorotoluene	0.5	1.73978	1	1.803072	2	1.855684	5	1.677465	10	1.535848	50	1.79964
Cyclohexane	0.5	0.4396916	1	0.4634382	2	0.409737	5	0.3895298	10	0.3643557	50	0.4100495
Dibromochloromethane	0.5	0.5283043	1	0.5578137	2	0.5173084	5	0.5282558	10	0.5005973	50	0.5522381
1,2-Dibromo-3-chloropropane	0.5		1	9.348104E-02	2	9.474229E-02	5	0.1156024	10	0.1023672	50	0.1237073
1,2-Dibromoethane (EDB)	0.5	0.5843429	1	0.6618649	2	0.6056568	5	0.540378	10	0.5211705	50	0.5524816
Dibromomethane	0.5	0.1536054	1	0.1796265	2	0.153499	5	0.1450265	10	0.1479124	50	0.1641915
1,2-Dichlorobenzene	0.5	0.8575686	1	1.041613	2	1.049727	5	0.9857437	10	0.9044381	50	1.03308

INITIAL CALIBRATION DATA
SW8260B

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Calibration: 1110001
 Matrix: Water

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-VOA5
 Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF										
1,3-Dichlorobenzene	0.5	1.273057	1	1.210968	2	1.111015	5	1.008536	10	0.9391991	50	1.051088
1,4-Dichlorobenzene	0.5	1.532551	1	1.16052	2	1.202197	5	1.083727	10	0.9748769	50	1.079088
Dichlorodifluoromethane	0.5	0.2840134	1	0.2858936	2	0.2909534	5	0.3119691	10	0.2727878	50	0.3162249
1,1-Dichloroethane	0.5	0.4287103	1	0.5320965	2	0.4751234	5	0.4325725	10	0.4120782	50	0.4661043
1,2-Dichloroethane	0.5	0.3562957	1	0.31363	2	0.3396192	5	0.3170589	10	0.2989102	50	0.3387723
1,1-Dichloroethene	0.5	0.2393828	1	0.2659251	2	0.2648033	5	0.1920973	10	0.1939775	50	0.2009782
cis-1,2-Dichloroethene	0.5	0.249482	1	0.3033548	2	0.3005381	5	0.247724	10	0.2281777	50	0.2555682
trans-1,2-Dichloroethene	0.5	0.2998018	1	0.2666415	2	0.2699336	5	0.2006577	10	0.2123392	50	0.230136
1,2-Dichloroethene (total)	1	0.2746419	2	0.2849981	4	0.2852358	10	0.2241909	20	0.2202585	100	0.2428521
1,2-Dichloropropane	0.5	0.2971116	1	0.3268379	2	0.3157074	5	0.2696402	10	0.2481496	50	0.2695601
1,3-Dichloropropane	0.5	0.843535	1	0.909842	2	0.8361608	5	0.8171525	10	0.764916	50	0.8162331
2,2-Dichloropropane	0.5	0.3501656	1	0.3412545	2	0.3056573	5	0.2780712	10	0.2715509	50	0.3022778
1,1-Dichloropropene	0.5	0.2968029	1	0.3418814	2	0.3254472	5	0.2892188	10	0.2793071	50	0.3077439
cis-1,3-Dichloropropene	0.5	0.3369793	1	0.4209045	2	0.3752986	5	0.3546505	10	0.3451507	50	0.3709639
trans-1,3-Dichloropropene	0.5	0.6572671	1	0.7202759	2	0.7544529	5	0.7045884	10	0.6688263	50	0.7769461
1,3-Dichloropropene (total)	1	0.3058216	2	0.3600701	4	0.3468991	10	0.3256349	20	0.3108605	100	0.3508639
Diisopropyl Ether	0.5	1.095436	1	1.089445	2	1.036587	5	1.039403	10	1.009037	50	1.099811
Ethylbenzene	0.5	2.026046	1	2.21121	2	2.244356	5	2.0568	10	1.979842	50	2.099205
Ethyl tert-Butyl Ether	0.5	0.8180381	1	0.8773582	2	0.8584222	5	0.7778061	10	0.7427239	50	0.8236289
Ethyl Methacrylate	0.5	0.7708219	1	0.7903798	2	0.7030081	5	0.7054255	10	0.6633499	50	0.7145584
Hexachlorobutadiene	0.5	0.3004126	1	0.2670639	2	0.2546861	5	0.2139476	10	0.1996979	50	0.2170609
2-Hexanone												
Iodomethane	0.5	0.1155017	1	0.1466517	2	0.1505738	5	0.1804679	10	0.1858682	50	0.2715026
Isopropylbenzene	0.5	1.553991	1	1.879496	2	1.64715	5	1.463981	10	1.484014	50	1.604791
p-Isopropyltoluene	0.5	1.89864	1	1.776951	2	1.742258	5	1.607387	10	1.523654	50	1.666623
Methylene chloride	0.5	0.3900775	1	0.2936392	2	0.2698228	5	0.2477597	10	0.2252182	50	0.2518085
Methyl Acetate	0.5	0.4609926	1	0.4005555	2	0.2358498	5	0.2255224	10	0.2031954	50	0.215042
Methylcyclohexane	0.5	0.3449617	1	0.2959674	2	0.3342673	5	0.2715628	10	0.2594567	50	0.2933012
Naphthalene	0.5	1.330595	1	1.403953	2	1.438523	5	1.267743	10	1.210153	50	1.336267
Methyl Methacrylate	0.5	0.3571778	1	0.3326583	2	0.2536673	5	0.2420409	10	0.2434765	50	0.2725396
4-Methyl-2-pentanone												

INITIAL CALIBRATION DATA
SW8260B

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Calibration: 1110001
 Matrix: Water

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-VOA5
 Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF										
Methyl t-Butyl Ether	0.5	0.58849	1	0.3847061	2	0.61701	5	0.5249432	10	0.5220101	50	0.575102
n-Propylbenzene	0.5	2.658898	1	2.631022	2	2.742525	5	2.498391	10	2.252019	50	2.51794
Styrene	0.5	1.191692	1	1.431338	2	1.394782	5	1.292819	10	1.286717	50	1.356195
1,1,2,2-Tetrachloroethane	0.5	0.6565294	1	0.8292243	2	0.7688837	5	0.6768636	10	0.6541766	50	0.723185
1,1,1,2-Tetrachloroethane	0.5	0.4367006	1	0.4756397	2	0.5285685	5	0.4857648	10	0.4354952	50	0.5080245
tert-Butyl alcohol	2.5	1.891953E-02	5	2.545306E-02	10	2.534346E-02	25	2.006688E-02	50	1.962376E-02	250	2.099059E-02
Tetrachloroethene	0.5	0.364093	1	0.5506471	2	0.4872814	5	0.4530117	10	0.4530936	50	0.4932279
Toluene	0.5	1.194858	1	1.156849	2	1.245383	5	1.085715	10	1.014703	50	1.112732
1,2,3-Trichlorobenzene	0.5	0.4865515	1	0.6485175	2	0.5326165	5	0.4876621	10	0.4486489	50	0.5188974
1,2,4-Trichlorobenzene	0.5	0.7493696	1	0.6890607	2	0.6505441	5	0.5479476	10	0.5055653	50	0.5773303
1,1,2-Trichloroethane	0.5	0.5303094	1	0.5252135	2	0.4770975	5	0.4418115	10	0.4350982	50	0.4271284
1,1,1-Trichloroethane	0.5	0.330761	1	0.3376056	2	0.3149539	5	0.2880055	10	0.2771033	50	0.3098753
Tetrahydrofuran	0.5	0.1634841	1	0.1109906	2	0.130662	5	7.513845E-02	10	7.189065E-02	50	7.579246E-02
Trichloroethene	0.5	0.2354577	1	0.2523815	2	0.2614126	5	0.2117919	10	0.2188451	50	0.2396014
Trichlorofluoromethane	0.5	0.4371778	1	0.4162929	2	0.4261584	5	0.3891685	10	0.3896686	50	0.3943387
1,2,3-Trichloropropane	0.5	0.1683271	1	0.1842854	2	0.2015794	5	0.1413224	10	0.1597234	50	0.1514929
1,3,5-Trimethylbenzene	0.5	1.681783	1	1.781468	2	1.842237	5	1.535102	10	1.452974	50	1.666816
1,2,4-Trimethylbenzene	0.5	1.815771	1	1.840546	2	1.734166	5	1.554856	10	1.452915	50	1.671327
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5	0.1947962	1	0.245106	2	0.2140875	5	0.1963128	10	0.1816022	50	0.207954
Vinyl chloride	0.5	0.4777512	1	0.3889818	2	0.3273641	5	0.3402598	10	0.3620777	50	0.3030401
m,p-Xylene	1	1.670396	2	1.787353	4	1.678962	10	1.568847	20	1.459675	100	1.572657
o-Xylene	0.5	1.74923	1	1.94044	2	1.807285	5	1.558785	10	1.560928	50	1.627801
Vinyl acetate	0.9995	0.4135478	1.999	0.3447625	3.998	0.4064887	9.995	0.3548725	19.99	0.3401282	99.95	0.3820547
Xylenes (total)	1.5	1.696674	3	1.838382	6	1.721736	15	1.565493	30	1.493426	150	1.591039
Dibromofluoromethane												
1,2-Dichloroethane-d4												
Toluene-d8												
tert-Amyl alcohol	2.5	1.766705E-02	5	1.906405E-02	10	1.790397E-02	25	0.0169066	50	0.0166562	250	1.650561E-02
tert-Amyl ethyl ether	0.5	0.6824261	1	0.6596976	2	0.6734211	5	0.6479509	10	0.6062625	50	0.6795288

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone							1		2	0.2395382	4	0.1062259
Acrolein	500.2	4.761912E-02	750.3	4.441414E-02	1000	4.446742E-02						
Acrylonitrile	499.8	9.624532E-02	749.7	0.0967836	999.6	9.945679E-02						
Benzene	100	0.8082567	150	0.8163695	200	0.7988039						
Bromobenzene	100	0.6227843	150	0.6086506	200	0.6133366						
Bromochloromethane	100	0.1302925	150	0.134319	200	0.130993						
Tert-Amyl Methyl Ether	100	0.6658783	150	0.687089	200	0.681037						
Bromodichloromethane	100	0.3180744	150	0.3272917	200	0.325512						
Bromoform	100	0.3779496	150	0.3790748	200	0.3705986						
Bromomethane	100	0.2381992	150	0.2519488	200	0.2510808						
Bromofluorobenzene							30	0.8695019	30	0.8691996	40	0.8060909
n-Butylbenzene	100	1.474875	150	1.431947	200	1.444853						
2-Butanone							1	0.1415871	2	0.1638124	4	0.150175
sec-Butylbenzene	100	1.901739	150	1.885204	200	1.850669						
tert-Butylbenzene	100	1.602518	150	1.609183	200	1.551959						
Carbon disulfide	100	0.6887554	150	0.6911361	200	0.68595						
Carbon tetrachloride	100	0.2509112	150	0.2571727	200	0.2633611						
Chlorobenzene	100	1.235874	150	1.215821	200	1.168307						
Chloroethane	100	0.2458709	150	0.2418009	200	0.2428498						
Chloroform	100	0.4073919	150	0.4212198	200	0.4175302						
2-Chloroethyl vinyl ether	199.5	0.175057	299.2	0.1795702	399	0.17956						
Chloromethane	100	0.4652296	150	0.4745201	200	0.4687825						
1-Chlorohexane	100.2	1.256774	150.3	1.25052	200.4	1.210453						
2-Chlorotoluene	100	1.52764	150	1.514417	200	1.503625						
4-Chlorotoluene	100	1.720962	150	1.745691	200	1.735362						
Cyclohexane	100	0.4088501	150	0.4185832	200	0.4205054						
Dibromochloromethane	100	0.5342505	150	0.5344027	200	0.5202787						
1,2-Dibromo-3-chloropropane	100	0.1245736	150	0.1227042	200	0.1233507						
1,2-Dibromoethane (EDB)	100	0.5329544	150	0.5193847	200	0.5009687						
Dibromomethane	100	0.1620901	150	0.1675086	200	0.1653088						
1,2-Dichlorobenzene	100	0.9798451	150	0.9607292	200	0.9510329						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF										
1,3-Dichlorobenzene	100	1.028373	150	0.998828	200	1.002863						
1,4-Dichlorobenzene	100	1.0591	150	1.030866	200	1.009536						
Dichlorodifluoromethane	100	0.3117621	150	0.3095106	200	0.3036366						
1,1-Dichloroethane	100	0.4650846	150	0.4714799	200	0.4701173						
1,2-Dichloroethane	100	0.3454874	150	0.3557143	200	0.3525558						
1,1-Dichloroethene	100	0.204577	150	0.2000217	200	0.2103732						
cis-1,2-Dichloroethene	100	0.2594392	150	0.2625341	200	0.2612869						
trans-1,2-Dichloroethene	100	0.2320617	150	0.2404701	200	0.2408501						
1,2-Dichloroethene (total)	200	0.2457505	300	0.2515021	400	0.2510685						
1,2-Dichloropropane	100	0.2768431	150	0.2841096	200	0.2821266						
1,3-Dichloropropane	100	0.7927853	150	0.7731411	200	0.7493176						
2,2-Dichloropropane	100	0.305663	150	0.3168261	200	0.3142077						
1,1-Dichloropropene	100	0.3115563	150	0.3233728	200	0.3222422						
cis-1,3-Dichloropropene	100	0.3828268	150	0.3965628	200	0.395178						
trans-1,3-Dichloropropene	100	0.7696532	150	0.7817741	200	0.7646546						
1,3-Dichloropropene (total)	200	0.3653738	300	0.3800619	400	0.3801002						
Diisopropyl Ether	100	1.11285	150	1.134986	200	1.107778						
Ethylbenzene	100	1.937883	150	1.922859	200	1.8281						
Ethyl tert-Butyl Ether	100	0.8342713	150	0.8474832	200	0.8437941						
Ethyl Methacrylate	100	0.6893992	150	0.6995502	200	0.6764212						
Hexachlorobutadiene	100	0.2183398	150	0.2151024	200	0.2166238						
2-Hexanone							1	0.5026459	2	0.5797565	4	0.4901297
Iodomethane	100	0.2889175	150	0.3081212	200	0.3008402						
Isopropylbenzene	100	1.506733	150	1.473016	200	1.422801						
p-Isopropyltoluene	100	1.637658	150	1.625244	200	1.615128						
Methylene chloride	100	0.2516857	150	0.2554455	200	0.2533425						
Methyl Acetate	100	0.2201898	150	0.2211768	200	0.2256047						
Methylcyclohexane	100	0.2949703	150	0.3038449	200	0.3052717						
Naphthalene	100	1.347997	150	1.313537	200	1.294839						
Methyl Methacrylate	100	0.2694595	150	0.2856965	200	0.2875679						
4-Methyl-2-pentanone							1	0.2715508	2	0.2845776	4	0.2933364

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Methyl t-Butyl Ether	100	0.5988705	150	0.6159157	200	0.6139185						
n-Propylbenzene	100	2.408552	150	2.369597	200	2.286507						
Styrene	100	1.294683	150	1.308169	200	1.270967						
1,1,2,2-Tetrachloroethane	100	0.713353	150	0.6930676	200	0.6933867						
1,1,1,2-Tetrachloroethane	100	0.475352	150	0.4757034	200	0.4682421						
tert-Butyl alcohol	500	2.167814E-02	750	2.229985E-02	1000	2.231197E-02						
Tetrachloroethene	100	0.4520485	150	0.4602833	200	0.448791						
Toluene	100	1.081687	150	1.095633	200	1.082227						
1,2,3-Trichlorobenzene	100	0.4923064	150	0.4935776	200	0.4830579						
1,2,4-Trichlorobenzene	100	0.5539334	150	0.560741	200	0.5458707						
1,1,2-Trichloroethane	100	0.4151994	150	0.4180961	200	0.3989418						
1,1,1-Trichloroethane	100	0.3158352	150	0.3216286	200	0.327623						
Tetrahydrofuran	100	7.667164E-02	150	7.949791E-02	200	7.960101E-02						
Trichloroethene	100	0.23727	150	0.2431529	200	0.2463272						
Trichlorofluoromethane	100	0.3969179	150	0.3949105	200	0.3914032						
1,2,3-Trichloropropane	100	0.1423161	150	0.1506411	200	0.1443797						
1,3,5-Trimethylbenzene	100	1.583804	150	1.575997	200	1.565018						
1,2,4-Trimethylbenzene	100	1.633456	150	1.64197	200	1.585531						
1,1,2-Trichloro-1,2,2-trifluoroethane	100	0.2067751	150	0.2062075	200	0.2127444						
Vinyl chloride	100	0.2340032	150	0.2065956	200	0.1971065						
m,p-Xylene	200	1.501925	300	1.462725	400	1.317357						
o-Xylene	100	1.565988	150	1.553286	200	1.508714						
Vinyl acetate	199.9	0.3826316	299.8	0.3832969	399.8	0.3787505						
Xylenes (total)	300	1.523279	450	1.492912	600	1.381143						
Dibromofluoromethane							30	0.305082	30	0.3121115	40	0.2808014
1,2-Dichloroethane-d4							30	0.060848	30	6.200351E-02	40	0.057634
Toluene-d8							30	2.175583	30	2.133059	40	1.993034
tert-Amyl alcohol	500	1.750579E-02	750	1.752437E-02	1000	1.792482E-02						
tert-Amyl ethyl ether	100	0.6929417	150	0.7127362	200	0.7089255						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	10	0.1058109	20	9.662517E-02	100	9.160077E-02	200	8.873568E-02	300	8.776138E-02	400	0.0912852
Acrolein												
Acrylonitrile												
Benzene												
Bromobenzene												
Bromochloromethane												
Tert-Amyl Methyl Ether												
Bromodichloromethane												
Bromoform												
Bromomethane												
Bromofluorobenzene	50	0.8179282	60	0.8024138	70	0.7653987	30	0.9016312	30	0.8719414	30	0.8837117
n-Butylbenzene												
2-Butanone	10	0.1154252	20	0.1283318	100	0.140829	200	0.1341546	300	0.1343933	400	0.1349522
sec-Butylbenzene												
tert-Butylbenzene												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
2-Chloroethyl vinyl ether												
Chloromethane												
1-Chlorohexane												
2-Chlorotoluene												
4-Chlorotoluene												
Cyclohexane												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane (EDB)												
Dibromomethane												
1,2-Dichlorobenzene												

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53

4/15/11 17:45

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF										
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												
Dichlorodifluoromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
1,2-Dichloroethene (total)												
1,2-Dichloropropane												
1,3-Dichloropropane												
2,2-Dichloropropane												
1,1-Dichloropropene												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
1,3-Dichloropropene (total)												
Diisopropyl Ether												
Ethylbenzene												
Ethyl tert-Butyl Ether												
Ethyl Methacrylate												
Hexachlorobutadiene												
2-Hexanone	10	0.4151944	20	0.4738867	100	0.4647011	200	0.4730331	300	0.4535798	400	0.4782568
Iodomethane												
Isopropylbenzene												
p-Isopropyltoluene												
Methylene chloride												
Methyl Acetate												
Methylcyclohexane												
Naphthalene												
Methyl Methacrylate												
4-Methyl-2-pentanone	10	0.2591883	20	0.2753029	100	0.2847717	200	0.2842831	300	0.2727058	400	0.2794371

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53

4/15/11 17:45

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Methyl t-Butyl Ether												
n-Propylbenzene												
Styrene												
1,1,2,2-Tetrachloroethane												
1,1,1,2-Tetrachloroethane												
tert-Butyl alcohol												
Tetrachloroethene												
Toluene												
1,2,3-Trichlorobenzene												
1,2,4-Trichlorobenzene												
1,1,2-Trichloroethane												
1,1,1-Trichloroethane												
Tetrahydrofuran												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,3,5-Trimethylbenzene												
1,2,4-Trimethylbenzene												
1,1,2-Trichloro-1,2,2-trifluoroethane												
Vinyl chloride												
m,p-Xylene												
o-Xylene												
Vinyl acetate												
Xylenes (total)												
Dibromofluoromethane	50	0.2831616	60	0.2832524	70	0.2746393	30	0.3029928	30	0.2980317	30	0.2988701
1,2-Dichloroethane-d4	50	6.188906E-02	60	5.667148E-02	70	5.616298E-02	30	0.0631027	30	5.735518E-02	30	5.957207E-02
Toluene-d8	50	1.973692	60	1.954738	70	1.847237	30	2.162138	30	2.08284	30	2.181926
tert-Amyl alcohol												
tert-Amyl ethyl ether												

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.095435	8.130072	3.761286	9.346288E-02			15	
Acrolein	5.338917E-02	25.4234	3.639333	0.1077746	0.9990652		0.995	
Acrylonitrile	9.529337E-02	7.569294	4.589333	0.1474434			15	
Benzene	0.8165687	6.399931	7.650444	5.168866E-02			15	
Bromobenzene	0.622891	4.364366	12.40278	5.143733E-02			15	
Bromochloromethane	0.1322805	12.97677	6.738889	0.0928818			15	
Tert-Amyl Methyl Ether	0.6611555	6.555788	7.841111	7.572897E-02			15	
Bromodichloromethane	0.3200121	9.249059	8.636667	6.813749E-02			15	
Bromoform	0.3605704	7.045665	11.81067	5.905082E-02			SPCC (0.1)	
Bromomethane	0.2069788	16.64528	2.818556	0.1637358	0.9991868		0.995	
Bromofluorobenzene	0.8430908	5.464727	12.24611	1.755882E-02			15	
n-Butylbenzene	1.504611	6.561854	13.83644	3.032147E-02			15	
2-Butanone	0.1381845	9.827188	6.202444	5.654298E-02			15	
sec-Butylbenzene	1.956089	7.131853	13.29478	2.976972E-02			15	
tert-Butylbenzene	1.609584	9.357792	13.06044	5.049762E-02			15	
Carbon disulfide	0.6773833	4.033366	4.763333	4.957716E-02			15	
Carbon tetrachloride	0.2397952	7.491069	7.617778	6.986726E-02			15	
Chlorobenzene	1.27837	6.608143	11.08278	5.423621E-02			SPCC (0.3)	
Chloroethane	0.2523708	10.49478	2.951	0.1958913			15	
Chloroform	0.4294733	10.46046	6.715889	8.754408E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.1717231	5.52504	8.994556	6.848219E-02			15	
Chloromethane	0.4745789	7.851537	2.228667	0.1926709			SPCC (0.1)	
1-Chlorohexane	1.344992	11.02804	11.049	3.869327E-02			15	
2-Chlorotoluene	1.535306	9.158972	12.625	3.281746E-02			15	
4-Chlorotoluene	1.734834	5.262659	12.68844	4.818632E-02			15	
Cyclohexane	0.4138601	6.775805	7.549889	5.761858E-02			15	
Dibromochloromethane	0.5303833	3.2862	10.31456	6.028785E-02			15	
1,2-Dibromo-3-chloropropane	0.1125661	12.02491	14.44125	3.902792E-02			15	
1,2-Dibromoethane (EDB)	0.5576892	9.147644	10.52789	5.679238E-02			15	
Dibromomethane	0.1598632	6.798654	8.573222	6.249779E-02			15	
1,2-Dichlorobenzene	0.9737531	6.602409	13.79711	3.249335E-02			15	
1,3-Dichlorobenzene	1.069325	10.20858	13.38444	4.478999E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.125829	14.93571	13.47644	4.420105E-02			15	
Dichlorodifluoromethane	0.2985279	5.170388	2.017222	0.1785951	0.9997339		0.995	
1,1-Dichloroethane	0.4614852	7.557788	5.750445	9.968297E-02			SPCC (0.1)	
1,2-Dichloroethane	0.3353382	6.162455	7.478667	8.089861E-02			15	
1,1-Dichloroethene	0.2191262	13.53056	4.228111	0.1783801			CCC (20)	
cis-1,2-Dichloroethene	0.2631228	9.248231	6.459889	8.951479E-02			15	
trans-1,2-Dichloroethene	0.2436546	12.59655	5.375111	0.1345106			15	
1,2-Dichloroethene (total)	0.2533887	9.456715	0	0			15	
1,2-Dichloropropane	0.2855651	8.528436	8.460444	7.290993E-02			CCC (20)	
1,3-Dichloropropane	0.8114537	6.040153	10.05411	0.0399961			15	
2,2-Dichloropropane	0.3095193	8.274472	6.569333	9.334919E-02			15	
1,1-Dichloropropene	0.3108414	6.366392	7.497444	8.152097E-02			15	
cis-1,3-Dichloropropene	0.3753906	7.176617	9.211445	6.630273E-02			15	
trans-1,3-Dichloropropene	0.7331598	6.458765	9.686222	5.472616E-02			15	
1,3-Dichloropropene (total)	0.3472984	7.996073	9.686222	5.472616E-02			15	
Diisopropyl Ether	1.080593	3.893299	6.121667	6.412666E-02			15	
Ethylbenzene	2.034033	6.673525	11.22944	0.0629414			CCC (20)	
Ethyl tert-Butyl Ether	0.8248362	5.044401	6.587778	7.160754E-02			15	
Ethyl Methacrylate	0.712546	5.877163	9.872444	5.863743E-02			15	
Hexachlorobutadiene	0.2336594	14.11394	15.80222	3.541708E-02			15	
2-Hexanone	0.4812427	9.22694	9.992778	3.236776E-02			15	
Iodomethane	0.2291179	30.40252	4.4235	0.1630534	0.9990179		0.995	
Isopropylbenzene	1.559553	8.952109	12.13022	3.579421E-02			15	
p-Isopropyltoluene	1.67706	6.663178	13.43278	2.871329E-02			15	
Methylene chloride	0.2560903	7.621563	4.710375	0.1147551			15	
Methyl Acetate	0.243392	26.37392	4.575	9.409387E-02	0.999715		0.995	
Methylcyclohexane	0.3004004	8.944592	8.791	4.837696E-02			15	
Naphthalene	1.327067	5.143918	15.67311	3.798954E-02			15	
Methyl Methacrylate	0.2826983	13.92008	7.548778	7.251518E-02			15	
4-Methyl-2-pentanone	0.2783504	3.582551	9.140111	2.964067E-02			15	
Methyl t-Butyl Ether	0.5601073	13.42515	5.375111	7.721725E-02			15	
n-Propylbenzene	2.48505	6.85256	12.53956	5.596903E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Styrene	1.314151	5.413242	11.70344	5.177519E-02			15	
1,1,2,2-Tetrachloroethane	0.7120744	7.923079	12.05467	5.038292E-02			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.4766101	6.262437	11.12456	4.672365E-02			15	
tert-Butyl alcohol	2.184747E-02	10.65008	4.374778	0.1799545			15	
Tetrachloroethene	0.4624975	10.6729	10.424	5.774833E-02			15	
Toluene	1.118865	6.198212	9.688333	5.751295E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.510204	11.15195	15.95856	3.955662E-02			15	
1,2,4-Trichlorobenzene	0.5978181	13.4198	15.521	2.557265E-02			15	
1,1,2-Trichloroethane	0.4520995	10.62213	9.842667	6.054729E-02			15	
1,1,1-Trichloroethane	0.3137102	6.314808	7.277333	7.972291E-02			15	
Tetrahydrofuran	8.753059E-02	24.39609	6.928	8.088625E-02	0.9995802		0.995	
Trichloroethene	0.2384711	6.483154	8.412333	8.104842E-02			15	
Trichlorofluoromethane	0.4040041	4.421798	3.443333	0.0711888			15	
1,2,3-Trichloropropane	0.1604519	12.94579	12.18167	0.049631			15	
1,3,5-Trimethylbenzene	1.631689	7.556347	12.71789	0.0493266			15	
1,2,4-Trimethylbenzene	1.658949	7.474238	13.09133	5.295763E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2072873	8.432636	4.302556	0.1663512			15	
Vinyl chloride	0.3152422	29.09972	2.374222	0.1915386		0.9981236	CCC (20)	*
m,p-Xylene	1.557766	9.078421	11.34	6.848237E-02			15	
o-Xylene	1.652495	8.873298	11.73289	5.401407E-02			15	
Vinyl acetate	0.3762815	6.768409	5.822778	0.1039803			15	
Xylenes (total)	1.589343	8.838143	0	0			15	
Dibromofluoromethane	0.2932159	4.427291	6.893333	0.0409069			15	
1,2-Dichloroethane-d4	0.059471	4.368149	7.391111	4.109608E-02			15	
Toluene-d8	2.056027	5.771716	9.617222	3.111463E-02			15	
tert-Amyl alcohol	1.751761E-02	4.453294	7.088	8.142149E-02			15	
tert-Amyl ethyl ether	0.6737656	4.880926	8.727444	6.940179E-02			15	

INITIAL CALIBRATION CHECK

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: MS-VOA5

Calibration: 1110001

Lab File ID: 0415ICV2.D

Calibration Date: 04/15/11 09:53

Sequence: 1D10810

Injection Date: 04/15/11

Lab Sample ID: 1D10810-ICV2

Injection Time: 14:01

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Benzene	A	100.0	101.0	0.8165687	0.824451		1.0	20
Ethylbenzene	A	100.0	99.98	2.034033	2.033602		-0.02	20
Methyl t-Butyl Ether	A	100.0	107.3	0.5601073	0.6009371		7.3	20
Toluene	A	100.0	100.4	1.118865	1.123341		0.4	20
Xylenes (total)	A	300.0	298.9	1.589343	1.583136		-0.4	20
Bromofluorobenzene	A	30.00	29.40	0.8430908	0.8261078		-2.0	20
Dibromofluoromethane	A	30.00	31.09	0.2932159	0.3038724		3.6	20
1,2-Dichloroethane-d4	A	30.00	31.37	0.059471	6.218618E-02		4.6	20
Toluene-d8	A	30.00	29.51	2.056027	2.022546		-1.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Instrument ID: MS-VOA5
 Lab File ID: 0418CC1E.D
 Sequence: 1D10913
 Lab Sample ID: 1D10913-CCV1

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Calibration: 1110001
 Calibration Date: 04/15/11 09:53
 Injection Date: 04/18/11
 Injection Time: 20:09

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzene	A	100.0	109.8	0.8165687	0.8966328		9.8	20
Ethylbenzene	A	100.0	99.02	2.034033	2.014002		-1.0	20
Methyl t-Butyl Ether	A	100.0	115.4	0.5601073	0.6463826		15.4	20
Toluene	A	100.0	98.32	1.118865	1.100093		-1.7	20
Xylenes (total)	A	300.0	291.3	1.589343	1.542383		-3.0	20
Bromofluorobenzene	A	30.00	28.93	0.8430908	0.8130891		-3.6	20
Dibromofluoromethane	A	30.00	31.25	0.2932159	0.3054696		4.2	20
1,2-Dichloroethane-d4	A	30.00	31.68	0.059471	6.279235E-02		5.6	20
Toluene-d8	A	30.00	29.52	2.056027	2.023038		-1.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-351-2-MW01S-20110413	04/13/11 10:52	04/14/11 08:45	04/18/11 00:00	N/A	14.00	04/19/11 03:36	5.74	14.00	
MPT-351-2-MW02S-20110413	04/13/11 11:31	04/14/11 08:45	04/18/11 00:00	N/A	14.00	04/19/11 04:01	5.73	14.00	
MPT-351-2-MW03S-20110413	04/13/11 13:13	04/14/11 08:45	04/18/11 00:00	N/A	14.00	04/19/11 04:26	5.68	14.00	
MPT-351-2-MW04D-20110413	04/13/11 12:28	04/14/11 08:45	04/18/11 00:00	N/A	14.00	04/19/11 04:51	5.72	14.00	
MPT-351-2-MW07S-20110413	04/13/11 15:02	04/14/11 08:45	04/18/11 00:00	N/A	14.00	04/19/11 05:16	5.63	14.00	
MPT-351-2-MW08S-20110413	04/13/11 14:09	04/14/11 08:45	04/18/11 00:00	N/A	14.00	04/19/11 05:40	5.69	14.00	
Trip Blank	04/13/11 00:00	04/14/11 08:45	04/18/11 00:00	N/A	14.00	04/18/11 23:03	6.00	14.00	

Data for SW8270C (PAH) Forms

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: 1D10908

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-BNA4
 Calibration: 1061004

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1D10908-CCV1) ug/mL				Lab File ID: SEQ-CCV1.D		Analyzed: 04/18/11 10:37		
2-Fluorobiphenyl	5.000	98.4	80 - 120	8.246	8.246	0.0000	+/-0.500	
Terphenyl-d14	5.000	104	80 - 120	13.917	13.917	0.0000	+/-0.500	
LCS (1D14024-BS1) ug/L				Lab File ID: D14024L1.D		Analyzed: 04/18/11 11:35		
2-Fluorobiphenyl	50.00	88.7	34 - 167	8.255	8.246	0.0090	+/-0.500	
Terphenyl-d14	50.00	70.5	34 - 167	13.926	13.917	0.0090	+/-0.500	
Blank (1D14024-BLK1) ug/L				Lab File ID: D14024B1.D		Analyzed: 04/18/11 12:03		
2-Fluorobiphenyl	50.00	84.1	34 - 167	8.255	8.246	0.0090	+/-0.500	
Terphenyl-d14	50.00	78.9	34 - 167	13.926	13.917	0.0090	+/-0.500	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: ID11510

SDG: CTOJM33 013
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-BNA4
 Calibration: 1112002

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (ID11510-CCV1) ug/mL				Lab File ID: SEQ-CCV2.D		Analyzed: 04/24/11 00:39		
2-Fluorobiphenyl	5.000	88.5	80 - 120	7.065	7.065	0.0000	+/-0.500	
Terphenyl-d14	5.000	95.2	80 - 120	11.639	11.639	0.0000	+/-0.500	
MPT-351-2-MW01S-20110413 (1104144-01) ug/L				Lab File ID: 0414401R.D		Analyzed: 04/24/11 08:56		
2-Fluorobiphenyl	46.30	65.7	34 - 167	7.075	7.065	0.0100	+/-0.500	
Terphenyl-d14	46.30	53.9	34 - 167	11.648	11.639	0.0090	+/-0.500	
MPT-351-2-MW02S-20110413 (1104144-02) ug/L				Lab File ID: 0414402R.D		Analyzed: 04/24/11 09:21		
2-Fluorobiphenyl	46.30	69.9	34 - 167	7.075	7.065	0.0100	+/-0.500	
Terphenyl-d14	46.30	57.2	34 - 167	11.649	11.639	0.0100	+/-0.500	
MPT-351-2-MW03S-20110413 (1104144-03) ug/L				Lab File ID: 0414403R.D		Analyzed: 04/24/11 09:45		
2-Fluorobiphenyl	46.30	66.5	34 - 167	7.084	7.065	0.0190	+/-0.500	
Terphenyl-d14	46.30	80.7	34 - 167	11.667	11.639	0.0280	+/-0.500	
MPT-351-2-MW04D-20110413 (1104144-04) ug/L				Lab File ID: 0414404R.D		Analyzed: 04/24/11 10:10		
2-Fluorobiphenyl	46.30	74.6	34 - 167	7.075	7.065	0.0100	+/-0.500	
Terphenyl-d14	46.30	62.5	34 - 167	11.649	11.639	0.0100	+/-0.500	
MPT-351-2-MW07S-20110413 (1104144-05) ug/L				Lab File ID: 0414405R.D		Analyzed: 04/24/11 10:35		
2-Fluorobiphenyl	46.30	67.6	34 - 167	7.075	7.065	0.0100	+/-0.500	
Terphenyl-d14	46.30	57.5	34 - 167	11.648	11.639	0.0090	+/-0.500	
MPT-351-2-MW08S-20110413 (1104144-06) ug/L				Lab File ID: 0414406R.D		Analyzed: 04/24/11 10:59		
2-Fluorobiphenyl	46.30	58.7	34 - 167	7.075	7.065	0.0100	+/-0.500	
Terphenyl-d14	46.30	55.0	34 - 167	11.649	11.639	0.0100	+/-0.500	

LCS / LCS DUPLICATE RECOVERY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D14024

Laboratory ID: 1D14024-BS1

Preparation: EXT_3510

Initial/Final: 1000 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Acenaphthene	1.000	0.9474	94.7	41 - 132
Acenaphthylene	1.000	0.9135	91.4	43 - 140
Anthracene	1.000	0.9544	95.4	50 - 139
Benzo(a)anthracene	1.000	0.8768	87.7	58 - 141
Benzo(a)pyrene	1.000	0.8268	82.7	31 - 142
Benzo(b)fluoranthene	1.000	0.8167	81.7	42 - 156
Benzo(g,h,i)perylene	1.000	0.6831	68.3	12 - 171
Benzo(k)fluoranthene	1.000	1.005	101	49 - 165
Chrysene	1.000	0.7330	73.3	51 - 155
Dibenz(a,h)anthracene	1.000	0.4924	49.2	28 - 153
Fluoranthene	1.000	0.8974	89.7	47 - 158
Fluorene	1.000	1.021	102	40 - 140
Indeno(1,2,3-cd)pyrene	1.000	0.5822	58.2	20 - 167
1-Methylnaphthalene	1.000	0.8256	82.6	35 - 131
2-Methylnaphthalene	1.000	0.8978	89.8	36 - 121
Naphthalene	1.000	0.8753	87.5	39 - 125
Phenanthrene	1.000	0.9604	96.0	46 - 144
Pyrene	1.000	0.8957	89.6	39 - 158

PREPARATION BATCH SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D14024 Batch Matrix: Water

Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW01S-20110413	1104144-01	04/15/11 14:35	1,080.00	1.00
MPT-351-2-MW02S-20110413	1104144-02	04/15/11 14:35	1,080.00	1.00
MPT-351-2-MW03S-20110413	1104144-03	04/15/11 14:35	1,080.00	1.00
MPT-351-2-MW04D-20110413	1104144-04	04/15/11 14:35	1,080.00	1.00
MPT-351-2-MW07S-20110413	1104144-05	04/15/11 14:35	1,080.00	1.00
MPT-351-2-MW08S-20110413	1104144-06	04/15/11 14:35	1,080.00	1.00
Blank	1D14024-BLK1	04/15/11 14:35	1,000.00	1.00
LCS	1D14024-BS1	04/15/11 14:35	1,000.00	1.00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Lab File ID: SEQ-TUN1.D

Injection Date: 02/28/11

Instrument ID: MS-BNA4

Injection Time: 19:40

Sequence: 1C06115

Lab Sample ID: 1C06115-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	54	PASS
68	Less than 2% of 69	1.39	PASS
69	Less than 200% of 198	52.7	PASS
70	Less than 2% of 69	0.407	PASS
127	40 - 60% of 198	57.4	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.79	PASS
275	10 - 30% of 198	25.3	PASS
365	1 - 200% of 198	3.37	PASS
441	0.001 - 100% of 443	81.8	PASS
442	40 - 200% of 198	103	PASS
443	17 - 23% of 442	20.3	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Lab File ID: SEQ-TUN1.D

Injection Date: 03/01/11

Instrument ID: MS-BNA4

Injection Time: 12:01

Sequence: 1C06115

Lab Sample ID: 1C06115-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	52.6	PASS
68	Less than 2% of 69	1.55	PASS
69	Less than 200% of 198	50.4	PASS
70	Less than 2% of 69	0.486	PASS
127	40 - 60% of 198	56.1	PASS
197	Less than 1% of 198	1	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.03	PASS
275	10 - 30% of 198	25.6	PASS
365	1 - 200% of 198	3.45	PASS
441	0.001 - 100% of 443	82.1	PASS
442	40 - 200% of 198	103	PASS
443	17 - 23% of 442	19.8	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Lab File ID: SEQ-TUN1.D

Injection Date: 04/18/11

Instrument ID: MS-BNA4

Injection Time: 10:18

Sequence: 1D10908

Lab Sample ID: 1D10908-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	51.9	PASS
68	Less than 2% of 69	1.4	PASS
69	Less than 200% of 198	52.9	PASS
70	Less than 2% of 69	0.465	PASS
127	40 - 60% of 198	57.6	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.7	PASS
275	10 - 30% of 198	26.6	PASS
365	1 - 200% of 198	3.8	PASS
441	0.001 - 100% of 443	81.7	PASS
442	40 - 200% of 198	132	PASS
443	17 - 23% of 442	19.9	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Lab File ID: SEQ-TUN2.D

Injection Date: 04/19/11

Instrument ID: MS-BNA4

Injection Time: 14:38

Sequence: 1D11106

Lab Sample ID: 1D11106-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	55.9	PASS
68	Less than 2% of 69	1.42	PASS
69	Less than 200% of 198	55.6	PASS
70	Less than 2% of 69	0.506	PASS
127	40 - 60% of 198	58.8	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.61	PASS
275	10 - 30% of 198	25.1	PASS
365	1 - 200% of 198	3.39	PASS
441	0.001 - 100% of 443	81.4	PASS
442	40 - 200% of 198	116	PASS
443	17 - 23% of 442	20	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Lab File ID: SEQ-TUN2.D

Injection Date: 04/24/11

Instrument ID: MS-BNA4

Injection Time: 00:20

Sequence: 1D11510

Lab Sample ID: 1D11510-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	46.1	PASS
68	Less than 2% of 69	1.43	PASS
69	Less than 200% of 198	45.7	PASS
70	Less than 2% of 69	0.517	PASS
127	40 - 60% of 198	55.5	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.74	PASS
275	10 - 30% of 198	26.8	PASS
365	1 - 200% of 198	3.83	PASS
441	0.001 - 100% of 443	82.3	PASS
442	40 - 200% of 198	129	PASS
443	17 - 23% of 442	20	PASS

ANALYSIS SEQUENCE SUMMARY
SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1C06115

Instrument: MS-BNA4

Calibration: 1061004

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1C06115-TUN1	SEQ-TUN1.D	02/28/11 19:40
Cal Standard	1C06115-CAL1	SEQ-CAL1.D	02/28/11 19:58
Cal Standard	1C06115-CAL2	SEQ-CAL2.D	02/28/11 20:24
Cal Standard	1C06115-CAL3	SEQ-CAL3.D	02/28/11 20:50
Cal Standard	1C06115-CAL4	SEQ-CAL4.D	02/28/11 21:16
Cal Standard	1C06115-CAL5	SEQ-CAL5.D	02/28/11 21:42
Cal Standard	1C06115-CAL6	SEQ-CAL6.D	02/28/11 22:08
Cal Standard	1C06115-CAL7	SEQ-CAL7.D	02/28/11 22:35
Cal Standard	1C06115-CAL8	SEQ-CAL8.D	02/28/11 23:01
MS Tune	1C06115-TUN2	SEQ-TUN1.D	03/01/11 12:01
Initial Cal Check	1C06115-ICV1	SEQ-ICV1.D	03/01/11 12:19

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D10908

Instrument: MS-BNA4

Calibration: 1061004

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1D10908-TUN1	SEQ-TUN1.D	04/18/11 10:18
Calibration Check	1D10908-CCV1	SEQ-CCV1.D	04/18/11 10:37
LCS	1D14024-BS1	D14024L1.D	04/18/11 11:35
Blank	1D14024-BLK1	D14024B1.D	04/18/11 12:03

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11106

Instrument: MS-BNA4

Calibration: 1112002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1D11106-TUN1	SEQ-TUN2.D	04/19/11 14:38
Cal Standard	1D11106-CAL1	SEQ-CAL1.D	04/19/11 14:56
Cal Standard	1D11106-CAL2	SEQ-CAL2.D	04/19/11 15:22
Cal Standard	1D11106-CAL3	SEQ-CAL3.D	04/19/11 15:49
Cal Standard	1D11106-CAL4	SEQ-CAL4.D	04/19/11 16:15
Cal Standard	1D11106-CAL5	SEQ-CAL5.D	04/19/11 16:41
Cal Standard	1D11106-CAL6	SEQ-CAL6.D	04/19/11 17:07
Cal Standard	1D11106-CAL7	SEQ-CAL7.D	04/19/11 17:33
Cal Standard	1D11106-CAL8	SEQ-CAL8.D	04/19/11 18:00
Cal Standard	1D11106-CAL9	SEQ-CAL9.D	04/19/11 18:26
Initial Cal Check	1D11106-ICV1	SEQ-ICV1.D	04/19/11 18:52

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11510

Instrument: MS-BNA4

Calibration: 1112002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1D11510-TUN1	SEQ-TUN2.D	04/24/11 00:20
Calibration Check	1D11510-CCV1	SEQ-CCV2.D	04/24/11 00:39
MPT-351-2-MW01S-20110413	1104144-01	0414401R.D	04/24/11 08:56
MPT-351-2-MW02S-20110413	1104144-02	0414402R.D	04/24/11 09:21
MPT-351-2-MW03S-20110413	1104144-03	0414403R.D	04/24/11 09:45
MPT-351-2-MW04D-20110413	1104144-04	0414404R.D	04/24/11 10:10
MPT-351-2-MW07S-20110413	1104144-05	0414405R.D	04/24/11 10:35
MPT-351-2-MW08S-20110413	1104144-06	0414406R.D	04/24/11 10:59

**INTERNAL STANDARD AREA AND RT SUMMARY
SW8270C**

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: ID10908

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-BNA4
 Calibration: 1061004

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (ID10908-CCV1)			Lab File ID: SEQ-CCV1.D			Analyzed: 04/18/11 10:37			
Phenanthrene-d10	144810	11.453	106904	11.432	135	50 - 200	0.0210	+/-0.50	
Perylene-d12	106875	17.477	80420	16.536	133	50 - 200	0.9410	+/-0.50	
LCS (ID14024-BS1)			Lab File ID: D14024L1.D			Analyzed: 04/18/11 11:35			
Phenanthrene-d10	123999	11.453	144810	11.453	86	50 - 200	0.0000	+/-0.50	
Perylene-d12	60506	17.477	106875	17.477	57	50 - 200	0.0000	+/-0.50	
Blank (ID14024-BLK1)			Lab File ID: D14024B1.D			Analyzed: 04/18/11 12:03			
Phenanthrene-d10	121058	11.453	144810	11.453	84	50 - 200	0.0000	+/-0.50	
Perylene-d12	55969	17.477	106875	17.477	52	50 - 200	0.0000	+/-0.50	

**INTERNAL STANDARD AREA AND RT SUMMARY
SW8270C**

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: ID11510

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-BNA4
 Calibration: 1112002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (ID11510-CCV1)			Lab File ID: SEQ-CCV2.D			Analyzed: 04/24/11 00:39			
Phenanthrene-d10	121021	9.668	138732	9.706	87	50 - 200	-0.0380	+/-0.50	
Perylene-d12	56064	14.8	75266	14.837	74	50 - 200	-0.0370	+/-0.50	
MPT-351-2-MW01S-20110413 (1104144-01)			Lab File ID: 0414401R.D			Analyzed: 04/24/11 08:56			
Phenanthrene-d10	113564	9.668	121021	9.668	94	50 - 200	0.0000	+/-0.50	
Perylene-d12	61649	14.8	56064	14.8	110	50 - 200	0.0000	+/-0.50	
MPT-351-2-MW02S-20110413 (1104144-02)			Lab File ID: 0414402R.D			Analyzed: 04/24/11 09:21			
Phenanthrene-d10	114179	9.678	121021	9.668	94	50 - 200	0.0100	+/-0.50	
Perylene-d12	50963	14.8	56064	14.8	91	50 - 200	0.0000	+/-0.50	
MPT-351-2-MW03S-20110413 (1104144-03)			Lab File ID: 0414403R.D			Analyzed: 04/24/11 09:45			
Phenanthrene-d10	104113	9.687	121021	9.668	86	50 - 200	0.0190	+/-0.50	
Perylene-d12	68769	14.8	56064	14.8	123	50 - 200	0.0000	+/-0.50	
MPT-351-2-MW04D-20110413 (1104144-04)			Lab File ID: 0414404R.D			Analyzed: 04/24/11 10:10			
Phenanthrene-d10	108054	9.668	121021	9.668	89	50 - 200	0.0000	+/-0.50	
Perylene-d12	53260	14.8	56064	14.8	95	50 - 200	0.0000	+/-0.50	
MPT-351-2-MW07S-20110413 (1104144-05)			Lab File ID: 0414405R.D			Analyzed: 04/24/11 10:35			
Phenanthrene-d10	112015	9.678	121021	9.668	93	50 - 200	0.0100	+/-0.50	
Perylene-d12	44542	14.809	56064	14.8	79	50 - 200	0.0090	+/-0.50	
MPT-351-2-MW08S-20110413 (1104144-06)			Lab File ID: 0414406R.D			Analyzed: 04/24/11 10:59			
Phenanthrene-d10	87291	9.668	121021	9.668	72	50 - 200	0.0000	+/-0.50	
Perylene-d12	43830	14.8	56064	14.8	78	50 - 200	0.0000	+/-0.50	

INITIAL CALIBRATION DATA

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_010

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1061004

Instrument: MS-BNA4

Matrix: Water

Calibration Dates: 2/28/11 19:58 2/28/11 23:01

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	0.2	0.8535207	0.5	0.873421	1	0.9064357	5	0.8395738	10	0.784535	20	0.8168652
Acenaphthylene	0.2	1.382044	0.5	1.218477	1	1.435272	5	1.311268	10	1.208637	20	1.217291
Anthracene	0.2	1.058534	0.5	1.093939	1	1.125915	5	1.133941	10	1.170225	20	1.132615
Benzo(a)anthracene	0.2	0.6476147	0.5	0.7623581	1	0.8156699	5	0.8984042	10	1.054533	20	0.8423353
Benzo(a)pyrene	0.2	1.02565	0.5	1.014554	1	1.005352	5	1.046623	10	1.13987	20	1.083464
Benzo(b)fluoranthene	0.2	1.352174	0.5	1.123357	1	1.241503	5	1.234178	10	1.470413	20	1.430442
Benzo(g,h,i)perylene	0.2	1.25079	0.5	0.9738602	1	0.9538002	5	0.8937802	10	0.8523731	20	0.9100527
Benzo(k)fluoranthene	0.2	1.25079	0.5	1.187413	1	1.228864	5	1.399423	10	1.350928	20	1.327367
Chrysene	0.2	0.7374538	0.5	0.8493865	1	0.842695	5	0.9126712	10	1.060452	20	0.7892754
Dibenz(a,h)anthracene	0.2	0.9186101	0.5	0.772847	1	0.7332764	5	0.807053	10	0.8074299	20	0.8601228
Fluoranthene	0.2	1.051742	0.5	1.162418	1	1.179913	5	1.225501	10	1.272376	20	1.210129
Fluorene	0.2	0.7020536	0.5	0.7674959	1	0.8242432	5	0.8055957	10	0.8027371	20	0.8141917
2-Fluorobiphenyl	0.2	0.9678027	0.5	0.9267382	1	0.971158	5	0.9172978	10	0.8347461	20	0.8721172
Indeno(1,2,3-cd)pyrene	0.2	1.19648	0.5	1.0475	1	1.041161	5	1.035051	10	1.034813	20	1.078813
1-Methylnaphthalene	0.2	1.063294	0.5	0.9409067	1	0.9548364	5	0.8620632	10	0.8000648	20	0.8432121
2-Methylnaphthalene	0.2	1.091703	0.5	0.9503314	1	0.953009	5	0.8485033	10	0.790738	20	0.8347751
Naphthalene	0.2	1.685474	0.5	1.472423	1	1.51616	5	1.341546	10	1.240043	20	1.318205
Phenanthrene	0.2	1.134937	0.5	1.1581	1	1.184863	5	1.175284	10	1.202262	20	1.17303
Pyrene	0.2	1.092794	0.5	1.147446	1	1.174827	5	1.234693	10	1.289576	20	1.223257
Terphenyl-d14	0.2	0.6118179	0.5	0.7063144	1	0.7228992	5	0.7705175	10	0.8117648	20	0.7422102
2,4,6-Tribromophenol	0.4	6.326415E-02	1	8.579129E-02	2	0.1089983	10	0.1584169	20	0.1656128	40	0.175367
1,4-Dichlorobenzene-d4	1		1		1		1		1		1	

INITIAL CALIBRATION DATA (Continued)

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_010

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1061004

Instrument: MS-BNA4

Matrix: Water

Calibration Dates: 2/28/11 19:58 2/28/11 23:01

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	40	0.7820316	50	0.7652934								
Acenaphthylene	40	1.094458	50	1.018169								
Anthracene	40	1.152126	50	1.196303								
Benzo(a)anthracene	40	1.003107	50	0.9291589								
Benzo(a)pyrene	40	1.080537	50	1.058466								
Benzo(b)fluoranthene	40	1.335067	50	1.516975								
Benzo(g,h,i)perylene	40	0.9253269	50	0.8257036								
Benzo(k)fluoranthene	40	1.386509	50	1.229503								
Chrysene	40	0.9474654	50	0.8935192								
Dibenz(a,h)anthracene	40	0.8924079	50	0.7981977								
Fluoranthene	40	1.255338	50	1.219358								
Fluorene	40	0.7859858	50	0.8053954								
2-Fluorobiphenyl	40	0.8111573	50	0.8142831								
Indeno(1,2,3-cd)pyrene	40	1.109845	50	0.9998711								
1-Methylnaphthalene	40	0.7771338	50	0.7467535								
2-Methylnaphthalene	40	0.7827356	50	0.7506397								
Naphthalene	40	1.179985	50	1.155622								
Phenanthrene	40	1.176864	50	1.189216								
Pyrene	40	1.276995	50	1.213951								
Terphenyl-d14	40	0.8018532	50	0.7661409								
2,4,6-Tribromophenol	80	0.1735388	100	0.164136								
1,4-Dichlorobenzene-d4	1		1									

INITIAL CALIBRATION DATA (Continued)

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_010

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1061004

Instrument: MS-BNA4

Matrix: Water

Calibration Dates: 2/28/11 19:58 2/28/11 23:01

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.8277096	5.964029	9.633875	8.915397E-02			CCC (30)	
Acenaphthylene	1.235702	11.26304	9.425	6.665902E-02			15	
Anthracene	1.13295	3.786272	11.52837	6.266625E-02			15	
Benzo(a)anthracene	0.8691476	15.11626	14.71213	5.462316E-02	0.9952477		0.995	
Benzo(a)pyrene	1.056815	4.183578	16.4705	5.396188E-02			CCC (30)	
Benzo(b)fluoranthene	1.338014	9.966544	16.07662	5.173099E-02			15	
Benzo(g,h,i)perylene	0.9482109	13.88728	18.45625	7.723512E-02			15	
Benzo(k)fluoranthene	1.2951	6.235241	16.108	5.845528E-02			15	
Chrysene	0.8791148	11.31297	14.76	4.591394E-02			15	
Dibenz(a,h)anthracene	0.8237431	7.540873	18.024	5.675539E-02			15	
Fluoranthene	1.197097	5.749219	12.9345	5.235663E-02			CCC (30)	
Fluorene	0.7884623	4.944379	10.27338	6.435991E-02			15	
2-Fluorobiphenyl	0.8894126	7.367129	8.767375	5.071162E-02			15	
Indeno(1,2,3-cd)pyrene	1.067942	5.744412	18.02163	5.897508E-02			15	
1-Methylnaphthalene	0.8735331	12.15937	8.4405	5.284201E-02			15	
2-Methylnaphthalene	0.8753044	13.10583	8.321125	5.827663E-02			15	
Naphthalene	1.363682	13.39317	7.482125	3.967633E-02			15	
Phenanthrene	1.17432	1.744274	11.461	5.511778E-02			15	
Pyrene	1.206692	5.463181	13.21437	5.315315E-02			15	
Terphenyl-d14	0.7416898	8.59253	13.40512	3.369558E-02			15	
2,4,6-Tribromophenol	0.1674143	4.178063	10.5764	9.131494E-02			15	
1,4-Dichlorobenzene-d4							15	

INITIAL CALIBRATION DATA

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1112002

Instrument: MS-BNA4

Matrix: Water

Calibration Dates: 4/19/11 14:56 4/19/11 18:26

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	0.1	0.9073685	0.2	0.8472282	0.5	0.8071579	1	0.8498111	5	0.7983861	10	0.8336235
Acenaphthylene	0.1	1.270537	0.2	1.269796	0.5	1.203545	1	1.329895	5	1.244934	10	1.26954
Anthracene	0.1	1.316798	0.2	1.168288	0.5	1.110749	1	1.196516	5	1.142564	10	1.145289
Benzo(a)anthracene	0.1	0.7733584	0.2	0.7987414	0.5	0.7936948	1	0.7615763	5	0.7571927	10	0.7128554
Benzo(a)pyrene	0.1	1.011587	0.2	1.030946	0.5	1.017569	1	1.060213	5	1.0839	10	1.070646
Benzo(b)fluoranthene	0.1	1.069402	0.2	1.059034	0.5	1.373963	1	1.372638	5	1.430587	10	1.441237
Benzo(g,h,i)perylene	0.1	0.9408315	0.2	0.8405568	0.5	0.7976318	1	0.8148168	5	0.864219	10	0.8665815
Benzo(k)fluoranthene	0.1	1.267422	0.2	1.346846	0.5	1.26362	1	1.415845	5	1.392767	10	1.383433
Chrysene	0.1	0.7544808	0.2	0.8034506	0.5	0.8045734	1	0.7738445	5	0.7358241	10	0.6923619
Dibenz(a,h)anthracene	0.1	0.9496165	0.2	0.7466783	0.5	0.7402214	1	0.6805862	5	0.796443	10	0.7934616
Fluoranthene	0.1	1.157548	0.2	1.062454	0.5	1.095169	1	1.124283	5	1.105329	10	1.104339
Fluorene	0.1	0.8064115	0.2	0.7540568	0.5	0.8063694	1	0.856421	5	0.815093	10	0.8250326
2-Fluorobiphenyl	0.1	0.9111025	0.2	0.8179966	0.5	0.8596231	1	0.9163567	5	0.8693337	10	0.9032449
Indeno(1,2,3-cd)pyrene	0.1	1.093383	0.2	0.9068841	0.5	0.9403396	1	0.8500651	5	0.988829	10	1.00136
1-Methylnaphthalene	0.1	0.9055015	0.2	0.8433563	0.5	0.8234392	1	0.8924473	5	0.8141195	10	0.8432931
2-Methylnaphthalene	0.1	0.8922941	0.2	0.8542047	0.5	0.8425825	1	0.9153548	5	0.8238603	10	0.8462289
Naphthalene	0.1	1.349228	0.2	1.335829	0.5	1.292384	1	1.372084	5	1.289524	10	1.314208
Phenanthrene	0.1	1.168128	0.2	1.160509	0.5	1.123307	1	1.207249	5	1.149711	10	1.147939
Pyrene	0.1	1.125118	0.2	1.087779	0.5	1.101083	1	1.132428	5	1.126722	10	1.105628
Terphenyl-d14	0.1	0.6677684	0.2	0.7013144	0.5	0.7095286	1	0.6890768	5	0.6935843	10	0.6867195
2,4,6-Tribromophenol	0.2	9.577087E-02	0.4	0.1047175	1	0.1132755	2	0.1399245	10	0.1621875	20	0.1721881

INITIAL CALIBRATION DATA (Continued)

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1112002

Instrument: MS-BNA4

Matrix: Water

Calibration Dates: 4/19/11 14:56 4/19/11 18:26

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	20	0.7940618	40	0.7352884	50	0.7827219						
Acenaphthylene	20	1.141889	40	1.048448	50	1.091477						
Anthracene	20	1.117011	40	1.128844	50	1.128459						
Benzo(a)anthracene	20	0.7657045	40	0.891703	50	0.7603992						
Benzo(a)pyrene	20	1.100458	40	1.064936	50	1.103355						
Benzo(b)fluoranthene	20	1.537608	40	1.633929	50	1.471212						
Benzo(g,h,i)perylene	20	0.8566147	40	0.7527658	50	0.8332651						
Benzo(k)fluoranthene	20	1.354037	40	1.250454	50	1.26906						
Chrysene	20	0.6823315	40	0.8250514	50	0.6874646						
Dibenz(a,h)anthracene	20	0.8197604	40	0.7276827	50	0.8426935						
Fluoranthene	20	1.100363	40	1.116813	50	1.129477						
Fluorene	20	0.8177829	40	0.7918825	50	0.7874121						
2-Fluorobiphenyl	20	0.8244022	40	0.7671239	50	0.8084073						
Indeno(1,2,3-cd)pyrene	20	1.000876	40	0.9043518	50	1.038719						
1-Methylnaphthalene	20	0.7692007	40	0.7167983	50	0.7352023						
2-Methylnaphthalene	20	0.7931505	40	0.7308007	50	0.7831935						
Naphthalene	20	1.210287	40	1.118559	50	1.125103						
Phenanthrene	20	1.129587	40	1.117307	50	1.135743						
Pyrene	20	1.104729	40	1.163501	50	1.105306						
Terphenyl-d14	20	0.7217151	40	0.7460979	50	0.6818047						
2,4,6-Tribromophenol	40	0.1625257	80	0.1663055	100	0.1695583						

INITIAL CALIBRATION DATA (Continued)

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1112002

Instrument: MS-BNA4

Matrix: Water

Calibration Dates: 4/19/11 14:56 4/19/11 18:26

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.8172941	6.002518	7.944333	0.1047021			CCC (30)	
Acenaphthylene	1.207785	7.808994	7.734889	0.1182522			15	
Anthracene	1.161613	5.505861	9.805778	0.100823			15	
Benzo(a)anthracene	0.7794695	6.254565	12.93533	6.502969E-02			15	
Benzo(a)pyrene	1.060401	3.200109	14.769	4.143849E-02			CCC (30)	
Benzo(b)fluoranthene	1.376623	14.1471	14.326	7.995191E-02			15	
Benzo(g,h,i)perylene	0.8408092	6.210629	16.70156	7.861425E-02			15	
Benzo(k)fluoranthene	1.327054	4.862521	14.36322	0.079314			15	
Chrysene	0.7510425	7.301878	12.98111	7.297783E-02			15	
Dibenz(a,h)anthracene	0.7885715	9.963425	16.36178	4.777576E-02			15	
Fluoranthene	1.110642	2.363902	11.19311	0.0831072			CCC (30)	
Fluorene	0.806718	3.496377	8.576445	9.781169E-02			15	
2-Fluorobiphenyl	0.8530656	6.095572	7.112	8.858856E-02			15	
Indeno(1,2,3-cd)pyrene	0.9694231	7.8043	16.34633	6.789173E-02			15	
1-Methylnaphthalene	0.8159287	7.985947	6.773	9.488666E-02			15	
2-Methylnaphthalene	0.8312967	6.802917	6.660333	0.1047284			15	
Naphthalene	1.267467	7.448697	5.839111	9.533926E-02			15	
Phenanthrene	1.148831	2.40557	9.740667	0.1040327			15	
Pyrene	1.116922	2.023077	11.46378	7.377866E-02			15	
Terphenyl-d14	0.6997344	3.349731	11.68256	6.766915E-02			15	
2,4,6-Tribromophenol	0.1551379	13.70301	8.878286	0.1225255			15	

INITIAL CALIBRATION CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Instrument ID: MS-BNA4
 Lab File ID: SEQ-ICV1.D
 Sequence: 1C06115
 Lab Sample ID: 1C06115-ICV1

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Calibration: 1061004
 Calibration Date: 02/28/11 19:58
 Injection Date: 03/01/11
 Injection Time: 12:19

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acenaphthene	A	5.000	5.234	0.8277096	0.8665216		4.7	20
Acenaphthylene	A	5.000	5.787	1.235702	1.430186		15.7	20
Anthracene	A	5.000	5.426	1.13295	1.229415		8.5	20
Benzo(a)anthracene	L	5.000	4.970	0.8691476	0.9136814		-0.6	20
Benzo(a)pyrene	A	5.000	5.399	1.056815	1.141205		8.0	20
Benzo(b)fluoranthene	A	5.000	4.866	1.338014	1.302123		-2.7	20
Benzo(g,h,i)perylene	A	5.000	4.830	0.9482109	0.9159273		-3.4	20
Benzo(k)fluoranthene	A	5.000	5.796	1.2951	1.501354		15.9	20
Chrysene	A	5.000	5.406	0.8791148	0.9505258		8.1	20
Dibenz(a,h)anthracene	A	5.000	4.789	0.8237431	0.7889492		-4.2	20
Fluoranthene	A	5.000	5.284	1.197097	1.265188		5.7	20
Fluorene	A	5.000	5.335	0.7884623	0.8413243		6.7	20
Indeno(1,2,3-cd)pyrene	A	5.000	4.885	1.067942	1.043478		-2.3	20
1-Methylnaphthalene	A	5.000	5.030	0.8735331	0.8786867		0.6	20
2-Methylnaphthalene	A	5.000	5.052	0.8753044	0.88448		1.0	20
Naphthalene	A	5.000	5.217	1.363682	1.422778		4.3	20
Phenanthrene	A	5.000	5.384	1.17432	1.264507		7.7	20
Pyrene	A	5.000	5.486	1.206692	1.324032		9.7	20
2-Fluorobiphenyl	A	5.000	5.477	0.8894126	0.974327		9.5	20
Terphenyl-d14	A	5.000	5.816	0.7416898	0.8626973		16.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: MS-BNA4

Calibration: 1112002

Lab File ID: SEQ-ICV1.D

Calibration Date: 04/19/11 00:00

Sequence: 1D11106

Injection Date: 04/19/11

Lab Sample ID: 1D11106-ICV1

Injection Time: 18:52

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acenaphthene	A	5.000	5.145	0.8172941	0.8409406		2.9	20
Acenaphthylene	A	5.000	5.694	1.207785	1.375521		13.9	20
Anthracene	A	5.000	5.601	1.161613	1.301226		12.0	20
Benzo(a)anthracene	A	5.000	4.940	0.7794695	0.7701215		-1.2	20
Benzo(a)pyrene	A	5.000	5.489	1.060401	1.16413		9.8	20
Benzo(b)fluoranthene	A	5.000	5.261	1.376623	1.448551		5.2	20
Benzo(g,h,i)perylene	A	5.000	5.469	0.8408092	0.9196673		9.4	20
Benzo(k)fluoranthene	A	5.000	5.499	1.327054	1.459622		10.0	20
Chrysene	A	5.000	5.270	0.7510425	0.7915565		5.4	20
Dibenz(a,h)anthracene	A	5.000	5.291	0.7885715	0.8344072		5.8	20
Fluoranthene	A	5.000	5.358	1.110642	1.190233		7.2	20
Fluorene	A	5.000	5.368	0.806718	0.866153		7.4	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.582	0.9694231	1.082169		11.6	20
1-Methylnaphthalene	A	5.000	5.107	0.8159287	0.8334349		2.1	20
2-Methylnaphthalene	A	5.000	5.373	0.8312967	0.8933577		7.5	20
Naphthalene	A	5.000	5.542	1.267467	1.404988		10.9	20
Phenanthrene	A	5.000	5.465	1.148831	1.255674		9.3	20
Pyrene	A	5.000	5.443	1.116922	1.21582		8.9	20
2-Fluorobiphenyl	A	5.000	5.807	0.8530656	0.9907614		16.1	20
Terphenyl-d14	A	5.000	5.562	0.6997344	0.7783563		11.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Instrument ID: MS-BNA4
 Lab File ID: SEQ-CCV1.D
 Sequence: 1D10908
 Lab Sample ID: 1D10908-CCV1

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Calibration: 1061004
 Calibration Date: 02/28/11 19:58
 Injection Date: 04/18/11
 Injection Time: 10:37

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	5.068	0.8277096	0.838891		1.4	20
Acenaphthylene	A	5.000	5.316	1.235702	1.313912		6.3	20
Anthracene	A	5.000	5.319	1.13295	1.20519		6.4	20
Benzo(a)anthracene	L	5.000	5.263	0.8691476	0.9697452		5.3	20
Benzo(a)pyrene	A	5.000	5.298	1.056815	1.119863		6.0	20
Benzo(b)fluoranthene	A	5.000	4.693	1.338014	1.255809		-6.1	20
Benzo(g,h,i)perylene	A	5.000	5.179	0.9482109	0.9821099		3.6	20
Benzo(k)fluoranthene	A	5.000	5.708	1.2951	1.478533		14.2	20
Chrysene	A	5.000	5.158	0.8791148	0.9068655		3.2	20
Dibenz(a,h)anthracene	A	5.000	5.411	0.8237431	0.8914152		8.2	20
Fluoranthene	A	5.000	5.205	1.197097	1.246265		4.1	20
Fluorene	A	5.000	5.322	0.7884623	0.8392418		6.4	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.299	1.067942	1.131775		6.0	20
1-Methylnaphthalene	A	5.000	4.956	0.8735331	0.8659112		-0.9	20
2-Methylnaphthalene	A	5.000	4.904	0.8753044	0.8585526		-1.9	20
Naphthalene	A	5.000	4.695	1.363682	1.28041		-6.1	20
Phenanthrene	A	5.000	5.192	1.17432	1.219405		3.8	20
Pyrene	A	5.000	5.264	1.206692	1.2704		5.3	20
2-Fluorobiphenyl	A	5.000	4.920	0.8894126	0.8752559		-1.6	20
Terphenyl-d14	A	5.000	5.214	0.7416898	0.7734839		4.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Instrument ID: MS-BNA4
 Lab File ID: SEQ-CCV2.D
 Sequence: 1D11510
 Lab Sample ID: 1D11510-CCV1

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Calibration: 1112002
 Calibration Date: 04/19/11 00:00
 Injection Date: 04/24/11
 Injection Time: 00:39

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.363	0.8172941	0.7132151		-12.7	20
Acenaphthylene	A	5.000	4.673	1.207785	1.128768		-6.5	20
Anthracene	A	5.000	4.831	1.161613	1.122341		-3.4	20
Benzo(a)anthracene	A	5.000	4.500	0.7794695	0.7014568		-10.0	20
Benzo(a)pyrene	A	5.000	4.751	1.060401	1.007691		-5.0	20
Benzo(b)fluoranthene	A	5.000	4.559	1.376623	1.255287		-8.8	20
Benzo(g,h,i)perylene	A	5.000	4.037	0.8408092	0.6788991		-19.3	20
Benzo(k)fluoranthene	A	5.000	5.324	1.327054	1.412996		6.5	20
Chrysene	A	5.000	4.926	0.7510425	0.7399179		-1.5	20
Dibenz(a,h)anthracene	A	5.000	4.366	0.7885715	0.6886344		-12.7	20
Fluoranthene	A	5.000	4.809	1.110642	1.068264		-3.8	20
Fluorene	A	5.000	4.779	0.806718	0.7710695		-4.4	20
Indeno(1,2,3-cd)pyrene	A	5.000	4.356	0.9694231	0.8445669		-12.9	20
1-Methylnaphthalene	A	5.000	4.277	0.8159287	0.6978971		-14.5	20
2-Methylnaphthalene	A	5.000	4.486	0.8312967	0.7458392		-10.3	20
Naphthalene	A	5.000	4.341	1.267467	1.100431		-13.2	20
Phenanthrene	A	5.000	4.779	1.148831	1.098117		-4.4	20
Pyrene	A	5.000	4.888	1.116922	1.092024		-2.2	20
2-Fluorobiphenyl	A	5.000	4.423	0.8530656	0.7546872		-11.5	20
Terphenyl-d14	A	5.000	4.760	0.6997344	0.6661538		-4.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

HOLDING TIME SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-351-2-MW01S-20110413	04/13/11 10:52	04/14/11 08:45	04/15/11 14:35	2.20	7.00	04/24/11 08:56	8.76	40.00	
MPT-351-2-MW02S-20110413	04/13/11 11:31	04/14/11 08:45	04/15/11 14:35	2.17	7.00	04/24/11 09:21	8.78	40.00	
MPT-351-2-MW03S-20110413	04/13/11 13:13	04/14/11 08:45	04/15/11 14:35	2.10	7.00	04/24/11 09:45	8.80	40.00	
MPT-351-2-MW04D-20110413	04/13/11 12:28	04/14/11 08:45	04/15/11 14:35	2.13	7.00	04/24/11 10:10	8.82	40.00	
MPT-351-2-MW07S-20110413	04/13/11 15:02	04/14/11 08:45	04/15/11 14:35	2.02	7.00	04/24/11 10:35	8.83	40.00	
MPT-351-2-MW08S-20110413	04/13/11 14:09	04/14/11 08:45	04/15/11 14:35	2.06	7.00	04/24/11 10:59	8.85	40.00	

Data for FLPRO Forms

ANALYSIS SEQUENCE SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D10403

Instrument: GL-GCFID2

Calibration: 1104001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1D10403-CAL6	003F0101.D	04/13/11 15:31
Cal Standard	1D10403-CAL5	004F0201.D	04/13/11 16:14
Cal Standard	1D10403-CAL4	005F0301.D	04/13/11 16:56
Cal Standard	1D10403-CAL3	006F0401.D	04/13/11 17:39
Cal Standard	1D10403-CAL2	007F0501.D	04/13/11 18:21
Cal Standard	1D10403-CAL1	008F0601.D	04/13/11 19:04
Initial Cal Check	1D10403-ICV1	009F0701.D	04/13/11 19:46

ANALYSIS SEQUENCE SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11214

Instrument: GL-GCFID2

Calibration: 1104001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1D11214-CCV1	012F1201.D	04/21/11 14:35
Blank	1D19026-BLK1	014F1401.D	04/21/11 16:00
LCS	1D19026-BS1	015F1501.D	04/21/11 16:43
LCS Dup	1D19026-BSD1	016F1601.D	04/21/11 17:25
MPT-351-2-MW01S-20110413	1104144-01	017F1701.D	04/21/11 18:08
MPT-351-2-MW02S-20110413	1104144-02	018F1801.D	04/21/11 18:50
MPT-351-2-MW03S-20110413	1104144-03	019F1901.D	04/21/11 19:32
MPT-351-2-MW04D-20110413	1104144-04	020F2001.D	04/21/11 20:15
MPT-351-2-MW07S-20110413	1104144-05	021F2101.D	04/21/11 20:57
MPT-351-2-MW08S-20110413	1104144-06	022F2201.D	04/21/11 21:39
Calibration Check	1D11214-CCV2	026F2601.D	04/22/11 00:28

ANALYSIS DATA SHEET

MPT-351-2-MW08S-20110413

Laboratory: <u>Empirical Laboratories, LLC</u>	SDG: <u>CTOJM33_013</u>	
Client: <u>Tetra Tech NUS, Inc. (T010)</u>	Project: <u>NAS Mayport CTO JM33 2010</u>	
Matrix: <u>Ground Water</u>	Laboratory ID: <u>1104144-06</u>	File ID: <u>022F2201.D</u>
Sampled: <u>04/13/11 14:09</u>	Prepared: <u>04/20/11 13:45</u>	Analyzed: <u>04/21/11 21:39</u>
Solids:	Preparation: <u>EXT_3510</u>	Dilution: <u>1</u>
Batch: <u>1D19026</u>	Sequence: <u>1D11214</u>	Calibration: <u>1104001</u>
		Instrument: <u>GL-GCFID2</u>

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	1.92	0.157	0.315	0.630	
SYSTEM MONITORING COMPOUND		ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl		0.04630	0.03484	75.2	50 - 150	
o-Terphenyl		0.04630	0.03591	77.6	82 - 142	*

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D19026

Laboratory ID: 1D19026-BS1

Preparation: EXT_3510

Initial/Final: 1000 mL / 2 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	3.200	3.112	97.2	55 - 118

ANALYTE	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
Petroleum Range Organics	3.200	3.040	95.0	2.34	30	55 - 118

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D19026 Batch Matrix: Water

Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW01S-20110413	1104144-01	04/20/11 13:45	1,080.00	2.00
MPT-351-2-MW02S-20110413	1104144-02	04/20/11 13:45	1,080.00	2.00
MPT-351-2-MW03S-20110413	1104144-03	04/20/11 13:45	1,080.00	2.00
MPT-351-2-MW04D-20110413	1104144-04	04/20/11 13:45	1,080.00	2.00
MPT-351-2-MW07S-20110413	1104144-05	04/20/11 13:45	1,080.00	2.00
MPT-351-2-MW08S-20110413	1104144-06	04/20/11 13:45	1,080.00	2.00
Blank	1D19026-BLK1	04/20/11 13:45	1,000.00	2.00
LCS	1D19026-BS1	04/20/11 13:45	1,000.00	2.00
LCS Dup	1D19026-BSD1	04/20/11 13:45	1,000.00	2.00

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D10403

Instrument: GL-GCFID2

Calibration: 1104001

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
11B0728	FLPRO CAL6 85ppm	1D10403-CAL6	003F0101.D	04/13/11 15:31
11B0727	FLPRO CAL5 850ppm	1D10403-CAL5	004F0201.D	04/13/11 16:14
11B0726	FLPRO CAL4 2550ppm	1D10403-CAL4	005F0301.D	04/13/11 16:56
11B0725	FLPRO CAL3 4250ppm	1D10403-CAL3	006F0401.D	04/13/11 17:39
11B0724	FLPRO CAL2 5950ppm	1D10403-CAL2	007F0501.D	04/13/11 18:21
11B0723	FLPRO CAL1 8500ppm	1D10403-CAL1	008F0601.D	04/13/11 19:04

INITIAL CALIBRATION DATA

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1104001

Instrument: GL-GCFID2

Matrix: Water

Calibration Dates: 4/13/11 15:31 4/13/11 19:04

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/L	RF										
Petroleum Range Organics	85	1579.718	850	1838.869	2550	1705.804	4250	1710.376	5950	1645.856	8500	1652.894
2-Fluorobiphenyl	5	2272.8	10	3009.6	15	3284.4	25	3118.36	35	3090.714	50	2747.06
o-Terphenyl	5	3426.8	10	3721.9	15	3804.2	25	3999.32	35	3939.572	50	3924.96

INITIAL CALIBRATION DATA (Continued)

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1104001

Instrument: GL-GCFID2

Matrix: Water

Calibration Dates: 4/13/11 15:31 4/13/11 19:04

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Petroleum Range Organics	1688.919	5.182621	2.923	2.565533E-02			20	
2-Fluorobiphenyl	2920.489	12.42221	10.68433	0.709301			20	
o-Terphenyl	3802.792	5.518154	16.28583	7.880568E-02			20	

INITIAL CALIBRATION CHECK

FLPRO

Laboratory: <u>Empirical Laboratories, LLC</u>	SDG: <u>CTOJM33_013</u>
Client: <u>Tetra Tech NUS, Inc. (T010)</u>	Project: <u>NAS Mayport CTO JM33 2010</u>
Instrument ID: <u>GL-GCFID2</u>	Calibration: <u>1104001</u>
Lab File ID: <u>009F0701.D</u>	Calibration Date: <u>04/13/11 00:00</u>
Sequence: <u>1D10403</u>	Injection Date: <u>04/13/11</u>
Lab Sample ID: <u>1D10403-ICV1</u>	Injection Time: <u>19:46</u>

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	4522	1688.919	1909.501		13.1	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: GL-GCFID2

Calibration: 1104001

Lab File ID: 012F1201.D

Calibration Date: 04/13/11 00:00

Sequence: 1D11214

Injection Date: 04/21/11

Lab Sample ID: 1D11214-CCV1

Injection Time: 14:35

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3800	1688.919	1509.994		-10.6	25
2-Fluorobiphenyl	A	25.00	20.93	2920.489	2445.2		-16.3	25
o-Terphenyl	A	25.00	23.41	3802.792	3561		-6.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: GL-GCFID2

Calibration: 1104001

Lab File ID: 026F2601.D

Calibration Date: 04/13/11 00:00

Sequence: 1D11214

Injection Date: 04/22/11

Lab Sample ID: 1D11214-CCV2

Injection Time: 00:28

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4055	1688.919	1611.352		-4.6	25
2-Fluorobiphenyl	A	25.00	21.34	2920.489	2493.52		-14.6	25
o-Terphenyl	A	25.00	22.10	3802.792	3362.24		-11.6	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 1D11214

SDG: CTOJM33 013
Project: NAS Mayport CTO JM33 2010
Instrument: GL-GCFID2
Calibration: 1104001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1D11214-CCV1) mg/L			Lab File ID: 012F1201.D		Analyzed: 04/21/11 14:35			
2-Fluorobiphenyl	25.00	83.7	75 - 125	10.61	10.61	0.0000	+/-0.050	
o-Terphenyl	25.00	93.6	75 - 125	16.236	16.236	0.0000	+/-0.050	
Blank (1D19026-BLK1) mg/L			Lab File ID: 014F1401.D		Analyzed: 04/21/11 16:00			
2-Fluorobiphenyl	0.05000	70.7	50 - 150	10.673	10.61	0.0630	+/-0.050	*
o-Terphenyl	0.05000	66.2	82 - 142	16.26	16.236	0.0240	+/-0.050	*
LCS (1D19026-BS1) mg/L			Lab File ID: 015F1501.D		Analyzed: 04/21/11 16:43			
2-Fluorobiphenyl	0.05000	79.7	50 - 150	10.616	10.61	0.0060	+/-0.050	
o-Terphenyl	0.05000	73.9	82 - 142	16.233	16.236	-0.0030	+/-0.050	*
LCS Dup (1D19026-BSD1) mg/L			Lab File ID: 016F1601.D		Analyzed: 04/21/11 17:25			
2-Fluorobiphenyl	0.05000	73.9	50 - 150	10.623	10.61	0.0130	+/-0.050	
o-Terphenyl	0.05000	74.0	82 - 142	16.236	16.236	0.0000	+/-0.050	*
MPT-351-2-MW01S-20110413 (1104144-01) mg/L			Lab File ID: 017F1701.D		Analyzed: 04/21/11 18:08			
2-Fluorobiphenyl	0.04630	61.1	50 - 150	10.626	10.61	0.0160	+/-0.050	
o-Terphenyl	0.04630	68.3	82 - 142	16.24	16.236	0.0040	+/-0.050	*
MPT-351-2-MW02S-20110413 (1104144-02) mg/L			Lab File ID: 018F1801.D		Analyzed: 04/21/11 18:50			
2-Fluorobiphenyl	0.04630	61.7	50 - 150	10.746	10.61	0.1360	+/-0.050	*
o-Terphenyl	0.04630	60.0	82 - 142	16.26	16.236	0.0240	+/-0.050	*
MPT-351-2-MW03S-20110413 (1104144-03) mg/L			Lab File ID: 019F1901.D		Analyzed: 04/21/11 19:32			
2-Fluorobiphenyl	0.04630	91.9	50 - 150	10.57	10.61	-0.0400	+/-0.050	
o-Terphenyl	0.04630	69.0	82 - 142	16.233	16.236	-0.0030	+/-0.050	*
MPT-351-2-MW04D-20110413 (1104144-04) mg/L			Lab File ID: 020F2001.D		Analyzed: 04/21/11 20:15			
2-Fluorobiphenyl	0.04630	67.1	50 - 150	10.703	10.61	0.0930	+/-0.050	*
o-Terphenyl	0.04630	64.2	82 - 142	16.256	16.236	0.0200	+/-0.050	*
MPT-351-2-MW07S-20110413 (1104144-05) mg/L			Lab File ID: 021F2101.D		Analyzed: 04/21/11 20:57			
2-Fluorobiphenyl	0.04630	72.3	50 - 150	10.73	10.61	0.1200	+/-0.050	*
o-Terphenyl	0.04630	65.4	82 - 142	16.266	16.236	0.0300	+/-0.050	*
MPT-351-2-MW08S-20110413 (1104144-06) mg/L			Lab File ID: 022F2201.D		Analyzed: 04/21/11 21:39			
2-Fluorobiphenyl	0.04630	75.2	50 - 150	10.59	10.61	-0.0200	+/-0.050	
o-Terphenyl	0.04630	77.6	82 - 142	16.233	16.236	-0.0030	+/-0.050	*
Calibration Check (1D11214-CCV2) mg/L			Lab File ID: 026F2601.D		Analyzed: 04/22/11 00:28			
2-Fluorobiphenyl	25.00	85.4	75 - 125	10.623	10.61	0.0130	+/-0.050	
o-Terphenyl	25.00	88.4	75 - 125	16.243	16.236	0.0070	+/-0.050	

HOLDING TIME SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-351-2-MW01S-20110413	04/13/11 10:52	04/14/11 08:45	04/20/11 13:45	7.16	7.00	04/21/11 18:08	1.18	40.00	
MPT-351-2-MW02S-20110413	04/13/11 11:31	04/14/11 08:45	04/20/11 13:45	7.13	7.00	04/21/11 18:50	1.21	40.00	
MPT-351-2-MW03S-20110413	04/13/11 13:13	04/14/11 08:45	04/20/11 13:45	7.06	7.00	04/21/11 19:32	1.24	40.00	
MPT-351-2-MW04D-20110413	04/13/11 12:28	04/14/11 08:45	04/20/11 13:45	7.10	7.00	04/21/11 20:15	1.27	40.00	
MPT-351-2-MW07S-20110413	04/13/11 15:02	04/14/11 08:45	04/20/11 13:45	6.99	7.00	04/21/11 20:57	1.30	40.00	
MPT-351-2-MW08S-20110413	04/13/11 14:09	04/14/11 08:45	04/20/11 13:45	7.03	7.00	04/21/11 21:39	1.33	40.00	

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Instrument: GL-GCFID2

Analyte	MDL	MRL	Units	Method
Petroleum Range Organics	0.170	0.680	mg/L	FLPRO

Data for SW6010C Forms

ANALYSIS DATA SHEET

MPT-351-2-MW01S-20110413

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/13/11 10:52
 % Solids: 0.00

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104144-01
 Received: 04/14/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	2230	30.0	60.0	100	1		SW6010C	1D19002	04/20/11 18:03
7440-23-5	Sodium	206000	200	3000	5000	1		SW6010C	1D19002	04/20/11 18:03

ANALYSIS DATA SHEET

MPT-351-2-MW02S-20110413

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/13/11 11:31
 % Solids: 0.00

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104144-02
 Received: 04/14/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron		30.0	60.0	100	1	U	SW6010C	1D19002	04/20/11 18:08
7440-23-5	Sodium	13000	200	3000	5000	1		SW6010C	1D19002	04/20/11 18:08

ANALYSIS DATA SHEET

MPT-351-2-MW03S-20110413

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/13/11 13:13
 % Solids: 0.00

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104144-03
 Received: 04/14/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	4260	30.0	60.0	100	1		SW6010C	1D19002	04/20/11 18:13
7440-23-5	Sodium	8410	200	3000	5000	1		SW6010C	1D19002	04/20/11 18:13

ANALYSIS DATA SHEET

MPT-351-2-MW04D-20110413

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/13/11 12:28
 % Solids: 0.00

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104144-04
 Received: 04/14/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron		30.0	60.0	100	1	U	SW6010C	1D19002	04/20/11 18:17
7440-23-5	Sodium	57800	200	3000	5000	1		SW6010C	1D19002	04/20/11 18:17

ANALYSIS DATA SHEET

MPT-351-2-MW07S-20110413

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/13/11 15:02
 % Solids: 0.00

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104144-05
 Received: 04/14/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	32.9	30.0	60.0	100	1	I	SW6010C	1D19002	04/20/11 18:22
7440-23-5	Sodium	33200	200	3000	5000	1		SW6010C	1D19002	04/20/11 18:22

ANALYSIS DATA SHEET

MPT-351-2-MW08S-20110413

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/13/11 14:09
 % Solids: 0.00

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104144-06
 Received: 04/14/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	2410	30.0	60.0	100	1		SW6010C	1D19002	04/20/11 18:26
7440-23-5	Sodium	11500	200	3000	5000	1		SW6010C	1D19002	04/20/11 18:26

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: ME-ICP

Calibration: 1110005

Sequence: 1D11034

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1D11034-ICV1	Iron	10000	10150	101	ug/L	+/- 10.00%
	Sodium	50000	49910	99.8	ug/L	+/- 10.00%
1D11034-CCV1	Iron	10000	10640	106	ug/L	+/- 10.00%
	Sodium	50000	49970	99.9	ug/L	+/- 10.00%
1D11034-CCV5	Iron	10000	10010	100	ug/L	+/- 10.00%
	Sodium	50000	49020	98.0	ug/L	+/- 10.00%
1D11034-CCV6	Iron	10000	10120	101	ug/L	+/- 10.00%
	Sodium	50000	47950	95.9	ug/L	+/- 10.00%
1D11034-CCV7	Iron	10000	9848	98.5	ug/L	+/- 10.00%
	Sodium	50000	48790	97.6	ug/L	+/- 10.00%

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: ME-ICP

Calibration: 1110005

Sequence: 1D11034

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limits
1D11034-CRL1	Iron	60.00	65.76	110	ug/L	80 - 120
	Sodium	3000	3084	103	ug/L	80 - 120

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Instrument ID: ME-ICP

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11034

Calibration: 1110005

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D11034-ICB1	Iron	0.03223	30.0	100	ug/L	U	SW6010C
	Sodium	61.85	200	5000	ug/L	U	SW6010C
1D11034-CCB1	Iron	-0.283	30.0	100	ug/L	U	SW6010C
	Sodium	195	200	5000	ug/L	U	SW6010C
1D11034-CCB5	Iron	3.57	30.0	100	ug/L	U	SW6010C
	Sodium	177	200	5000	ug/L	U	SW6010C
1D19002-BLK1	Iron	6.32	30.0	100	ug/L	U	SW6010C
	Sodium	-36.8	200	5000	ug/L	U	SW6010C
1D11034-CCB6	Iron	3.18	30.0	100	ug/L	U	SW6010C
	Sodium	319	200	5000	ug/L	I	SW6010C
1D11034-CCB7	Iron	-0.470	30.0	100	ug/L	U	SW6010C
	Sodium	96.4	200	5000	ug/L	U	SW6010C

ICP INTERFERENCE CHECK SAMPLE

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: ME-ICP

Calibration: 1110005

Sequence: 1D11034

Lab Sample ID	Analyte	True	Found	%R	Units
1D11034-IFA1	Iron	200000	197,780.00	98.9	ug/L
	Sodium		-82.71		ug/L
1D11034-IFB1	Iron	200000	186,040.00	93.0	ug/L
	Sodium		-28.41		ug/L

LCS / LCS DUPLICATE RECOVERY

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D19002

Laboratory ID: 1D19002-BS1

Preparation: MET_3005A

Initial/Final: 50 mL / 50 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Iron	1000	1012	101	80 - 120
Sodium	5000	4882	97.6	80 - 120

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Instrument: ME-ICP

Analyte	MDL	MRL	Units	Method
Iron	30.0	100	ug/L	SW6010C
Sodium	200	5000	ug/L	SW6010C

10A-IN

ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLCContract: Tetra Tech NUS, Inc. (T010)SDG No.: CTOJM33_013ICP-AES Instrument ID: Thermo Jarrell Ashe ICAPDate: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ag
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLCContract: Tetra Tech NUS, Inc. (T010)SDG No.: CTOJM33_013ICP-AES Instrument ID: Thermo Jarrell Ashe ICAPDate: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		As	B	Ba	Be	Cd
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLCContract: Tetra Tech NUS, Inc. (T010)SDG No.: CTOJM33_013ICP-AES Instrument ID: Thermo Jarrell Ashe ICAPDate: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cr	Cu	K	Mn
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLCContract: Tetra Tech NUS, Inc. (T010)SDG No.: CTOJM33_013ICP-AES Instrument ID: Thermo Jarrell Ashe ICAPDate: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Mo	Na	Ni	Pb	Sb
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLCContract: Tetra Tech NUS, Inc. (T010)SDG No.: CTOJM33_013ICP-AES Instrument ID: Thermo Jarrell Ashe ICAPDate: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Se	Sn	Ti	Tl	V
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

10A-IN
 ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC

Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM33_013

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP

Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Zn				
Iron	261.1	0.0000000				
Sodium	330.2	0.0000000				

Comments:

FORM XA-IN

ICP-AES AND ICP-MS LINEAR RANGES (QUARTERLY)

Lab Name: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

SDG: CTOJM33_013

Project: NAS Mayport CTO JM33 2010

ICP Instrument ID: ME-ICP Date: 09/11/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Iron	15	500000	P
Sodium	15	500000	P

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D19002 Batch Matrix: Water

Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW01S-20110413	1104144-01	04/19/11 07:35	50.00	50.00
MPT-351-2-MW02S-20110413	1104144-02	04/19/11 07:35	50.00	50.00
MPT-351-2-MW03S-20110413	1104144-03	04/19/11 07:35	50.00	50.00
MPT-351-2-MW04D-20110413	1104144-04	04/19/11 07:35	50.00	50.00
MPT-351-2-MW07S-20110413	1104144-05	04/19/11 07:35	50.00	50.00
MPT-351-2-MW08S-20110413	1104144-06	04/19/11 07:35	50.00	50.00
Blank	1D19002-BLK1	04/19/11 07:35	50.00	50.00
LCS	1D19002-BS1	04/19/11 07:35	50.00	50.00

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11034

Instrument: ME-ICP

Calibration: 1110005

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1D11034-CAL1	042011A-001	04/20/11 09:34
Cal Standard	1D11034-CAL2	042011A-002	04/20/11 09:39
Cal Standard	1D11034-CAL3	042011A-003	04/20/11 09:44
Cal Standard	1D11034-CAL5	042011A-005	04/20/11 09:53
Cal Standard	1D11034-CAL6	042011A-006	04/20/11 09:59
Cal Standard	1D11034-CAL7	042011A-007	04/20/11 10:04
Cal Standard	1D11034-CAL8	042011A-008	04/20/11 10:10
Initial Cal Check	1D11034-ICV1	042011B-001	04/20/11 10:51
Initial Cal Blank	1D11034-ICB1	042011B-002	04/20/11 10:58
Instrument RL Check	1D11034-CRL1	042011B-003	04/20/11 11:03
Interference Check A	1D11034-IFA1	042011B-006	04/20/11 11:17
Interference Check B	1D11034-IFB1	042011B-007	04/20/11 11:23
Calibration Check	1D11034-CCV1	042011B-009	04/20/11 11:34
Calibration Blank	1D11034-CCB1	042011B-010	04/20/11 11:41
Calibration Check	1D11034-CCV5	042011D-011	04/20/11 16:05
Calibration Blank	1D11034-CCB5	042011D-012	04/20/11 16:12
Blank	1D19002-BLK1	042011D-013	04/20/11 16:17
LCS	1D19002-BS1	042011D-014	04/20/11 16:22
Calibration Check	1D11034-CCV6	042011D-029	04/20/11 17:37
Calibration Blank	1D11034-CCB6	042011D-030	04/20/11 17:44
MPT-351-2-MW01S-20110413	1104144-01	042011D-034	04/20/11 18:03
MPT-351-2-MW02S-20110413	1104144-02	042011D-035	04/20/11 18:08
MPT-351-2-MW03S-20110413	1104144-03	042011D-036	04/20/11 18:13
MPT-351-2-MW04D-20110413	1104144-04	042011D-037	04/20/11 18:17
MPT-351-2-MW07S-20110413	1104144-05	042011D-038	04/20/11 18:22
MPT-351-2-MW08S-20110413	1104144-06	042011D-039	04/20/11 18:26
Calibration Check	1D11034-CCV7	042011D-041	04/20/11 18:37
Calibration Blank	1D11034-CCB7	042011D-042	04/20/11 18:44

INITIAL CALIBRATION DATA

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110005

Instrument: ME-ICP

Matrix: Water

Calibration Dates: 4/20/11 9:34

4/20/11 10:10

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Aluminum	0	0	5000	1.7678E-05	10000	1.8049E-05			500000	1.79758E-05		
Antimony	0	0	100	0.0007874	1000	8.4787E-04					10000	8.1835E-04
Arsenic	0	0	100	0.0003352	1000	3.6725E-04					10000	0.0003515
Barium	0	0	50	0.013039	1000	0.012547	5000	0.0121818				
Beryllium	0	0	100	0.0026836	1000	0.0027299					10000	0.0024612
Boron	0	0	50	0.0000124	1000	1.282E-05					5000	1.2382E-05
Cadmium	0	0	100	0.015246	1000	0.015539					10000	0.014277
Calcium	0	0	1100	3.797273E-05	50000	3.7234E-05					10000	
Chromium	0	0	100	0.0000358	1000	3.449E-05					10000	3.3862E-05
Cobalt	0	0	100	0.0064147	1000	0.006461					10000	0.0063641
Copper	0	0	100	0.0000827	1000	7.949999E-05					10000	7.6775E-05
Iron	0	0	5100	1.40098E-05	10000	1.3664E-05			500000	1.225E-05	10000	
Lead	0	0	100	0.0014105	1000	0.0014002					10000	0.0013899
Magnesium	0	0	5100		50000	1.5262E-06			500000	1.59276E-06	10000	
Manganese	0	0	100	0.00023	1000	2.2145E-04	10000	2.0604E-04			10000	
Molybdenum	0	0	100	0.0041559	1000	0.0043443					10000	0.0042182
Nickel	0	0	100	0.0034765	1000	0.0033768					10000	0.0033117
Potassium	0	0	1000	7.99E-06	10000	9.61E-06						
Selenium	0	0	100	0.000456	1000	4.6448E-04					10000	4.4277E-04
Silver	0	0	20	0.0000515	500	4.818E-05	2000	5.038E-05				
Sodium	0	0	1000		50000	4.2254E-05						
Strontium	0	0	100	0.00155	1000	0.001543					10000	0.001457
Thallium	0	0	100	0.0008923	1000	8.9686E-04					10000	8.7471E-04
Tin	0	0	50	0.001304	1000	0.0013434					5000	1.30278E-03
Titanium	0	0	100	0.0002076	1000	2.0431E-04					10000	1.9833E-04
Vanadium	0	0	100	0.0000421	1000	4.083E-05					10000	3.953E-05
Zinc	0	0	100	0.0056788	1000	0.0058876					10000	0.0056291

INITIAL CALIBRATION DATA (Continued)

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110005

Instrument: ME-ICP

Matrix: Water

Calibration Dates: 4/20/11 9:34 4/20/11 10:10

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Aluminum												
Antimony												
Arsenic												
Barium												
Beryllium												
Boron												
Cadmium												
Calcium	100000		500000	3.5806E-05								
Chromium												
Cobalt												
Copper												
Iron												
Lead												
Magnesium			100000	1.5535E-06								
Manganese												
Molybdenum												
Nickel												
Potassium	100000	9.6424E-06										
Selenium												
Silver												
Sodium	100000	4.0396E-05	500000	4.0796E-05								
Strontium												
Thallium												
Tin												
Titanium												
Vanadium												
Zinc												

INITIAL CALIBRATION DATA (Continued)

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110005

Instrument: ME-ICP

Matrix: Water

Calibration Dates: 4/20/11 9:34 4/20/11 10:10

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aluminum	1.34257E-05	66.67738	9.68826	176.2102	1		0.998	
Antimony	6.13405E-04	66.78805	11.24007	184.7328	0.999985		0.998	
Arsenic	2.634875E-04	66.85137	9.14919	176.1114	0.9999767		0.998	
Barium	9.44195E-03	66.77036	3.19633	137.103	0.9999646		0.998	
Beryllium	1.968675E-03	66.93233	10.00396	185.9072	0.9998878		0.998	
Boron	9.4005E-06	66.70141	5.620872	184.9005	0.9999464		0.998	
Cadmium	0.0112655	66.83831	3.276718	152.2017	0.9999264		0.998	
Calcium	2.775318E-05	66.74538	4.052527	166.7076	0.9999846		0.998	
Chromium	2.6038E-05	66.73873	13.36742	195.2252	0.9999971		0.998	
Cobalt	4.80995E-03	66.67174	2.47807	147.0987	0.9999979		0.998	
Copper	5.974375E-05	66.78976	1.387982	102.6855	0.9999907		0.998	
Iron	9.980951E-06	67.10156	31.33113	193.913	0.9999962		0.998	
Lead	1.05015E-03	66.67147	5.961223	179.9537	0.9999996		0.998	
Magnesium	1.168115E-06	66.70768	14.45525	186.5661	0.9999729		0.998	
Manganese	1.643725E-04	66.93897	4.87142	173.6866	0.9999503		0.998	
Molybdenum	0.0031796	66.71221	10.24301	186.9111	0.9999906		0.998	
Nickel	2.54125E-03	66.71998	1.681517	124.9822	0.9999975		0.998	
Potassium	6.8106E-06	67.62205	4.402972	163.6635	0.9999988		0.998	
Selenium	3.408125E-04	66.71818	5.340835	171.3968	0.9999784		0.998	
Silver	3.7515E-05	66.76794	3.289747	130.9317	0.9998613		0.998	
Sodium	3.08615E-05	66.71685	4.951525	131.4078	0.9999759		0.998	
Strontium	0.0011375	66.77024	1.3237	77.89416	0.9999678		0.998	
Thallium	6.659675E-04	66.68208	2.614618	151.8006	0.9999935		0.998	
Tin	9.87545E-04	66.69404	33.36887	194.7364	0.9999572		0.998	
Titanium	1.5256E-04	66.7141	6.255733	180.0551	0.9999923		0.998	
Vanadium	3.0615E-05	66.7547	4.316093	189.531	0.9999911		0.998	
Zinc	4.298875E-03	66.71755	21.06829	194.1934	0.9999791		0.998	

Data for Wet Chemistry Forms

ANALYSIS DATA SHEET

MPT-351-2-MW01S-20110413

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/13/11 10:52
 % Solids: 0.00

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104144-01
 Received: 04/14/11 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7664-41-7	Ammonia as N	0.480	0.110	0.150	0.300	1		SM4500NH3BG	1D22009	04/22/11 14:39
NA	Total Dissolved Solids	944	20.0	20.0	20.0	1		SM2540C	1D15004	04/19/11 09:30
14797-55-8	Nitrate as N	0.154	0.0330	0.100	0.200	1	I	E300.0	1D14015	04/14/11 18:28
14808-79-8	Sulfate as SO4	38.9	0.330	1.00	2.00	1		E300.0	1D14015	04/14/11 18:28

ANALYSIS DATA SHEET

MPT-351-2-MW02S-20110413

 Laboratory: Empirical Laboratories, LLC

 SDG: CTOJM33_013

 Client: Tetra Tech NUS, Inc. (T010)

 Project: NAS Mayport CTO JM33 2010

 Matrix: Ground Water

 Laboratory ID: 1104144-02

 Sampled: 04/13/11 11:31

 Received: 04/14/11 08:45

 % Solids: 0.00

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7664-41-7	Ammonia as N		0.110	0.150	0.300	1	U	SM4500NH3BG	1D22009	04/22/11 14:40
NA	Total Dissolved Solids	251	20.0	20.0	20.0	1		SM2540C	1D15004	04/19/11 09:30
14797-55-8	Nitrate as N	0.369	0.0330	0.100	0.200	1		E300.0	1D14015	04/14/11 18:45
14808-79-8	Sulfate as SO4	23.5	0.330	1.00	2.00	1		E300.0	1D14015	04/14/11 18:45

ANALYSIS DATA SHEET

MPT-351-2-MW03S-20110413

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/13/11 13:13
 % Solids: 0.00

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104144-03
 Received: 04/14/11 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7664-41-7	Ammonia as N	1.03	0.110	0.150	0.300	1		SM4500NH3BG	1D22009	04/22/11 14:41
NA	Total Dissolved Solids	163	20.0	20.0	20.0	1		SM2540C	1D15004	04/19/11 09:30
14797-55-8	Nitrate as N		0.0330	0.100	0.200	1	U	E300.0	1D14015	04/14/11 19:02
14808-79-8	Sulfate as SO4	0.673	0.330	1.00	2.00	1	I	E300.0	1D14015	04/14/11 19:02

ANALYSIS DATA SHEET

MPT-351-2-MW04D-20110413

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/13/11 12:28
 % Solids: 0.00

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104144-04
 Received: 04/14/11 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7664-41-7	Ammonia as N	1.33	0.110	0.150	0.300	1		SM4500NH3BG	1D22009	04/22/11 14:42
NA	Total Dissolved Solids	525	20.0	20.0	20.0	1		SM2540C	1D15004	04/19/11 09:30
14797-55-8	Nitrate as N		0.0330	0.100	0.200	1	U	E300.0	1D14015	04/14/11 19:20
14808-79-8	Sulfate as SO4	27.2	0.330	1.00	2.00	1		E300.0	1D14015	04/14/11 19:20

ANALYSIS DATA SHEET

MPT-351-2-MW07S-20110413

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/13/11 15:02
 % Solids: 0.00

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104144-05
 Received: 04/14/11 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7664-41-7	Ammonia as N		0.110	0.150	0.300	1	U	SM4500NH3BG	1D22009	04/22/11 14:43
NA	Total Dissolved Solids	261	20.0	20.0	20.0	1		SM2540C	1D15004	04/19/11 09:30
14797-55-8	Nitrate as N	1.10	0.0330	0.100	0.200	1		E300.0	1D14015	04/14/11 19:37
14808-79-8	Sulfate as SO4	22.1	0.330	1.00	2.00	1		E300.0	1D14015	04/14/11 19:37

ANALYSIS DATA SHEET

MPT-351-2-MW08S-20110413

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/13/11 14:09
 % Solids: 0.00

SDG: CTOJM33_013
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104144-06
 Received: 04/14/11 08:45

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7664-41-7	Ammonia as N	0.270	0.110	0.150	0.300	1	I	SM4500NH3BG	1D22009	04/22/11 14:44
NA	Total Dissolved Solids	258	20.0	20.0	20.0	1		SM2540C	1D15004	04/19/11 09:30
14797-55-8	Nitrate as N	0.121	0.0330	0.100	0.200	1	I	E300.0	1D14015	04/14/11 19:55
14808-79-8	Sulfate as SO4	21.5	0.330	1.00	2.00	1		E300.0	1D14015	04/14/11 19:55

INITIAL AND CONTINUING CALIBRATION CHECK

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 0J29503

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
0J29503-ICV1	Nitrate as N	3.616	3.531	97.6	mg/L	+/- 10.00%
	Sulfate as SO4	24.00	23.53	98.0	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: WC-Lachat

Calibration: 1112003

Sequence: 1D11217

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1D11217-ICV1	Ammonia as N	2.000	2.170	108	mg/L	+/- 10.00%
1D11217-CCV1	Ammonia as N	2.000	2.160	108	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 1D11617

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1D11617-CCV1	Nitrate as N	2.500	2.529	101	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.44	106	mg/L	+/- 10.00%
1D11617-CCV2	Nitrate as N	2.500	2.549	102	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.63	107	mg/L	+/- 10.00%
1D11617-CCV3	Nitrate as N	2.500	2.545	102	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.73	107	mg/L	+/- 10.00%

CRDL STANDARD

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 0J29503

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limits
0J29503-CRL2	Nitrate as N	0.1000	0.09500	95.0	mg/L	75 - 125
	Sulfate as SO4	1.000	1.023	102	mg/L	75 - 125

CRDL STANDARD

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 1D11617

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limits
1D11617-CRL2	Nitrate as N	0.1000	0.09000	90.0	mg/L	75 - 125
	Sulfate as SO4	1.000	1.043	104	mg/L	75 - 125

METHOD BLANKS

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D14015

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D14015-BLK1	Nitrate as N	0.00	0.0330	0.200	mg/L	U	E300.0
	Sulfate as SO4	0.00	0.330	2.00	mg/L	U	E300.0

METHOD BLANKS
SM2540C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D15004

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D15004-BLK1	Total Dissolved Solids	-1.00	20.0	20.0	mg/L	U	SM2540C

METHOD BLANKS
SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D22009

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D22009-BLK1	Ammonia as N	0.0210	0.110	0.300	mg/L	U	SM4500NH3BG

BLANKS
E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 0J29503

Calibration: 0295001

Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
0J29503-ICB1	Nitrate as N	0.000	0.0330	0.200	mg/L	U	E300.0
	Sulfate as SO4	0.08000	0.330	2.00	mg/L	U	E300.0

BLANKS
SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11217

Calibration: 1112003

Instrument ID: WC-Lachat

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D11217-ICB1	Ammonia as N	-0.01535	0.110	0.300	mg/L	U	SM4500NH3BG
1D11217-CCB1	Ammonia as N	-0.0100	0.110	0.300	mg/L	U	SM4500NH3BG

BLANKS

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11617

Calibration: 0295001

Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D11617-CCB1	Nitrate as N	0.00	0.0330	0.200	mg/L	U	E300.0
	Sulfate as SO4	0.00	0.330	2.00	mg/L	U	E300.0
1D11617-CCB2	Nitrate as N	0.00	0.0330	0.200	mg/L	U	E300.0
	Sulfate as SO4	0.00	0.330	2.00	mg/L	U	E300.0
1D11617-CCB3	Nitrate as N	0.00	0.0330	0.200	mg/L	U	E300.0
	Sulfate as SO4	0.00	0.330	2.00	mg/L	U	E300.0

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

MPT-351-2-MW08S-20110413

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D14015

% Solids:

Source Sample Name: **1104144-06**

ANALYTE	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC.	Q	QC LIMITS REC.
Nitrate as N	2.778	0.1210	2.974	103		80 - 120
Sulfate as SO4	27.78	21.54	50.76	105		80 - 120

ANALYTE	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD	Q	QC LIMITS	
						RPD	REC.
Nitrate as N	2.778	2.987	103	0.410		20	80 - 120
Sulfate as SO4	27.78	50.83	105	0.147		20	80 - 120

DUPLICATES

T-351-2-MW08S-20110

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Laboratory ID: 1D14015-DUP1

Batch: 1D14015

Lab Source ID: 1104144-06

Preparation: WC PREP ANIONS W

Initial/Final: 5 mL / 5 mL

Source Sample Name: MPT-351-2-MW08S-20110413

% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	DUPLICATE CONCENTRATION (mg/L)	RPD %	Q	METHOD
Nitrate as N	20	0.121 I	0.200 J	0.830		E300.0
Sulfate as SO4	20	21.5	21.42	0.559		E300.0

DUPLICATES

T-351-2-MW01S-20110

SM2540C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Laboratory ID: 1D15004-DUP2

Batch: 1D15004

Lab Source ID: 1104144-01

Preparation: pNone

Initial/Final: 100 mL / 100 mL

Source Sample Name: MPT-351-2-MW01S-20110413

% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	DUPLICATE CONCENTRATION (mg/L)	RPD %	Q	METHOD
Total Dissolved Solids	5	944	932.0	1.28		SM2540C

LCS / LCS DUPLICATE RECOVERY

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D14015

Laboratory ID: 1D14015-BS1

Preparation: WC_PREP_ANIONS_W

Initial/Final: 5 mL / 5 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Nitrate as N	3.616	3.673	102	90 - 110
Sulfate as SO4	24.00	25.24	105	90 - 110

LCS / LCS DUPLICATE RECOVERY

SM2540C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D15004

Laboratory ID: 1D15004-BS1

Preparation: pNone

Initial/Final: 20 mL / 100 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Total Dissolved Solids	970.0	1035	107	80 - 120

LCS / LCS DUPLICATE RECOVERY

SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D22009

Laboratory ID: 1D22009-BS1

Preparation: pNone

Initial/Final: 100 mL / 100 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Ammonia as N	5.000	5.119	102	80 - 120

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Instrument:

Analyte	MDL	MRL	Units	Method
Total Dissolved Solids	20.0	20.0	mg/L	SM2540C

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Instrument: WC-IC

Analyte	MDL	MRL	Units	Method
Nitrate as N	0.0330	0.200	mg/L	E300.0
Sulfate as SO4	0.330	2.00	mg/L	E300.0

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Instrument: WC-Lachat

Analyte	MDL	MRL	Units	Method
Ammonia as N	0.110	0.300	mg/L	SM4500NH3BG

PREPARATION BATCH SUMMARY

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D14015 Batch Matrix: Water

Preparation: WC_PREP_ANIONS_W

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW01S-20110413	1104144-01	04/14/11 14:08	5.00	5.00
MPT-351-2-MW01S-20110413	1104144-01	04/14/11 14:08	5.00	5.00
MPT-351-2-MW02S-20110413	1104144-02	04/14/11 14:08	5.00	5.00
MPT-351-2-MW02S-20110413	1104144-02	04/14/11 14:08	5.00	5.00
MPT-351-2-MW03S-20110413	1104144-03	04/14/11 14:08	5.00	5.00
MPT-351-2-MW03S-20110413	1104144-03	04/14/11 14:08	5.00	5.00
MPT-351-2-MW04D-20110413	1104144-04	04/14/11 14:08	5.00	5.00
MPT-351-2-MW04D-20110413	1104144-04	04/14/11 14:08	5.00	5.00
MPT-351-2-MW07S-20110413	1104144-05	04/14/11 14:08	5.00	5.00
MPT-351-2-MW07S-20110413	1104144-05	04/14/11 14:08	5.00	5.00
MPT-351-2-MW08S-20110413	1104144-06	04/14/11 14:08	5.00	5.00
MPT-351-2-MW08S-20110413	1104144-06	04/14/11 14:08	5.00	5.00
Blank	1D14015-BLK1	04/14/11 14:08	5.00	5.00
LCS	1D14015-BS1	04/14/11 14:08	5.00	5.00
MPT-351-2-MW08S-20110413	1D14015-DUP1	04/14/11 14:08	5.00	5.00
MPT-351-2-MW08S-20110413	1D14015-MS1	04/14/11 14:08	22.50	25.00
MPT-351-2-MW08S-20110413	1D14015-MSD1	04/14/11 14:08	22.50	25.00

PREPARATION BATCH SUMMARY

SM2540C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D15004 Batch Matrix: Water

Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW01S-20110413	1104144-01	04/15/11 15:25	100.00	100.00
MPT-351-2-MW02S-20110413	1104144-02	04/15/11 15:25	100.00	100.00
MPT-351-2-MW03S-20110413	1104144-03	04/15/11 15:25	100.00	100.00
MPT-351-2-MW04D-20110413	1104144-04	04/15/11 15:25	100.00	100.00
MPT-351-2-MW07S-20110413	1104144-05	04/15/11 15:25	100.00	100.00
MPT-351-2-MW08S-20110413	1104144-06	04/15/11 15:25	100.00	100.00
Blank	1D15004-BLK1	04/15/11 15:35	100.00	100.00
LCS	1D15004-BS1	04/15/11 15:35	20.00	100.00
MPT-351-2-MW01S-20110413	1D15004-DUP2	04/15/11 15:35	100.00	100.00

PREPARATION BATCH SUMMARY

SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D22009 Batch Matrix: Water

Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW01S-20110413	1104144-01	04/22/11 12:24	100.00	100.00
MPT-351-2-MW02S-20110413	1104144-02	04/22/11 12:24	100.00	100.00
MPT-351-2-MW03S-20110413	1104144-03	04/22/11 12:24	100.00	100.00
MPT-351-2-MW04D-20110413	1104144-04	04/22/11 12:24	100.00	100.00
MPT-351-2-MW07S-20110413	1104144-05	04/22/11 12:24	100.00	100.00
MPT-351-2-MW08S-20110413	1104144-06	04/22/11 12:24	100.00	100.00
Blank	1D22009-BLK1	04/22/11 09:16	100.00	100.00
LCS	1D22009-BS1	04/22/11 09:16	100.00	100.00

ANALYSIS SEQUENCE SUMMARY

SM2540C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	1D15004-BS1	041511-003	04/19/11 09:30
MPT-351-2-MW01S-20110413	1D15004-DUP2	041511-019	04/19/11 09:30
Blank	1D15004-BLK1	041511-002	04/19/11 09:30

ANALYSIS SEQUENCE SUMMARY

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 0J29503

Instrument: WC-IC

Calibration: 0295001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	0J29503-CAL1	102110curve-057	10/21/10 10:28
Cal Standard	0J29503-CAL2	102110curve-058	10/21/10 10:45
Cal Standard	0J29503-CAL3	102110curve-059	10/21/10 11:02
Cal Standard	0J29503-CAL4	102110curve-060	10/21/10 11:20
Cal Standard	0J29503-CAL5	102110curve-061	10/21/10 11:37
Cal Standard	0J29503-CAL6	102110curve-062	10/21/10 11:55
Cal Standard	0J29503-CAL7	102110curve-063	10/21/10 12:12
Cal Standard	0J29503-CAL8	102110curve-064	10/21/10 12:29
Initial Cal Check	0J29503-ICV1	102110curve-065	10/21/10 12:47
Initial Cal Blank	0J29503-ICB1	102110curve-066	10/21/10 13:04
Instrument RL Check	0J29503-CRL2	102110curve-068	10/21/10 13:39

ANALYSIS SEQUENCE SUMMARY

SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11217

Instrument: WC-Lachat

Calibration: 1112003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1D11217-CAL1		04/22/11 14:26
Cal Standard	1D11217-CAL2		04/22/11 14:27
Cal Standard	1D11217-CAL3		04/22/11 14:28
Cal Standard	1D11217-CAL4		04/22/11 14:29
Cal Standard	1D11217-CAL5		04/22/11 14:30
Cal Standard	1D11217-CAL6		04/22/11 14:31
Cal Standard	1D11217-CAL7		04/22/11 14:32
Cal Standard	1D11217-CAL8		04/22/11 14:33
Initial Cal Check	1D11217-ICV1		04/22/11 14:34
Initial Cal Blank	1D11217-ICB1		04/22/11 14:35
Blank	1D22009-BLK1		04/22/11 14:36
LCS	1D22009-BS1		04/22/11 14:37
MPT-351-2-MW01S-20110413	1104144-01		04/22/11 14:39
MPT-351-2-MW02S-20110413	1104144-02		04/22/11 14:40
MPT-351-2-MW03S-20110413	1104144-03		04/22/11 14:41
MPT-351-2-MW04D-20110413	1104144-04		04/22/11 14:42
MPT-351-2-MW07S-20110413	1104144-05		04/22/11 14:43
MPT-351-2-MW08S-20110413	1104144-06		04/22/11 14:44
Calibration Check	1D11217-CCV1		04/22/11 14:45
Calibration Blank	1D11217-CCB1		04/22/11 14:46

ANALYSIS SEQUENCE SUMMARY

E300.0

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM33_013

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11617

Instrument: WC-IC

Calibration: 0295001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1D11617-CCV1	041411-002	04/14/11 16:43
Calibration Blank	1D11617-CCB1	041411-003	04/14/11 17:00
Instrument RL Check	1D11617-CRL2	041411-005	04/14/11 17:35
LCS	1D14015-BS1	041411-006	04/14/11 17:53
Blank	1D14015-BLK1	041411-007	04/14/11 18:10
MPT-351-2-MW01S-20110413	1104144-01	041411-008	04/14/11 18:28
MPT-351-2-MW02S-20110413	1104144-02	041411-009	04/14/11 18:45
MPT-351-2-MW03S-20110413	1104144-03	041411-010	04/14/11 19:02
MPT-351-2-MW04D-20110413	1104144-04	041411-011	04/14/11 19:20
MPT-351-2-MW07S-20110413	1104144-05	041411-012	04/14/11 19:37
MPT-351-2-MW08S-20110413	1104144-06	041411-013	04/14/11 19:55
Calibration Check	1D11617-CCV2	041411-014	04/14/11 20:12
Calibration Blank	1D11617-CCB2	041411-015	04/14/11 20:30
MPT-351-2-MW08S-20110413	1D14015-MS1	041411-016	04/14/11 20:47
MPT-351-2-MW08S-20110413	1D14015-MSD1	041411-017	04/14/11 21:04
MPT-351-2-MW08S-20110413	1D14015-DUP1	041411-018	04/14/11 21:22
Calibration Check	1D11617-CCV3	041411-022	04/14/11 22:32
Calibration Blank	1D11617-CCB3	041411-023	04/14/11 22:49



ANALYTICAL SUMMARY DATA PACKAGE
SDG # 1104191

PROJECT NAME: NAS MAYPORT CTO JM33 2010
PROJECT LOCATION: MAYPORT, FLORIDA
CONTRACT #: N62470-08-D-1001

SUBMITTAL TO:

Tobrena Sedlmeyer
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220

SUBMITTAL BY:

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Original Report Date: April 29, 2011
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 141

THIS DOCUMENT MEETS DoD QSM 4.1 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

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Sample Delivery Group Case Narrative

Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision

This is an original submittal of the final report package.

Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

- A:** The peak was manually integrated as it was not integrated in the original chromatogram.
- B:** The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
- C:** The peak was manually integrated to correct the baseline from the original chromatogram.
- D:** The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
- E:** The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:

No anomalies or deviations are noted.

SW8270C:

No anomalies or deviations are noted.

FLPRO:

The surrogate o-Terphenyl exceeded criteria with a negative bias in 1D19026-BLK1, -BS1, -BSD1, 1104191-01, and -02. Recoveries are within laboratory limits and spike recoveries are within limits in spite of low surrogate recoveries. The surrogate

2-Fluorobiphenyl exceeded the retention time window in 1D19026-BLK1. The result bias due to the retention time shift was determined to be negligible for all affected batch QC.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C:

The matrix spikes associated to sample 1104091-02 exceeded criteria with a positive bias for Iron. The matrix spikes and post spike associated to sample 1104091-02 exceeded criteria for Sodium; however, the parent sample concentration is greater than 4 times the amount spiked.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Wet Chemistry:

1D11801-CRL2 exceeded criteria with a negative bias for Sulfate as SO₄ associated samples maybe biased low for Sulfate as SO₄.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers

As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

- MDL:** The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.1 reporting purposes, this definition is also applied to the reported Detection Limit (DL).
- LOD:** The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.1 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.
- LOQ:** The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.1 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.
- *:** An exceeding quality control criteria is associated with the reported result.
- B:** The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**
- D:** When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".
- E:** The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**
- H1:** The result was analyzed outside of the EPA recommended holding time.

- H2:** The result was extracted outside of the EPA recommended holding time.
- H3:** The sample for this analyte was received outside of the EPA recommended holding time.
- J:** The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**
- M:** Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.
- N:** The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.
- P:** The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.
- Q:** The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.
- S:** The associated internal standard failed criteria.
- U:** The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.
- X:** The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.
- Y:** The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.
- Z:** The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "RE" implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:

I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity is authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

Organic Calculations:

GC/MS Volatiles

$$\text{Final Concentration} = \frac{\text{On-column(ug/L or ug/Kg)} * \text{Expected Vol/Weight (mL or g)} * \text{Dilution}}{\text{Initial Vol/Weight (mL or g)} * (\text{Percent Solids}/100) \text{ (if applicable)}}$$

Note - Expected Vol/Weight value is found in "Final Vol" column of Preparation Batch Summary.

GC/MS Extractables

$$\begin{aligned} \text{Final Concentration} &= \frac{\text{On-column(ng/uL)} * \text{Final Vol (ml)} * \text{Dilution} * (1000\text{uL/mL})}{\text{Initial Vol/Weight (mL or g)} * (\text{Percent Solids}/100) \text{ (if applicable)}} \\ &= \text{ng/mL or ng/g} \\ &= \text{ug/L or ug/kg} \end{aligned}$$

GC or LC Extractables

$$\begin{aligned} \text{Final Concentration} &= \frac{\text{On-column(ng/mL)} * \text{Final Vol (mL)} * \text{Dilution}}{\text{Initial Vol/Weight (mL or g)} * (\text{Percent Solids}/100) \text{ (if applicable)}} \\ &= \text{ng/mL or ng/g} \\ &= \text{ug/L or ug/kg} \end{aligned}$$

Sample Receipt Information



TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER **N2** - 2124

PAGE **1** OF **2**

PROJECT NO. **112603801**
SAMPLERS (SIGNATURE) *[Signature]*

FACILITY: **NAUSTA**
MAUPORT SITE 351-2

PROJECT MANAGER **DAVE SIEGREN**
FIELD OPERATIONS LEADER **J & K Krone**

PHONE NUMBER **904 334-7260**
PHONE NUMBER **904 699 7493**
LABORATORY NAME AND CONTACT: **Environmental Labs / Brian Richard**
ADDRESS **691 Mainstream Dr Suite 270**
CITY, STATE **Nashville TN 37208**

STANDARD TAT **24 hr.** 48 hr. 72 hr. 7 day 14 day

DATE YEAR **2011**
TIME **1104191**
SAMPLE ID **1089 MPT-351-2-MW065-20110414**
LOCATION ID **Tip Blank**

TOP DEPTH (FT)
BOTTOM DEPTH (FT)
MATRIX (GW, SO, SW, SD, QC, ETC.)
COLLECTION METHOD
GRAB (G)
COMP (C)
No. OF CONTAINERS

CONTAINER TYPE
PLASTIC (P) or GLASS (G)
PRESERVATIVE USED
TYPE OF ANALYSIS
**VOCs (8260B) BTEX
PAH Metals + T + P
TRPH FLPRO
Ammonia Fed Na
Metals (6010C) Sulfate
4 IDS**

DATE	TIME	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD	No. OF CONTAINERS	CONTAINER TYPE	PRESERVATIVE USED	TYPE OF ANALYSIS	COMMENTS
4/14	0956			MPT-351-2-MW053-20110414	GRAB (G)	11	G			Cool to 40°C 35HV + 2C + 1CW1 + 1CS4 + 2H + 2HW
4/14	1039			MPT-351-2-MW065-20110414	GRAB (G)	11	G			
				Tip Blank		2	X			

1. RELINQUISHED BY *[Signature]*

DATE **4/14/11** TIME **1730**

1. RECEIVED BY
2. RECEIVED BY
3. RECEIVED BY **Reginald Tolley Reginald Tolley** DATE **3/4/11** TIME **0900**

3. RELINQUISHED BY
COMMENTS
DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) FORM NO. TINUS-001 4/02R

**EMPIRICAL LABORATORIES
COOLER RECEIPT FORM**

LIMS Number: 1104191 Number of Coolers: 3 of 3
 Client: Tetra Tech NUS Pte Project: Nausta Mayport Site 351-2
 Date/Time Received: 4.15.11 09:00 Date cooler(s) opened: 4.15.11
 Opened By (print): Russ Townsend (signature): Russ Townsend

Circle response below as appropriate

1. How did the samples arrive? FedEx UPS DHL Hand Delivered
 EL Courier Other: _____

If applicable, enter airbill number here: 1598

2. Were custody seals on outside of cooler(s)? Yes No
 How many: 2 Seal date: 4.14.11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? Yes No N/A
 4. Were custody papers sealed in a plastic bag included in the sample cooler? Yes No N/A
 5. Were custody papers filled out properly (ink, signed, etc.)? Yes No N/A
 6. Did you sign custody papers in the appropriate place for acceptance? Yes No N/A
 7. Was project identifiable from custody papers? Yes No N/A
 8. If required, was enough ice present in the cooler(s)? Yes No N/A

Type of Coolant WET DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 3.7 °C Correction Factor: -0.3 °C Final Value: 3.4 °C

Dates samples were logged-in: 4.15.11

9. Initial this form to acknowledge login of sample(s): (Name): Reginald Taylor (Initial): RT
 10. Were all bottle lids intact and sealed tightly? Yes No N/A
 11. Did all bottles arrive unbroken? Yes No N/A
 12. Was all required bottle label information complete? Yes No N/A
 13. Did all bottle labels agree with custody papers? Yes No N/A
 14. Were correct containers used for the analyses indicated? Yes No N/A
 15. Were preservative levels correct in all applicable sample containers? Yes No N/A
 16. Was residual chlorine present in any applicable sample containers? Yes No N/A
 17. Was sufficient amount of sample sent for the analyses required? Yes No N/A
 18. Was headspace present in any included VOA vials? Yes No N/A

If Non-Conformance issues were present, list by sample ID: _____

Ph for all metal were < 2

WORK ORDER

1104191

Printed: 4/29/2011 2:46:37PM

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM33 2010

Project Manager: Brian Richard
Project Number: TET_CTOJM33

Report To:

Tetra Tech NUS, Inc. (T010)

Tobrena Skeen

Foster Plaza 7, 661 Anderson Drive

Pittsburgh, PA 15220

Phone: (412) 921-8182

Fax: (412) 921-4040

Invoice To:

Tetra Tech NUS, Inc. (T010)

Accounts Payable

661 Anderson Drive

Pittsburgh, PA 15220-2745

Phone : (412) 921-8182

Fax: (412) 921-4040

Date Due: 04/27/2011 16:00 (8 day TAT)

Received By: Reginald Talley

Logged In By: Reginald Talley

Date Received: 04/15/2011 09:00

Date Logged In 04/15/2011 18:09

Samples Received at: 3.4°C

Custody Seals	Yes	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confr	Yes		

Analysis

Due

TAT

Expires

Version

Comments

1104191-01 MPT-351-2-MW05S-20110414 [Water] Sampled 04/14/2011 09:56
Central

SM2540C	04/25/2011 14:00	8	04/21/2011 09:56		
FLPRO	04/25/2011 14:00	8	04/21/2011 09:56		
SW8270C	04/25/2011 14:00	8	04/21/2011 09:56		
SW8260B	04/25/2011 14:00	8	04/28/2011 09:56		BTEX & MTBE
SM4500NH3BG	04/25/2011 14:00	8	05/12/2011 09:56		
E300.0	04/25/2011 14:00	8	05/12/2011 09:56		SO4
E300.0	04/25/2011 14:00	8	04/16/2011 09:56		NO3
SW6010C	04/25/2011 14:00	8	10/11/2011 09:56	Fe & Na	see version

WORK ORDER

1104191

Printed: 4/29/2011 2:46:37PM

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
 Project: NAS Mayport CTO JM33 2010

Project Manager: Brian Richard
 Project Number: TET_CTOJM33

Analysis	Due	TAT	Expires	Version	Comments
1104191-02 MPT-351-2-MW06S-20110414 [Water] Sampled 04/14/2011 10:32 Central					
FLPRO	04/25/2011 14:00	8	04/21/2011 10:32		
SW8270C	04/25/2011 14:00	8	04/21/2011 10:32		
SW8260B	04/25/2011 14:00	8	04/28/2011 10:32		BTEX & MTBE
SM4500NH3BG	04/25/2011 14:00	8	05/12/2011 10:32		
E300.0	04/25/2011 14:00	8	05/12/2011 10:32		SO4
E300.0	04/25/2011 14:00	8	04/16/2011 10:32		NO3
SM2540C	04/25/2011 14:00	8	04/21/2011 10:32		
SW6010C	04/25/2011 14:00	8	10/11/2011 10:32	Fe & Na	see version
1104191-03 Trip Blank [Water] Sampled 04/14/2011 00:00 Central					
SW8260B	04/25/2011 14:00	8	04/28/2011 00:00		BTEX & MTBE

Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
 PROJECT NAME: NAS Mayport CTO JM33 2010
 SDG #: 1104191
 MATRIX: Water

QC LEVEL: Level IV
 Report Due: 4/27/2011
 Client Sample Count: 2

Sample Type	Sampled	Received	Lab ID	Client ID	E300.0	FLPRO	SM2540C	SM4500NH3BG	SW6010C	SW8260B	SW8270C
Client Sample	4/14/2011	4/15/2011	1104191-01	MPT-351-2-MW05S-20110414	X	X	X	X	X	X	X
Client Sample	4/14/2011	4/15/2011	1104191-02	MPT-351-2-MW06S-20110414	X	X	X	X	X	X	X
Trip Blank	4/14/2011	4/15/2011	1104191-03	Trip Blank						X	

Data for SW8260B Forms

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: 1D11511

SDG:
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-VOA5
 Calibration: 1110001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1D11511-CCV1) ug/L			Lab File ID: 0422CC1.D		Analyzed: 04/22/11 06:59			
Bromofluorobenzene	30.00	94.7	80 - 120	12.242	12.242	0.0000	+/-1.000	
Dibromofluoromethane	30.00	107	80 - 120	6.884	6.884	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	107	80 - 120	7.386	7.386	0.0000	+/-1.000	
Toluene-d8	30.00	96.2	80 - 120	9.612	9.612	0.0000	+/-1.000	
LCS (1D22008-BS1) ug/L			Lab File ID: 0422LS1.D		Analyzed: 04/22/11 07:24			
Bromofluorobenzene	30.00	99.8	75 - 120	12.229	12.242	-0.0130	+/-1.000	
Dibromofluoromethane	30.00	107	85 - 115	6.881	6.884	-0.0030	+/-1.000	
1,2-Dichloroethane-d4	30.00	98.9	70 - 120	7.383	7.386	-0.0030	+/-1.000	
Toluene-d8	30.00	103	85 - 120	9.609	9.612	-0.0030	+/-1.000	
Blank (1D22008-BLK1) ug/L			Lab File ID: 0422BL1.D		Analyzed: 04/22/11 08:38			
Bromofluorobenzene	30.00	101	75 - 120	12.235	12.242	-0.0070	+/-1.000	
Dibromofluoromethane	30.00	95.0	85 - 115	6.886	6.884	0.0020	+/-1.000	
1,2-Dichloroethane-d4	30.00	98.8	70 - 120	7.379	7.386	-0.0070	+/-1.000	
Toluene-d8	30.00	106	85 - 120	9.605	9.612	-0.0070	+/-1.000	
Trip Blank (1104191-03) ug/L			Lab File ID: 0419103.D		Analyzed: 04/22/11 10:17			
Bromofluorobenzene	30.00	96.1	75 - 120	12.234	12.242	-0.0080	+/-1.000	
Dibromofluoromethane	30.00	97.1	85 - 115	6.876	6.884	-0.0080	+/-1.000	
1,2-Dichloroethane-d4	30.00	96.9	70 - 120	7.378	7.386	-0.0080	+/-1.000	
Toluene-d8	30.00	105	85 - 120	9.604	9.612	-0.0080	+/-1.000	
MPT-351-2-MW05S-20110414 (1104191-01) ug/L			Lab File ID: 0419101.D		Analyzed: 04/22/11 14:07			
Bromofluorobenzene	30.00	96.0	75 - 120	12.225	12.242	-0.0170	+/-1.000	
Dibromofluoromethane	30.00	98.9	85 - 115	6.876	6.884	-0.0080	+/-1.000	
1,2-Dichloroethane-d4	30.00	107	70 - 120	7.369	7.386	-0.0170	+/-1.000	
Toluene-d8	30.00	104	85 - 120	9.595	9.612	-0.0170	+/-1.000	
MPT-351-2-MW06S-20110414 (1104191-02) ug/L			Lab File ID: 0419102.D		Analyzed: 04/22/11 14:33			
Bromofluorobenzene	30.00	100	75 - 120	12.225	12.242	-0.0170	+/-1.000	
Dibromofluoromethane	30.00	100	85 - 115	6.876	6.884	-0.0080	+/-1.000	
1,2-Dichloroethane-d4	30.00	109	70 - 120	7.378	7.386	-0.0080	+/-1.000	
Toluene-d8	30.00	102	85 - 120	9.595	9.612	-0.0170	+/-1.000	

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D22008

Laboratory ID: 1D22008-BS1

Preparation: 5030B

Initial/Final: 5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Benzene	50.00	53.4	107	80 - 120
Ethylbenzene	50.00	52.6	105	75 - 125
Methyl t-Butyl Ether	50.00	52.3	105	65 - 125
Toluene	50.00	50.7	101	75 - 120
Xylenes (total)	150.0	154	103	75 - 130

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D22008 Batch Matrix: Water

Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW05S-20110414	1104191-01	04/22/11 00:00	5.00	5.00
MPT-351-2-MW06S-20110414	1104191-02	04/22/11 00:00	5.00	5.00
Trip Blank	1104191-03	04/22/11 00:00	5.00	5.00
Blank	1D22008-BLK1	04/22/11 00:00	5.00	5.00
LCS	1D22008-BS1	04/22/11 00:00	5.00	5.00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Lab File ID: 0415TU1.D

Injection Date: 04/15/11

Instrument ID: MS-VOA5

Injection Time: 08:29

Sequence: 1D10810

Lab Sample ID: 1D10810-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	18.4	PASS
75	30 - 60% of 95	38.6	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.52	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	101	PASS
175	5 - 9% of 174	7.11	PASS
176	95 - 101% of 174	95.6	PASS
177	5 - 9% of 176	5.75	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Lab File ID: 0422TU1.D

Injection Date: 04/22/11

Instrument ID: MS-VOA5

Injection Time: 06:34

Sequence: 1D11511

Lab Sample ID: 1D11511-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	26.6	PASS
75	30 - 60% of 95	44.2	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.51	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	62	PASS
175	5 - 9% of 174	8.01	PASS
176	95 - 101% of 174	96.5	PASS
177	5 - 9% of 176	7.06	PASS

ANALYSIS SEQUENCE SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D10810

Instrument: MS-VOA5

Calibration: 1110001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1D10810-TUN1	0415TU1.D	04/15/11 08:29
Cal Standard	1D10810-CAL1	0415CAL1.D	04/15/11 09:53
Cal Standard	1D10810-CAL2	0415CAL2.D	04/15/11 10:18
Cal Standard	1D10810-CAL3	0415CAL3.D	04/15/11 10:43
Cal Standard	1D10810-CAL4	0415CAL4.D	04/15/11 11:07
Cal Standard	1D10810-CAL5	0415CAL5.D	04/15/11 11:32
Cal Standard	1D10810-CAL6	0415CAL6.D	04/15/11 11:57
Cal Standard	1D10810-CAL7	0415CAL7.D	04/15/11 12:22
Cal Standard	1D10810-CAL8	0415CAL8.D	04/15/11 12:47
Cal Standard	1D10810-CAL9	0415CAL9.D	04/15/11 13:12
Initial Cal Check	1D10810-ICV2	0415ICV2.D	04/15/11 14:01
Cal Standard	1D10810-CALA	0415CALA.D	04/15/11 14:26
Cal Standard	1D10810-CALB	0415CALB.D	04/15/11 14:51
Cal Standard	1D10810-CALC	0415CALC.D	04/15/11 15:16
Cal Standard	1D10810-CALD	0415CALD.D	04/15/11 15:41
Cal Standard	1D10810-CALE	0415CALE.D	04/15/11 16:05
Cal Standard	1D10810-CALF	0415CALF.D	04/15/11 16:30
Cal Standard	1D10810-CALG	0415CALG.D	04/15/11 16:55
Cal Standard	1D10810-CALH	0415CALH.D	04/15/11 17:20
Cal Standard	1D10810-CALI	0415CALI.D	04/15/11 17:45

ANALYSIS SEQUENCE SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11511

Instrument: MS-VOA5

Calibration: 1110001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1D11511-TUN1	0422TU1.D	04/22/11 06:34
Calibration Check	1D11511-CCV1	0422CC1.D	04/22/11 06:59
LCS	1D22008-BS1	0422LS1.D	04/22/11 07:24
Blank	1D22008-BLK1	0422BL1.D	04/22/11 08:38
Trip Blank	1104191-03	0419103.D	04/22/11 10:17
MPT-351-2-MW05S-20110414	1104191-01	0419101.D	04/22/11 14:07
MPT-351-2-MW06S-20110414	1104191-02	0419102.D	04/22/11 14:33

**INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B**

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: ID11511

SDG:
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-VOA5
 Calibration: 1110001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (ID11511-CCV1)									
			Lab File ID: 0422CC1.D			Analyzed: 04/22/11 06:59			
Fluorobenzene	1078952	7.908	1328259	7.92	81	50 - 200	-0.0120	+/-0.50	
Chlorobenzene-d5	476945	11.04	600438	11.052	79	50 - 200	-0.0120	+/-0.50	
1,4-Dichlorobenzene-d4	389712	13.444	522137	13.456	75	50 - 200	-0.0120	+/-0.50	
LCS (ID22008-BS1)									
			Lab File ID: 0422LS1.D			Analyzed: 04/22/11 07:24			
Fluorobenzene	1117170	7.905	1078952	7.908	104	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5	468372	11.037	476945	11.04	98	50 - 200	-0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	394568	13.441	389712	13.444	101	50 - 200	-0.0030	+/-0.50	
Blank (ID22008-BLK1)									
			Lab File ID: 0422BL1.D			Analyzed: 04/22/11 08:38			
Fluorobenzene	1243244	7.911	1078952	7.908	115	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5	500589	11.043	476945	11.04	105	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	405968	13.437	389712	13.444	104	50 - 200	-0.0070	+/-0.50	
Trip Blank (1104191-03)									
			Lab File ID: 0419103.D			Analyzed: 04/22/11 10:17			
Fluorobenzene	1148788	7.91	1078952	7.908	106	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5	455886	11.032	476945	11.04	96	50 - 200	-0.0080	+/-0.50	
1,4-Dichlorobenzene-d4	369289	13.436	389712	13.444	95	50 - 200	-0.0080	+/-0.50	
MPT-351-2-MW05S-20110414 (1104191-01)									
			Lab File ID: 0419101.D			Analyzed: 04/22/11 14:07			
Fluorobenzene	1061853	7.901	1078952	7.908	98	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5	432156	11.033	476945	11.04	91	50 - 200	-0.0070	+/-0.50	
1,4-Dichlorobenzene-d4	351307	13.437	389712	13.444	90	50 - 200	-0.0070	+/-0.50	
MPT-351-2-MW06S-20110414 (1104191-02)									
			Lab File ID: 0419102.D			Analyzed: 04/22/11 14:33			
Fluorobenzene	1096802	7.901	1078952	7.908	102	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5	436133	11.033	476945	11.04	91	50 - 200	-0.0070	+/-0.50	
1,4-Dichlorobenzene-d4	374179	13.436	389712	13.444	96	50 - 200	-0.0080	+/-0.50	

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF										
Acetone												
Acrolein	2.501	7.345248E-02	5.002	0.0629605	10	7.600379E-02	25.01	4.266429E-02	50.02	4.401047E-02	250.1	4.491028E-02
Acrylonitrile	2.499	9.808561E-02	4.998	0.109848	9.996	8.699726E-02	24.99	8.799322E-02	49.98	8.802525E-02	249.9	9.420532E-02
Benzene	0.5	0.8000888	1	0.9156609	2	0.8803617	5	0.7934592	10	0.7359414	50	0.800176
Bromobenzene	0.5	0.641056	1	0.6621863	2	0.5914626	5	0.6467631	10	0.579489	50	0.6402908
Bromochloromethane	0.5	0.1093716	1	0.1692393	2	0.140701	5	0.1313986	10	0.112671	50	0.1315389
Tert-Amyl Methyl Ether	0.5	0.6306069	1	0.7326989	2	0.6863854	5	0.6084636	10	0.594319	50	0.6639212
Bromodichloromethane	0.5	0.3849176	1	0.3212413	2	0.3108098	5	0.3016333	10	0.2722413	50	0.3183873
Bromoform	0.5	0.3945924	1	0.3386649	2	0.3466746	5	0.3226988	10	0.33363	50	0.3812498
Bromomethane	0.5	0.1684676	1	0.1779699	2	0.192281	5	0.1780457	10	0.1785955	50	0.2262205
Bromofluorobenzene												
n-Butylbenzene	0.5	1.615764	1	1.620222	2	1.568309	5	1.533788	10	1.313584	50	1.538153
2-Butanone												
sec-Butylbenzene	0.5	2.182433	1	2.042219	2	2.12414	5	1.9027	10	1.740465	50	1.975233
tert-Butylbenzene	0.5	1.42206	1	1.934084	2	1.652871	5	1.639224	10	1.426676	50	1.647677
Carbon disulfide	0.5	0.6700777	1	0.7146108	2	0.6935102	5	0.6335915	10	0.6337523	50	0.6850653
Carbon tetrachloride	0.5	0.2142449	1	0.2502996	2	0.2321267	5	0.2296175	10	0.2145385	50	0.245885
Chlorobenzene	0.5	1.326671	1	1.439744	2	1.348718	5	1.242116	10	1.218162	50	1.309918
Chloroethane	0.5	0.2639473	1	0.3176148	2	0.2371905	5	0.2382983	10	0.229075	50	0.2546896
Chloroform	0.5	0.4713124	1	0.525224	2	0.4449954	5	0.3898242	10	0.3843343	50	0.4034271
2-Chloroethyl vinyl ether	0.9975	0.1757648	1.995	0.1714589	3.99	0.1786886	9.975	0.1651317	19.95	0.1499097	99.75	0.1703667
Chloromethane	0.5	0.4048956	1	0.522269	2	0.5269472	5	0.4844209	10	0.4433077	50	0.4808374
1-Chlorohexane	0.501	1.585962	1.002	1.589005	2.004	1.398023	5.01	1.274661	10.02	1.22227	50.1	1.31726
2-Chlorotoluene	0.5	1.32624	1	1.808458	2	1.659932	5	1.543797	10	1.385015	50	1.54863
4-Chlorotoluene	0.5	1.73978	1	1.803072	2	1.855684	5	1.677465	10	1.535848	50	1.79964
Cyclohexane	0.5	0.4396916	1	0.4634382	2	0.409737	5	0.3895298	10	0.3643557	50	0.4100495
Dibromochloromethane	0.5	0.5283043	1	0.5578137	2	0.5173084	5	0.5282558	10	0.5005973	50	0.5522381
1,2-Dibromo-3-chloropropane	0.5		1	9.348104E-02	2	9.474229E-02	5	0.1156024	10	0.1023672	50	0.1237073
1,2-Dibromoethane (EDB)	0.5	0.5843429	1	0.6618649	2	0.6056568	5	0.540378	10	0.5211705	50	0.5524816
Dibromomethane	0.5	0.1536054	1	0.1796265	2	0.153499	5	0.1450265	10	0.1479124	50	0.1641915
1,2-Dichlorobenzene	0.5	0.8575686	1	1.041613	2	1.049727	5	0.9857437	10	0.9044381	50	1.03308

INITIAL CALIBRATION DATA
SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF										
1,3-Dichlorobenzene	0.5	1.273057	1	1.210968	2	1.111015	5	1.008536	10	0.9391991	50	1.051088
1,4-Dichlorobenzene	0.5	1.532551	1	1.16052	2	1.202197	5	1.083727	10	0.9748769	50	1.079088
Dichlorodifluoromethane	0.5	0.2840134	1	0.2858936	2	0.2909534	5	0.3119691	10	0.2727878	50	0.3162249
1,1-Dichloroethane	0.5	0.4287103	1	0.5320965	2	0.4751234	5	0.4325725	10	0.4120782	50	0.4661043
1,2-Dichloroethane	0.5	0.3562957	1	0.31363	2	0.3396192	5	0.3170589	10	0.2989102	50	0.3387723
1,1-Dichloroethene	0.5	0.2393828	1	0.2659251	2	0.2648033	5	0.1920973	10	0.1939775	50	0.2009782
cis-1,2-Dichloroethene	0.5	0.249482	1	0.3033548	2	0.3005381	5	0.247724	10	0.2281777	50	0.2555682
trans-1,2-Dichloroethene	0.5	0.2998018	1	0.2666415	2	0.2699336	5	0.2006577	10	0.2123392	50	0.230136
1,2-Dichloroethene (total)	1	0.2746419	2	0.2849981	4	0.2852358	10	0.2241909	20	0.2202585	100	0.2428521
1,2-Dichloropropane	0.5	0.2971116	1	0.3268379	2	0.3157074	5	0.2696402	10	0.2481496	50	0.2695601
1,3-Dichloropropane	0.5	0.843535	1	0.909842	2	0.8361608	5	0.8171525	10	0.764916	50	0.8162331
2,2-Dichloropropane	0.5	0.3501656	1	0.3412545	2	0.3056573	5	0.2780712	10	0.2715509	50	0.3022778
1,1-Dichloropropene	0.5	0.2968029	1	0.3418814	2	0.3254472	5	0.2892188	10	0.2793071	50	0.3077439
cis-1,3-Dichloropropene	0.5	0.3369793	1	0.4209045	2	0.3752986	5	0.3546505	10	0.3451507	50	0.3709639
trans-1,3-Dichloropropene	0.5	0.6572671	1	0.7202759	2	0.7544529	5	0.7045884	10	0.6688263	50	0.7769461
1,3-Dichloropropene (total)	1	0.3058216	2	0.3600701	4	0.3468991	10	0.3256349	20	0.3108605	100	0.3508639
Diisopropyl Ether	0.5	1.095436	1	1.089445	2	1.036587	5	1.039403	10	1.009037	50	1.099811
Ethylbenzene	0.5	2.026046	1	2.21121	2	2.244356	5	2.0568	10	1.979842	50	2.099205
Ethyl tert-Butyl Ether	0.5	0.8180381	1	0.8773582	2	0.8584222	5	0.7778061	10	0.7427239	50	0.8236289
Ethyl Methacrylate	0.5	0.7708219	1	0.7903798	2	0.7030081	5	0.7054255	10	0.6633499	50	0.7145584
Hexachlorobutadiene	0.5	0.3004126	1	0.2670639	2	0.2546861	5	0.2139476	10	0.1996979	50	0.2170609
2-Hexanone												
Iodomethane	0.5	0.1155017	1	0.1466517	2	0.1505738	5	0.1804679	10	0.1858682	50	0.2715026
Isopropylbenzene	0.5	1.553991	1	1.879496	2	1.64715	5	1.463981	10	1.484014	50	1.604791
p-Isopropyltoluene	0.5	1.89864	1	1.776951	2	1.742258	5	1.607387	10	1.523654	50	1.666623
Methylene chloride	0.5	0.3900725	1	0.2936392	2	0.2698228	5	0.2477597	10	0.2252182	50	0.2518085
Methyl Acetate	0.5	0.4609926	1	0.4005555	2	0.2358498	5	0.2255224	10	0.2031954	50	0.215042
Methylcyclohexane	0.5	0.3449617	1	0.2959674	2	0.3342673	5	0.2715628	10	0.2594567	50	0.2933012
Naphthalene	0.5	1.330595	1	1.403953	2	1.438523	5	1.267743	10	1.210153	50	1.336267
Methyl Methacrylate	0.5	0.3571778	1	0.3326583	2	0.2536673	5	0.2420409	10	0.2434765	50	0.2725396
4-Methyl-2-pentanone												

INITIAL CALIBRATION DATA
SW8260B

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Calibration: 1110001
 Matrix: Water

SDG:
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-VOA5
 Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF										
Methyl t-Butyl Ether	0.5	0.58849	1	0.3847061	2	0.61701	5	0.5249432	10	0.5220101	50	0.575102
n-Propylbenzene	0.5	2.658898	1	2.631022	2	2.742525	5	2.498391	10	2.252019	50	2.51794
Styrene	0.5	1.191692	1	1.431338	2	1.394782	5	1.292819	10	1.286717	50	1.356195
1,1,2,2-Tetrachloroethane	0.5	0.6565294	1	0.8292243	2	0.7688837	5	0.6768636	10	0.6541766	50	0.723185
1,1,1,2-Tetrachloroethane	0.5	0.4367006	1	0.4756397	2	0.5285685	5	0.4857648	10	0.4354952	50	0.5080245
tert-Butyl alcohol	2.5	1.891953E-02	5	2.545306E-02	10	2.534346E-02	25	2.006688E-02	50	1.962376E-02	250	2.099059E-02
Tetrachloroethene	0.5	0.364093	1	0.5506471	2	0.4872814	5	0.4530117	10	0.4530936	50	0.4932279
Toluene	0.5	1.194858	1	1.156849	2	1.245383	5	1.085715	10	1.014703	50	1.112732
1,2,3-Trichlorobenzene	0.5	0.4865515	1	0.6485175	2	0.5326165	5	0.4876621	10	0.4486489	50	0.5188974
1,2,4-Trichlorobenzene	0.5	0.7493696	1	0.6890607	2	0.6505441	5	0.5479476	10	0.5055653	50	0.5773303
1,1,2-Trichloroethane	0.5	0.5303094	1	0.5252135	2	0.4770975	5	0.4418115	10	0.4350982	50	0.4271284
1,1,1-Trichloroethane	0.5	0.330761	1	0.3376056	2	0.3149539	5	0.2880055	10	0.2771033	50	0.3098753
Tetrahydrofuran	0.5	0.1634841	1	0.1109906	2	0.130662	5	7.513845E-02	10	7.189065E-02	50	7.579246E-02
Trichloroethene	0.5	0.2354577	1	0.2523815	2	0.2614126	5	0.2117919	10	0.2188451	50	0.2396014
Trichlorofluoromethane	0.5	0.4371778	1	0.4162929	2	0.4261584	5	0.3891685	10	0.3896686	50	0.3943387
1,2,3-Trichloropropane	0.5	0.1683271	1	0.1842854	2	0.2015794	5	0.1413224	10	0.1597234	50	0.1514929
1,3,5-Trimethylbenzene	0.5	1.681783	1	1.781468	2	1.842237	5	1.535102	10	1.452974	50	1.666816
1,2,4-Trimethylbenzene	0.5	1.815771	1	1.840546	2	1.734166	5	1.554856	10	1.452915	50	1.671327
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5	0.1947962	1	0.245106	2	0.2140875	5	0.1963128	10	0.1816022	50	0.207954
Vinyl chloride	0.5	0.4777512	1	0.3889818	2	0.3273641	5	0.3402598	10	0.3620777	50	0.3030401
m,p-Xylene	1	1.670396	2	1.787353	4	1.678962	10	1.568847	20	1.459675	100	1.572657
o-Xylene	0.5	1.74923	1	1.94044	2	1.807285	5	1.558785	10	1.560928	50	1.627801
Vinyl acetate	0.9995	0.4135478	1.999	0.3447625	3.998	0.4064887	9.995	0.3548725	19.99	0.3401282	99.95	0.3820547
Xylenes (total)	1.5	1.696674	3	1.838382	6	1.721736	15	1.565493	30	1.493426	150	1.591039
Dibromofluoromethane												
1,2-Dichloroethane-d4												
Toluene-d8												
tert-Amyl alcohol	2.5	1.766705E-02	5	1.906405E-02	10	1.790397E-02	25	0.0169066	50	0.0166562	250	1.650561E-02
tert-Amyl ethyl ether	0.5	0.6824261	1	0.6596976	2	0.6734211	5	0.6479509	10	0.6062625	50	0.6795288

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone							1		2	0.2395382	4	0.1062259
Acrolein	500.2	4.761912E-02	750.3	4.441414E-02	1000	4.446742E-02						
Acrylonitrile	499.8	9.624532E-02	749.7	0.0967836	999.6	9.945679E-02						
Benzene	100	0.8082567	150	0.8163695	200	0.7988039						
Bromobenzene	100	0.6227843	150	0.6086506	200	0.6133366						
Bromochloromethane	100	0.1302925	150	0.134319	200	0.130993						
Tert-Amyl Methyl Ether	100	0.6658783	150	0.687089	200	0.681037						
Bromodichloromethane	100	0.3180744	150	0.3272917	200	0.325512						
Bromoform	100	0.3779496	150	0.3790748	200	0.3705986						
Bromomethane	100	0.2381992	150	0.2519488	200	0.2510808						
Bromofluorobenzene							30	0.8695019	30	0.8691996	40	0.8060909
n-Butylbenzene	100	1.474875	150	1.431947	200	1.444853						
2-Butanone							1	0.1415871	2	0.1638124	4	0.150175
sec-Butylbenzene	100	1.901739	150	1.885204	200	1.850669						
tert-Butylbenzene	100	1.602518	150	1.609183	200	1.551959						
Carbon disulfide	100	0.6887554	150	0.6911361	200	0.68595						
Carbon tetrachloride	100	0.2509112	150	0.2571727	200	0.2633611						
Chlorobenzene	100	1.235874	150	1.215821	200	1.168307						
Chloroethane	100	0.2458709	150	0.2418009	200	0.2428498						
Chloroform	100	0.4073919	150	0.4212198	200	0.4175302						
2-Chloroethyl vinyl ether	199.5	0.175057	299.2	0.1795702	399	0.17956						
Chloromethane	100	0.4652296	150	0.4745201	200	0.4687825						
1-Chlorohexane	100.2	1.256774	150.3	1.25052	200.4	1.210453						
2-Chlorotoluene	100	1.52764	150	1.514417	200	1.503625						
4-Chlorotoluene	100	1.720962	150	1.745691	200	1.735362						
Cyclohexane	100	0.4088501	150	0.4185832	200	0.4205054						
Dibromochloromethane	100	0.5342505	150	0.5344027	200	0.5202787						
1,2-Dibromo-3-chloropropane	100	0.1245736	150	0.1227042	200	0.1233507						
1,2-Dibromoethane (EDB)	100	0.5329544	150	0.5193847	200	0.5009687						
Dibromomethane	100	0.1620901	150	0.1675086	200	0.1653088						
1,2-Dichlorobenzene	100	0.9798451	150	0.9607292	200	0.9510329						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF										
1,3-Dichlorobenzene	100	1.028373	150	0.998828	200	1.002863						
1,4-Dichlorobenzene	100	1.0591	150	1.030866	200	1.009536						
Dichlorodifluoromethane	100	0.3117621	150	0.3095106	200	0.3036366						
1,1-Dichloroethane	100	0.4650846	150	0.4714799	200	0.4701173						
1,2-Dichloroethane	100	0.3454874	150	0.3557143	200	0.3525558						
1,1-Dichloroethene	100	0.204577	150	0.2000217	200	0.2103732						
cis-1,2-Dichloroethene	100	0.2594392	150	0.2625341	200	0.2612869						
trans-1,2-Dichloroethene	100	0.2320617	150	0.2404701	200	0.2408501						
1,2-Dichloroethene (total)	200	0.2457505	300	0.2515021	400	0.2510685						
1,2-Dichloropropane	100	0.2768431	150	0.2841096	200	0.2821266						
1,3-Dichloropropane	100	0.7927853	150	0.7731411	200	0.7493176						
2,2-Dichloropropane	100	0.305663	150	0.3168261	200	0.3142077						
1,1-Dichloropropene	100	0.3115563	150	0.3233728	200	0.3222422						
cis-1,3-Dichloropropene	100	0.3828268	150	0.3965628	200	0.395178						
trans-1,3-Dichloropropene	100	0.7696532	150	0.7817741	200	0.7646546						
1,3-Dichloropropene (total)	200	0.3653738	300	0.3800619	400	0.3801002						
Diisopropyl Ether	100	1.11285	150	1.134986	200	1.107778						
Ethylbenzene	100	1.937883	150	1.922859	200	1.8281						
Ethyl tert-Butyl Ether	100	0.8342713	150	0.8474832	200	0.8437941						
Ethyl Methacrylate	100	0.6893992	150	0.6995502	200	0.6764212						
Hexachlorobutadiene	100	0.2183398	150	0.2151024	200	0.2166238						
2-Hexanone							1	0.5026459	2	0.5797565	4	0.4901297
Iodomethane	100	0.2889175	150	0.3081212	200	0.3008402						
Isopropylbenzene	100	1.506733	150	1.473016	200	1.422801						
p-Isopropyltoluene	100	1.637658	150	1.625244	200	1.615128						
Methylene chloride	100	0.2516857	150	0.2554455	200	0.2533425						
Methyl Acetate	100	0.2201898	150	0.2211768	200	0.2256047						
Methylcyclohexane	100	0.2949703	150	0.3038449	200	0.3052717						
Naphthalene	100	1.347997	150	1.313537	200	1.294839						
Methyl Methacrylate	100	0.2694595	150	0.2856965	200	0.2875679						
4-Methyl-2-pentanone							1	0.2715508	2	0.2845776	4	0.2933364

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Methyl t-Butyl Ether	100	0.5988705	150	0.6159157	200	0.6139185						
n-Propylbenzene	100	2.408552	150	2.369597	200	2.286507						
Styrene	100	1.294683	150	1.308169	200	1.270967						
1,1,2,2-Tetrachloroethane	100	0.713353	150	0.6930676	200	0.6933867						
1,1,1,2-Tetrachloroethane	100	0.475352	150	0.4757034	200	0.4682421						
tert-Butyl alcohol	500	2.167814E-02	750	2.229985E-02	1000	2.231197E-02						
Tetrachloroethene	100	0.4520485	150	0.4602833	200	0.448791						
Toluene	100	1.081687	150	1.095633	200	1.082227						
1,2,3-Trichlorobenzene	100	0.4923064	150	0.4935776	200	0.4830579						
1,2,4-Trichlorobenzene	100	0.5539334	150	0.560741	200	0.5458707						
1,1,2-Trichloroethane	100	0.4151994	150	0.4180961	200	0.3989418						
1,1,1-Trichloroethane	100	0.3158352	150	0.3216286	200	0.327623						
Tetrahydrofuran	100	7.667164E-02	150	7.949791E-02	200	7.960101E-02						
Trichloroethene	100	0.23727	150	0.2431529	200	0.2463272						
Trichlorofluoromethane	100	0.3969179	150	0.3949105	200	0.3914032						
1,2,3-Trichloropropane	100	0.1423161	150	0.1506411	200	0.1443797						
1,3,5-Trimethylbenzene	100	1.583804	150	1.575997	200	1.565018						
1,2,4-Trimethylbenzene	100	1.633456	150	1.64197	200	1.585531						
1,1,2-Trichloro-1,2,2-trifluoroethane	100	0.2067751	150	0.2062075	200	0.2127444						
Vinyl chloride	100	0.2340032	150	0.2065956	200	0.1971065						
m,p-Xylene	200	1.501925	300	1.462725	400	1.317357						
o-Xylene	100	1.565988	150	1.553286	200	1.508714						
Vinyl acetate	199.9	0.3826316	299.8	0.3832969	399.8	0.3787505						
Xylenes (total)	300	1.523279	450	1.492912	600	1.381143						
Dibromofluoromethane							30	0.305082	30	0.3121115	40	0.2808014
1,2-Dichloroethane-d4							30	0.060848	30	6.200351E-02	40	0.057634
Toluene-d8							30	2.175583	30	2.133059	40	1.993034
tert-Amyl alcohol	500	1.750579E-02	750	1.752437E-02	1000	1.792482E-02						
tert-Amyl ethyl ether	100	0.6929417	150	0.7127362	200	0.7089255						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	10	0.1058109	20	9.662517E-02	100	9.160077E-02	200	8.873568E-02	300	8.776138E-02	400	0.0912852
Acrolein												
Acrylonitrile												
Benzene												
Bromobenzene												
Bromochloromethane												
Tert-Amyl Methyl Ether												
Bromodichloromethane												
Bromoform												
Bromomethane												
Bromofluorobenzene	50	0.8179282	60	0.8024138	70	0.7653987	30	0.9016312	30	0.8719414	30	0.8837117
n-Butylbenzene												
2-Butanone	10	0.1154252	20	0.1283318	100	0.140829	200	0.1341546	300	0.1343933	400	0.1349522
sec-Butylbenzene												
tert-Butylbenzene												
Carbon disulfide												
Carbon tetrachloride												
Chlorobenzene												
Chloroethane												
Chloroform												
2-Chloroethyl vinyl ether												
Chloromethane												
1-Chlorohexane												
2-Chlorotoluene												
4-Chlorotoluene												
Cyclohexane												
Dibromochloromethane												
1,2-Dibromo-3-chloropropane												
1,2-Dibromoethane (EDB)												
Dibromomethane												
1,2-Dichlorobenzene												

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF										
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												
Dichlorodifluoromethane												
1,1-Dichloroethane												
1,2-Dichloroethane												
1,1-Dichloroethene												
cis-1,2-Dichloroethene												
trans-1,2-Dichloroethene												
1,2-Dichloroethene (total)												
1,2-Dichloropropane												
1,3-Dichloropropane												
2,2-Dichloropropane												
1,1-Dichloropropene												
cis-1,3-Dichloropropene												
trans-1,3-Dichloropropene												
1,3-Dichloropropene (total)												
Diisopropyl Ether												
Ethylbenzene												
Ethyl tert-Butyl Ether												
Ethyl Methacrylate												
Hexachlorobutadiene												
2-Hexanone	10	0.4151944	20	0.4738867	100	0.4647011	200	0.4730331	300	0.4535798	400	0.4782568
Iodomethane												
Isopropylbenzene												
p-Isopropyltoluene												
Methylene chloride												
Methyl Acetate												
Methylcyclohexane												
Naphthalene												
Methyl Methacrylate												
4-Methyl-2-pentanone	10	0.2591883	20	0.2753029	100	0.2847717	200	0.2842831	300	0.2727058	400	0.2794371

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Methyl t-Butyl Ether												
n-Propylbenzene												
Styrene												
1,1,2,2-Tetrachloroethane												
1,1,1,2-Tetrachloroethane												
tert-Butyl alcohol												
Tetrachloroethene												
Toluene												
1,2,3-Trichlorobenzene												
1,2,4-Trichlorobenzene												
1,1,2-Trichloroethane												
1,1,1-Trichloroethane												
Tetrahydrofuran												
Trichloroethene												
Trichlorofluoromethane												
1,2,3-Trichloropropane												
1,3,5-Trimethylbenzene												
1,2,4-Trimethylbenzene												
1,1,2-Trichloro-1,2,2-trifluoroethane												
Vinyl chloride												
m,p-Xylene												
o-Xylene												
Vinyl acetate												
Xylenes (total)												
Dibromofluoromethane	50	0.2831616	60	0.2832524	70	0.2746393	30	0.3029928	30	0.2980317	30	0.2988701
1,2-Dichloroethane-d4	50	6.188906E-02	60	5.667148E-02	70	5.616298E-02	30	0.0631027	30	5.735518E-02	30	5.957207E-02
Toluene-d8	50	1.973692	60	1.954738	70	1.847237	30	2.162138	30	2.08284	30	2.181926
tert-Amyl alcohol												
tert-Amyl ethyl ether												

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.095435	8.130072	3.761286	9.346288E-02			15	
Acrolein	5.338917E-02	25.4234	3.639333	0.1077746	0.9990652		0.995	
Acrylonitrile	9.529337E-02	7.569294	4.589333	0.1474434			15	
Benzene	0.8165687	6.399931	7.650444	5.168866E-02			15	
Bromobenzene	0.622891	4.364366	12.40278	5.143733E-02			15	
Bromochloromethane	0.1322805	12.97677	6.738889	0.0928818			15	
Tert-Amyl Methyl Ether	0.6611555	6.555788	7.841111	7.572897E-02			15	
Bromodichloromethane	0.3200121	9.249059	8.636667	6.813749E-02			15	
Bromoform	0.3605704	7.045665	11.81067	5.905082E-02			SPCC (0.1)	
Bromomethane	0.2069788	16.64528	2.818556	0.1637358	0.9991868		0.995	
Bromofluorobenzene	0.8430908	5.464727	12.24611	1.755882E-02			15	
n-Butylbenzene	1.504611	6.561854	13.83644	3.032147E-02			15	
2-Butanone	0.1381845	9.827188	6.202444	5.654298E-02			15	
sec-Butylbenzene	1.956089	7.131853	13.29478	2.976972E-02			15	
tert-Butylbenzene	1.609584	9.357792	13.06044	5.049762E-02			15	
Carbon disulfide	0.6773833	4.033366	4.763333	4.957716E-02			15	
Carbon tetrachloride	0.2397952	7.491069	7.617778	6.986726E-02			15	
Chlorobenzene	1.27837	6.608143	11.08278	5.423621E-02			SPCC (0.3)	
Chloroethane	0.2523708	10.49478	2.951	0.1958913			15	
Chloroform	0.4294733	10.46046	6.715889	8.754408E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.1717231	5.52504	8.994556	6.848219E-02			15	
Chloromethane	0.4745789	7.851537	2.228667	0.1926709			SPCC (0.1)	
1-Chlorohexane	1.344992	11.02804	11.049	3.869327E-02			15	
2-Chlorotoluene	1.535306	9.158972	12.625	3.281746E-02			15	
4-Chlorotoluene	1.734834	5.262659	12.68844	4.818632E-02			15	
Cyclohexane	0.4138601	6.775805	7.549889	5.761858E-02			15	
Dibromochloromethane	0.5303833	3.2862	10.31456	6.028785E-02			15	
1,2-Dibromo-3-chloropropane	0.1125661	12.02491	14.44125	3.902792E-02			15	
1,2-Dibromoethane (EDB)	0.5576892	9.147644	10.52789	5.679238E-02			15	
Dibromomethane	0.1598632	6.798654	8.573222	6.249779E-02			15	
1,2-Dichlorobenzene	0.9737531	6.602409	13.79711	3.249335E-02			15	
1,3-Dichlorobenzene	1.069325	10.20858	13.38444	4.478999E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.125829	14.93571	13.47644	4.420105E-02			15	
Dichlorodifluoromethane	0.2985279	5.170388	2.017222	0.1785951	0.9997339		0.995	
1,1-Dichloroethane	0.4614852	7.557788	5.750445	9.968297E-02			SPCC (0.1)	
1,2-Dichloroethane	0.3353382	6.162455	7.478667	8.089861E-02			15	
1,1-Dichloroethene	0.2191262	13.53056	4.228111	0.1783801			CCC (20)	
cis-1,2-Dichloroethene	0.2631228	9.248231	6.459889	8.951479E-02			15	
trans-1,2-Dichloroethene	0.2436546	12.59655	5.375111	0.1345106			15	
1,2-Dichloroethene (total)	0.2533887	9.456715	0	0			15	
1,2-Dichloropropane	0.2855651	8.528436	8.460444	7.290993E-02			CCC (20)	
1,3-Dichloropropane	0.8114537	6.040153	10.05411	0.0399961			15	
2,2-Dichloropropane	0.3095193	8.274472	6.569333	9.334919E-02			15	
1,1-Dichloropropene	0.3108414	6.366392	7.497444	8.152097E-02			15	
cis-1,3-Dichloropropene	0.3753906	7.176617	9.211445	6.630273E-02			15	
trans-1,3-Dichloropropene	0.7331598	6.458765	9.686222	5.472616E-02			15	
1,3-Dichloropropene (total)	0.3472984	7.996073	9.686222	5.472616E-02			15	
Diisopropyl Ether	1.080593	3.893299	6.121667	6.412666E-02			15	
Ethylbenzene	2.034033	6.673525	11.22944	0.0629414			CCC (20)	
Ethyl tert-Butyl Ether	0.8248362	5.044401	6.587778	7.160754E-02			15	
Ethyl Methacrylate	0.712546	5.877163	9.872444	5.863743E-02			15	
Hexachlorobutadiene	0.2336594	14.11394	15.80222	3.541708E-02			15	
2-Hexanone	0.4812427	9.22694	9.992778	3.236776E-02			15	
Iodomethane	0.2291179	30.40252	4.4235	0.1630534	0.9990179		0.995	
Isopropylbenzene	1.559553	8.952109	12.13022	3.579421E-02			15	
p-Isopropyltoluene	1.67706	6.663178	13.43278	2.871329E-02			15	
Methylene chloride	0.2560903	7.621563	4.710375	0.1147551			15	
Methyl Acetate	0.243392	26.37392	4.575	9.409387E-02	0.999715		0.995	
Methylcyclohexane	0.3004004	8.944592	8.791	4.837696E-02			15	
Naphthalene	1.327067	5.143918	15.67311	3.798954E-02			15	
Methyl Methacrylate	0.2826983	13.92008	7.548778	7.251518E-02			15	
4-Methyl-2-pentanone	0.2783504	3.582551	9.140111	2.964067E-02			15	
Methyl t-Butyl Ether	0.5601073	13.42515	5.375111	7.721725E-02			15	
n-Propylbenzene	2.48505	6.85256	12.53956	5.596903E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1110001

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 4/15/11 9:53 4/15/11 17:45

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Styrene	1.314151	5.413242	11.70344	5.177519E-02			15	
1,1,2,2-Tetrachloroethane	0.7120744	7.923079	12.05467	5.038292E-02			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.4766101	6.262437	11.12456	4.672365E-02			15	
tert-Butyl alcohol	2.184747E-02	10.65008	4.374778	0.1799545			15	
Tetrachloroethene	0.4624975	10.6729	10.424	5.774833E-02			15	
Toluene	1.118865	6.198212	9.688333	5.751295E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.510204	11.15195	15.95856	3.955662E-02			15	
1,2,4-Trichlorobenzene	0.5978181	13.4198	15.521	2.557265E-02			15	
1,1,2-Trichloroethane	0.4520995	10.62213	9.842667	6.054729E-02			15	
1,1,1-Trichloroethane	0.3137102	6.314808	7.277333	7.972291E-02			15	
Tetrahydrofuran	8.753059E-02	24.39609	6.928	8.088625E-02	0.9995802		0.995	
Trichloroethene	0.2384711	6.483154	8.412333	8.104842E-02			15	
Trichlorofluoromethane	0.4040041	4.421798	3.443333	0.0711888			15	
1,2,3-Trichloropropane	0.1604519	12.94579	12.18167	0.049631			15	
1,3,5-Trimethylbenzene	1.631689	7.556347	12.71789	0.0493266			15	
1,2,4-Trimethylbenzene	1.658949	7.474238	13.09133	5.295763E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2072873	8.432636	4.302556	0.1663512			15	
Vinyl chloride	0.3152422	29.09972	2.374222	0.1915386		0.9981236	CCC (20)	*
m,p-Xylene	1.557766	9.078421	11.34	6.848237E-02			15	
o-Xylene	1.652495	8.873298	11.73289	5.401407E-02			15	
Vinyl acetate	0.3762815	6.768409	5.822778	0.1039803			15	
Xylenes (total)	1.589343	8.838143	0	0			15	
Dibromofluoromethane	0.2932159	4.427291	6.893333	0.0409069			15	
1,2-Dichloroethane-d4	0.059471	4.368149	7.391111	4.109608E-02			15	
Toluene-d8	2.056027	5.771716	9.617222	3.111463E-02			15	
tert-Amyl alcohol	1.751761E-02	4.453294	7.088	8.142149E-02			15	
tert-Amyl ethyl ether	0.6737656	4.880926	8.727444	6.940179E-02			15	

INITIAL CALIBRATION CHECK

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: MS-VOA5

Calibration: 1110001

Lab File ID: 0415ICV2.D

Calibration Date: 04/15/11 09:53

Sequence: 1D10810

Injection Date: 04/15/11

Lab Sample ID: 1D10810-ICV2

Injection Time: 14:01

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Benzene	A	100.0	101.0	0.8165687	0.824451		1.0	20
Ethylbenzene	A	100.0	99.98	2.034033	2.033602		-0.02	20
Methyl t-Butyl Ether	A	100.0	107.3	0.5601073	0.6009371		7.3	20
Toluene	A	100.0	100.4	1.118865	1.123341		0.4	20
Xylenes (total)	A	300.0	298.9	1.589343	1.583136		-0.4	20
Bromofluorobenzene	A	30.00	29.40	0.8430908	0.8261078		-2.0	20
Dibromofluoromethane	A	30.00	31.09	0.2932159	0.3038724		3.6	20
1,2-Dichloroethane-d4	A	30.00	31.37	0.059471	6.218618E-02		4.6	20
Toluene-d8	A	30.00	29.51	2.056027	2.022546		-1.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Instrument ID: MS-VOA5
 Lab File ID: 0422CC1.D
 Sequence: 1D11511
 Lab Sample ID: 1D11511-CCV1

SDG:
 Project: NAS Mayport CTO JM33 2010
 Calibration: 1110001
 Calibration Date: 04/15/11 09:53
 Injection Date: 04/22/11
 Injection Time: 06:59

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzene	A	100.0	119.7	0.8165687	0.977664		19.7	20
Ethylbenzene	A	100.0	110.5	2.034033	2.247792		10.5	20
Methyl t-Butyl Ether	A	100.0	119.1	0.5601073	0.6669119		19.1	20
Toluene	A	100.0	106.4	1.118865	1.191081		6.5	20
Xylenes (total)	A	300.0	329.7	1.589343	1.745396		9.8	20
Bromofluorobenzene	A	30.00	28.41	0.8430908	0.7983541		-5.3	20
Dibromofluoromethane	A	30.00	32.04	0.2932159	0.3131251		6.8	20
1,2-Dichloroethane-d4	A	30.00	32.17	0.059471	6.376651E-02		7.2	20
Toluene-d8	A	30.00	28.85	2.056027	1.977452		-3.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-351-2-MW05S-20110414	04/14/11 09:56	04/15/11 09:00	04/22/11 00:00	N/A	14.00	04/22/11 14:07	8.17	14.00	
MPT-351-2-MW06S-20110414	04/14/11 10:32	04/15/11 09:00	04/22/11 00:00	N/A	14.00	04/22/11 14:33	8.17	14.00	
Trip Blank	04/14/11 00:00	04/15/11 09:00	04/22/11 00:00	N/A	14.00	04/22/11 10:17	8.43	14.00	

Data for SW8270C (PAH) Forms

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: 1D11612

SDG:
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-BNA4
 Calibration: 1112002

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1D11612-CCV1) ug/mL				Lab File ID: SEQ-CCV1.D		Analyzed: 04/25/11 18:05		
2-Fluorobiphenyl	5.000	95.0	80 - 120	7.031	7.031	0.0000	+/-0.500	
Terphenyl-d14	5.000	96.5	80 - 120	11.595	11.595	0.0000	+/-0.500	
LCS (1D19023-BS1) ug/L				Lab File ID: D19023L1.D		Analyzed: 04/25/11 20:14		
2-Fluorobiphenyl	50.00	76.7	34 - 167	7.031	7.031	0.0000	+/-0.500	
Terphenyl-d14	50.00	70.5	34 - 167	11.604	11.595	0.0090	+/-0.500	
LCS Dup (1D19023-BSD1) ug/L				Lab File ID: D19023L2.D		Analyzed: 04/25/11 20:39		
2-Fluorobiphenyl	50.00	78.2	34 - 167	7.031	7.031	0.0000	+/-0.500	
Terphenyl-d14	50.00	68.4	34 - 167	11.604	11.595	0.0090	+/-0.500	
Blank (1D19023-BLK1) ug/L				Lab File ID: D19023B1.D		Analyzed: 04/25/11 21:04		
2-Fluorobiphenyl	50.00	71.8	34 - 167	7.03	7.031	-0.0010	+/-0.500	
Terphenyl-d14	50.00	77.1	34 - 167	11.604	11.595	0.0090	+/-0.500	
MPT-351-2-MW05S-20110414 (1104191-01) ug/L				Lab File ID: 0419101.D		Analyzed: 04/25/11 22:44		
2-Fluorobiphenyl	46.30	72.2	34 - 167	7.031	7.031	0.0000	+/-0.500	
Terphenyl-d14	46.30	70.0	34 - 167	11.604	11.595	0.0090	+/-0.500	
MPT-351-2-MW06S-20110414 (1104191-02) ug/L				Lab File ID: 0419102.D		Analyzed: 04/25/11 23:09		
2-Fluorobiphenyl	46.30	64.1	34 - 167	7.04	7.031	0.0090	+/-0.500	
Terphenyl-d14	46.30	66.3	34 - 167	11.623	11.595	0.0280	+/-0.500	

LCS / LCS DUPLICATE RECOVERY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D19023

Laboratory ID: 1D19023-BS1

Preparation: EXT_3510

Initial/Final: 1000 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Acenaphthene	1.000	0.8405	84.1	41 - 132
Acenaphthylene	1.000	0.8387	83.9	43 - 140
Anthracene	1.000	0.8518	85.2	50 - 139
Benzo(a)anthracene	1.000	0.7910	79.1	58 - 141
Benzo(a)pyrene	1.000	0.8189	81.9	31 - 142
Benzo(b)fluoranthene	1.000	0.8162	81.6	42 - 156
Benzo(g,h,i)perylene	1.000	0.7559	75.6	12 - 171
Benzo(k)fluoranthene	1.000	0.8756	87.6	49 - 165
Chrysene	1.000	0.7602	76.0	51 - 155
Dibenz(a,h)anthracene	1.000	0.5812	58.1	28 - 153
Fluoranthene	1.000	0.8958	89.6	47 - 158
Fluorene	1.000	0.8945	89.4	40 - 140
Indeno(1,2,3-cd)pyrene	1.000	0.6843	68.4	20 - 167
1-Methylnaphthalene	1.000	0.7472	74.7	35 - 131
2-Methylnaphthalene	1.000	0.8332	83.3	36 - 121
Naphthalene	1.000	0.7923	79.2	39 - 125
Phenanthrene	1.000	0.9098	91.0	46 - 144
Pyrene	1.000	0.9000	90.0	39 - 158

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
Acenaphthene	1.000	0.8538	85.4	1.56	30	41 - 132
Acenaphthylene	1.000	0.7906	79.1	5.91	30	43 - 140
Anthracene	1.000	0.7922	79.2	7.25	30	50 - 139
Benzo(a)anthracene	1.000	0.7644	76.4	3.43	30	58 - 141
Benzo(a)pyrene	1.000	0.7935	79.3	3.16	30	31 - 142
Benzo(b)fluoranthene	1.000	0.8359	83.6	2.38	30	42 - 156
Benzo(g,h,i)perylene	1.000	0.7134	71.3	5.79	30	12 - 171
Benzo(k)fluoranthene	1.000	0.8712	87.1	0.511	30	49 - 165
Chrysene	1.000	0.8248	82.5	8.16	30	51 - 155

LCS / LCS DUPLICATE RECOVERY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D19023

Laboratory ID: 1D19023-BSD1

Preparation: EXT 3510

Initial/Final: 1000 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
Dibenz(a,h)anthracene	1.000	0.5818	58.2	0.113	30	28 - 153
Fluoranthene	1.000	0.8528	85.3	4.93	30	47 - 158
Fluorene	1.000	0.8660	86.6	3.23	30	40 - 140
Indeno(1,2,3-cd)pyrene	1.000	0.7198	72.0	5.05	30	20 - 167
1-Methylnaphthalene	1.000	0.7576	75.8	1.38	30	35 - 131
2-Methylnaphthalene	1.000	0.8345	83.4	0.150	30	36 - 121
Naphthalene	1.000	0.8055	80.5	1.65	30	39 - 125
Phenanthrene	1.000	0.8888	88.9	2.34	30	46 - 144
Pyrene	1.000	0.8586	85.9	4.71	30	39 - 158

PREPARATION BATCH SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D19023 Batch Matrix: Water

Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW05S-20110414	1104191-01	04/20/11 15:50	1,080.00	1.00
MPT-351-2-MW06S-20110414	1104191-02	04/20/11 15:50	1,080.00	1.00
Blank	1D19023-BLK1	04/20/11 15:50	1,000.00	1.00
LCS	1D19023-BS1	04/20/11 15:50	1,000.00	1.00
LCS Dup	1D19023-BSD1	04/20/11 15:50	1,000.00	1.00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Lab File ID: SEQ-TUN2.D

Injection Date: 04/19/11

Instrument ID: MS-BNA4

Injection Time: 14:38

Sequence: 1D11106

Lab Sample ID: 1D11106-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	55.9	PASS
68	Less than 2% of 69	1.42	PASS
69	Less than 200% of 198	55.6	PASS
70	Less than 2% of 69	0.506	PASS
127	40 - 60% of 198	58.8	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.61	PASS
275	10 - 30% of 198	25.1	PASS
365	1 - 200% of 198	3.39	PASS
441	0.001 - 100% of 443	81.4	PASS
442	40 - 200% of 198	116	PASS
443	17 - 23% of 442	20	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Lab File ID: SEQ-TUN1.D

Injection Date: 04/25/11

Instrument ID: MS-BNA4

Injection Time: 17:46

Sequence: 1D11612

Lab Sample ID: 1D11612-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	54.5	PASS
68	Less than 2% of 69	1.61	PASS
69	Less than 200% of 198	52.1	PASS
70	Less than 2% of 69	0.558	PASS
127	40 - 60% of 198	55.4	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.77	PASS
275	10 - 30% of 198	29.4	PASS
365	1 - 200% of 198	4.64	PASS
441	0.001 - 100% of 443	81.9	PASS
442	40 - 200% of 198	174	PASS
443	17 - 23% of 442	19.8	PASS

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11106

Instrument: MS-BNA4

Calibration: 1112002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1D11106-TUN1	SEQ-TUN2.D	04/19/11 14:38
Cal Standard	1D11106-CAL1	SEQ-CAL1.D	04/19/11 14:56
Cal Standard	1D11106-CAL2	SEQ-CAL2.D	04/19/11 15:22
Cal Standard	1D11106-CAL3	SEQ-CAL3.D	04/19/11 15:49
Cal Standard	1D11106-CAL4	SEQ-CAL4.D	04/19/11 16:15
Cal Standard	1D11106-CAL5	SEQ-CAL5.D	04/19/11 16:41
Cal Standard	1D11106-CAL6	SEQ-CAL6.D	04/19/11 17:07
Cal Standard	1D11106-CAL7	SEQ-CAL7.D	04/19/11 17:33
Cal Standard	1D11106-CAL8	SEQ-CAL8.D	04/19/11 18:00
Cal Standard	1D11106-CAL9	SEQ-CAL9.D	04/19/11 18:26
Initial Cal Check	1D11106-ICV1	SEQ-ICV1.D	04/19/11 18:52

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11612

Instrument: MS-BNA4

Calibration: 1112002

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1D11612-TUN1	SEQ-TUN1.D	04/25/11 17:46
Calibration Check	1D11612-CCV1	SEQ-CCV1.D	04/25/11 18:05
LCS	1D19023-BS1	D19023L1.D	04/25/11 20:14
LCS Dup	1D19023-BSD1	D19023L2.D	04/25/11 20:39
Blank	1D19023-BLK1	D19023B1.D	04/25/11 21:04
MPT-351-2-MW05S-20110414	1104191-01	0419101.D	04/25/11 22:44
MPT-351-2-MW06S-20110414	1104191-02	0419102.D	04/25/11 23:09

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270C

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: ID11612

SDG:
 Project: NAS Mayport CTO JM33 2010
 Instrument: MS-BNA4
 Calibration: 1112002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (ID11612-CCV1)			Lab File ID: SEQ-CCV1.D			Analyzed: 04/25/11 18:05			
Phenanthrene-d10	120836	9.624	138732	9.706	87	50 - 200	-0.0820	+/-0.50	
Perylene-d12	65369	14.719	75266	14.837	87	50 - 200	-0.1180	+/-0.50	
LCS (ID19023-BS1)			Lab File ID: D19023L1.D			Analyzed: 04/25/11 20:14			
Phenanthrene-d10	136363	9.624	120836	9.624	113	50 - 200	0.0000	+/-0.50	
Perylene-d12	61664	14.719	65369	14.719	94	50 - 200	0.0000	+/-0.50	
LCS Dup (ID19023-BSD1)			Lab File ID: D19023L2.D			Analyzed: 04/25/11 20:39			
Phenanthrene-d10	140511	9.615	120836	9.624	116	50 - 200	-0.0090	+/-0.50	
Perylene-d12	64930	14.719	65369	14.719	99	50 - 200	0.0000	+/-0.50	
Blank (ID19023-BLK1)			Lab File ID: D19023B1.D			Analyzed: 04/25/11 21:04			
Phenanthrene-d10	128575	9.624	120836	9.624	106	50 - 200	0.0000	+/-0.50	
Perylene-d12	61891	14.719	65369	14.719	95	50 - 200	0.0000	+/-0.50	
MPT-351-2-MW05S-20110414 (1104191-01)			Lab File ID: 0419101.D			Analyzed: 04/25/11 22:44			
Phenanthrene-d10	106249	9.624	120836	9.624	88	50 - 200	0.0000	+/-0.50	
Perylene-d12	49020	14.728	65369	14.719	75	50 - 200	0.0090	+/-0.50	
MPT-351-2-MW06S-20110414 (1104191-02)			Lab File ID: 0419102.D			Analyzed: 04/25/11 23:09			
Phenanthrene-d10	132557	9.643	120836	9.624	110	50 - 200	0.0190	+/-0.50	
Perylene-d12	49358	14.728	65369	14.719	76	50 - 200	0.0090	+/-0.50	

INITIAL CALIBRATION DATA

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1112002

Instrument: MS-BNA4

Matrix: Water

Calibration Dates: 4/19/11 14:56 4/19/11 18:26

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	0.1	0.9073685	0.2	0.8472282	0.5	0.8071579	1	0.8498111	5	0.7983861	10	0.8336235
Acenaphthylene	0.1	1.270537	0.2	1.269796	0.5	1.203545	1	1.329895	5	1.244934	10	1.26954
Anthracene	0.1	1.316798	0.2	1.168288	0.5	1.110749	1	1.196516	5	1.142564	10	1.145289
Benzo(a)anthracene	0.1	0.7733584	0.2	0.7987414	0.5	0.7936948	1	0.7615763	5	0.7571927	10	0.7128554
Benzo(a)pyrene	0.1	1.011587	0.2	1.030946	0.5	1.017569	1	1.060213	5	1.0839	10	1.070646
Benzo(b)fluoranthene	0.1	1.069402	0.2	1.059034	0.5	1.373963	1	1.372638	5	1.430587	10	1.441237
Benzo(g,h,i)perylene	0.1	0.9408315	0.2	0.8405568	0.5	0.7976318	1	0.8148168	5	0.864219	10	0.8665815
Benzo(k)fluoranthene	0.1	1.267422	0.2	1.346846	0.5	1.26362	1	1.415845	5	1.392767	10	1.383433
Chrysene	0.1	0.7544808	0.2	0.8034506	0.5	0.8045734	1	0.7738445	5	0.7358241	10	0.6923619
Dibenz(a,h)anthracene	0.1	0.9496165	0.2	0.7466783	0.5	0.7402214	1	0.6805862	5	0.796443	10	0.7934616
Fluoranthene	0.1	1.157548	0.2	1.062454	0.5	1.095169	1	1.124283	5	1.105329	10	1.104339
Fluorene	0.1	0.8064115	0.2	0.7540568	0.5	0.8063694	1	0.856421	5	0.815093	10	0.8250326
2-Fluorobiphenyl	0.1	0.9111025	0.2	0.8179966	0.5	0.8596231	1	0.9163567	5	0.8693337	10	0.9032449
Indeno(1,2,3-cd)pyrene	0.1	1.093383	0.2	0.9068841	0.5	0.9403396	1	0.8500651	5	0.988829	10	1.00136
1-Methylnaphthalene	0.1	0.9055015	0.2	0.8433563	0.5	0.8234392	1	0.8924473	5	0.8141195	10	0.8432931
2-Methylnaphthalene	0.1	0.8922941	0.2	0.8542047	0.5	0.8425825	1	0.9153548	5	0.8238603	10	0.8462289
Naphthalene	0.1	1.349228	0.2	1.335829	0.5	1.292384	1	1.372084	5	1.289524	10	1.314208
Phenanthrene	0.1	1.168128	0.2	1.160509	0.5	1.123307	1	1.207249	5	1.149711	10	1.147939
Pyrene	0.1	1.125118	0.2	1.087779	0.5	1.101083	1	1.132428	5	1.126722	10	1.105628
Terphenyl-d14	0.1	0.6677684	0.2	0.7013144	0.5	0.7095286	1	0.6890768	5	0.6935843	10	0.6867195
2,4,6-Tribromophenol	0.2	9.577087E-02	0.4	0.1047175	1	0.1132755	2	0.1399245	10	0.1621875	20	0.1721881

INITIAL CALIBRATION DATA (Continued)

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1112002

Instrument: MS-BNA4

Matrix: Water

Calibration Dates: 4/19/11 14:56 4/19/11 18:26

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	20	0.7940618	40	0.7352884	50	0.7827219						
Acenaphthylene	20	1.141889	40	1.048448	50	1.091477						
Anthracene	20	1.117011	40	1.128844	50	1.128459						
Benzo(a)anthracene	20	0.7657045	40	0.891703	50	0.7603992						
Benzo(a)pyrene	20	1.100458	40	1.064936	50	1.103355						
Benzo(b)fluoranthene	20	1.537608	40	1.633929	50	1.471212						
Benzo(g,h,i)perylene	20	0.8566147	40	0.7527658	50	0.8332651						
Benzo(k)fluoranthene	20	1.354037	40	1.250454	50	1.26906						
Chrysene	20	0.6823315	40	0.8250514	50	0.6874646						
Dibenz(a,h)anthracene	20	0.8197604	40	0.7276827	50	0.8426935						
Fluoranthene	20	1.100363	40	1.116813	50	1.129477						
Fluorene	20	0.8177829	40	0.7918825	50	0.7874121						
2-Fluorobiphenyl	20	0.8244022	40	0.7671239	50	0.8084073						
Indeno(1,2,3-cd)pyrene	20	1.000876	40	0.9043518	50	1.038719						
1-Methylnaphthalene	20	0.7692007	40	0.7167983	50	0.7352023						
2-Methylnaphthalene	20	0.7931505	40	0.7308007	50	0.7831935						
Naphthalene	20	1.210287	40	1.118559	50	1.125103						
Phenanthrene	20	1.129587	40	1.117307	50	1.135743						
Pyrene	20	1.104729	40	1.163501	50	1.105306						
Terphenyl-d14	20	0.7217151	40	0.7460979	50	0.6818047						
2,4,6-Tribromophenol	40	0.1625257	80	0.1663055	100	0.1695583						

INITIAL CALIBRATION DATA (Continued)

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1112002

Instrument: MS-BNA4

Matrix: Water

Calibration Dates: 4/19/11 14:56 4/19/11 18:26

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.8172941	6.002518	7.944333	0.1047021			CCC (30)	
Acenaphthylene	1.207785	7.808994	7.734889	0.1182522			15	
Anthracene	1.161613	5.505861	9.805778	0.100823			15	
Benzo(a)anthracene	0.7794695	6.254565	12.93533	6.502969E-02			15	
Benzo(a)pyrene	1.060401	3.200109	14.769	4.143849E-02			CCC (30)	
Benzo(b)fluoranthene	1.376623	14.1471	14.326	7.995191E-02			15	
Benzo(g,h,i)perylene	0.8408092	6.210629	16.70156	7.861425E-02			15	
Benzo(k)fluoranthene	1.327054	4.862521	14.36322	0.079314			15	
Chrysene	0.7510425	7.301878	12.98111	7.297783E-02			15	
Dibenz(a,h)anthracene	0.7885715	9.963425	16.36178	4.777576E-02			15	
Fluoranthene	1.110642	2.363902	11.19311	0.0831072			CCC (30)	
Fluorene	0.806718	3.496377	8.576445	9.781169E-02			15	
2-Fluorobiphenyl	0.8530656	6.095572	7.112	8.858856E-02			15	
Indeno(1,2,3-cd)pyrene	0.9694231	7.8043	16.34633	6.789173E-02			15	
1-Methylnaphthalene	0.8159287	7.985947	6.773	9.488666E-02			15	
2-Methylnaphthalene	0.8312967	6.802917	6.660333	0.1047284			15	
Naphthalene	1.267467	7.448697	5.839111	9.533926E-02			15	
Phenanthrene	1.148831	2.40557	9.740667	0.1040327			15	
Pyrene	1.116922	2.023077	11.46378	7.377866E-02			15	
Terphenyl-d14	0.6997344	3.349731	11.68256	6.766915E-02			15	
2,4,6-Tribromophenol	0.1551379	13.70301	8.878286	0.1225255			15	

INITIAL CALIBRATION CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Instrument ID: MS-BNA4
 Lab File ID: SEQ-ICV1.D
 Sequence: 1D11106
 Lab Sample ID: 1D11106-ICV1

SDG:
 Project: NAS Mayport CTO JM33 2010
 Calibration: 1112002
 Calibration Date: 04/19/11 00:00
 Injection Date: 04/19/11
 Injection Time: 18:52

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acenaphthene	A	5.000	5.145	0.8172941	0.8409406		2.9	20
Acenaphthylene	A	5.000	5.694	1.207785	1.375521		13.9	20
Anthracene	A	5.000	5.601	1.161613	1.301226		12.0	20
Benzo(a)anthracene	A	5.000	4.940	0.7794695	0.7701215		-1.2	20
Benzo(a)pyrene	A	5.000	5.489	1.060401	1.16413		9.8	20
Benzo(b)fluoranthene	A	5.000	5.261	1.376623	1.448551		5.2	20
Benzo(g,h,i)perylene	A	5.000	5.469	0.8408092	0.9196673		9.4	20
Benzo(k)fluoranthene	A	5.000	5.499	1.327054	1.459622		10.0	20
Chrysene	A	5.000	5.270	0.7510425	0.7915565		5.4	20
Dibenz(a,h)anthracene	A	5.000	5.291	0.7885715	0.8344072		5.8	20
Fluoranthene	A	5.000	5.358	1.110642	1.190233		7.2	20
Fluorene	A	5.000	5.368	0.806718	0.866153		7.4	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.582	0.9694231	1.082169		11.6	20
1-Methylnaphthalene	A	5.000	5.107	0.8159287	0.8334349		2.1	20
2-Methylnaphthalene	A	5.000	5.373	0.8312967	0.8933577		7.5	20
Naphthalene	A	5.000	5.542	1.267467	1.404988		10.9	20
Phenanthrene	A	5.000	5.465	1.148831	1.255674		9.3	20
Pyrene	A	5.000	5.443	1.116922	1.21582		8.9	20
2-Fluorobiphenyl	A	5.000	5.807	0.8530656	0.9907614		16.1	20
Terphenyl-d14	A	5.000	5.562	0.6997344	0.7783563		11.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270C

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Instrument ID: MS-BNA4
 Lab File ID: SEQ-CCV1.D
 Sequence: 1D11612
 Lab Sample ID: 1D11612-CCV1

SDG:
 Project: NAS Mayport CTO JM33 2010
 Calibration: 1112002
 Calibration Date: 04/19/11 00:00
 Injection Date: 04/25/11
 Injection Time: 18:05

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.698	0.8172941	0.7679053		-6.0	20
Acenaphthylene	A	5.000	5.019	1.207785	1.212366		0.4	20
Anthracene	A	5.000	4.996	1.161613	1.160568		-0.09	20
Benzo(a)anthracene	A	5.000	4.514	0.7794695	0.7036496		-9.7	20
Benzo(a)pyrene	A	5.000	4.752	1.060401	1.007884		-5.0	20
Benzo(b)fluoranthene	A	5.000	3.999	1.376623	1.101078		-20.0	20
Benzo(g,h,i)perylene	A	5.000	4.991	0.8408092	0.8392602		-0.2	20
Benzo(k)fluoranthene	A	5.000	4.941	1.327054	1.311304		-1.2	20
Chrysene	A	5.000	4.683	0.7510425	0.7034112		-6.3	20
Dibenz(a,h)anthracene	A	5.000	4.798	0.7885715	0.7566431		-4.0	20
Fluoranthene	A	5.000	4.914	1.110642	1.091435		-1.7	20
Fluorene	A	5.000	5.035	0.806718	0.8123672		0.7	20
Indeno(1,2,3-cd)pyrene	A	5.000	4.914	0.9694231	0.9527146		-1.7	20
1-Methylnaphthalene	A	5.000	4.500	0.8159287	0.7343391		-10.0	20
2-Methylnaphthalene	A	5.000	4.716	0.8312967	0.7841603		-5.7	20
Naphthalene	A	5.000	4.889	1.267467	1.239377		-2.2	20
Phenanthrene	A	5.000	4.922	1.148831	1.130832		-1.6	20
Pyrene	A	5.000	4.910	1.116922	1.096758		-1.8	20
2-Fluorobiphenyl	A	5.000	4.751	0.8530656	0.8106392		-5.0	20
Terphenyl-d14	A	5.000	4.823	0.6997344	0.6749561		-3.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

LCS

Laboratory: <u>Empirical Laboratories, LLC</u>	SDG:	
Client: <u>Tetra Tech NUS, Inc. (T010)</u>	Project: <u>NAS Mayport CTO JM33 2010</u>	
Matrix:	Laboratory ID: <u>1D19023-BS1</u>	File ID: <u>D19023L1.D</u>
Sampled:	Prepared:	Analyzed: <u>04/25/11 20:14</u>
Solids:	Preparation: <u>EXT_3510</u>	Dilution:
Batch: <u>1D19023</u>	Sequence: <u>1D11612</u>	Calibration: <u>1112002</u>
		Instrument: <u>MS-BNA4</u>

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.8405	0.0500	0.100	0.200	
208-96-8	Acenaphthylene	0.8387	0.0500	0.100	0.200	
120-12-7	Anthracene	0.8518	0.0500	0.100	0.200	
56-55-3	Benzo(a)anthracene	0.7910	0.0500	0.100	0.200	
50-32-8	Benzo(a)pyrene	0.8189	0.0500	0.100	0.200	
205-99-2	Benzo(b)fluoranthene	0.8162	0.0500	0.100	0.200	
191-24-2	Benzo(g,h,i)perylene	0.7559	0.0500	0.100	0.200	
207-08-9	Benzo(k)fluoranthene	0.8756	0.0500	0.100	0.200	
218-01-9	Chrysene	0.7602	0.0500	0.100	0.200	
53-70-3	Dibenz(a,h)anthracene	0.5812	0.0500	0.100	0.200	
206-44-0	Fluoranthene	0.8958	0.0500	0.100	0.200	
86-73-7	Fluorene	0.8945	0.0500	0.100	0.200	
193-39-5	Indeno(1,2,3-cd)pyrene	0.6843	0.0500	0.100	0.200	
90-12-0	1-Methylnaphthalene	0.7472	0.0500	0.100	0.200	
91-57-6	2-Methylnaphthalene	0.8332	0.0500	0.100	0.200	
91-20-3	Naphthalene	0.7923	0.0500	0.100	0.200	
85-01-8	Phenanthrene	0.9098	0.0500	0.100	0.200	
129-00-0	Pyrene	0.9000	0.0500	0.100	0.200	
SYSTEM MONITORING COMPOUND		ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl		50.00	38.35	76.7	34 - 167	
Terphenyl-d14		50.00	35.26	70.5	34 - 167	

HOLDING TIME SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-351-2-MW05S-20110414	04/14/11 09:56	04/15/11 09:00	04/20/11 15:50	6.25	7.00	04/25/11 22:44	5.29	40.00	
MPT-351-2-MW06S-20110414	04/14/11 10:32	04/15/11 09:00	04/20/11 15:50	6.22	7.00	04/25/11 23:09	5.30	40.00	

Data for FLPRO Forms

ANALYSIS SEQUENCE SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D10403

Instrument: GL-GCFID2

Calibration: 1104001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1D10403-CAL6	003F0101.D	04/13/11 15:31
Cal Standard	1D10403-CAL5	004F0201.D	04/13/11 16:14
Cal Standard	1D10403-CAL4	005F0301.D	04/13/11 16:56
Cal Standard	1D10403-CAL3	006F0401.D	04/13/11 17:39
Cal Standard	1D10403-CAL2	007F0501.D	04/13/11 18:21
Cal Standard	1D10403-CAL1	008F0601.D	04/13/11 19:04
Initial Cal Check	1D10403-ICV1	009F0701.D	04/13/11 19:46

ANALYSIS SEQUENCE SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11214

Instrument: GL-GCFID2

Calibration: 1104001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1D11214-CCV1	012F1201.D	04/21/11 14:35
Blank	1D19026-BLK1	014F1401.D	04/21/11 16:00
LCS	1D19026-BS1	015F1501.D	04/21/11 16:43
LCS Dup	1D19026-BSD1	016F1601.D	04/21/11 17:25
Calibration Check	1D11214-CCV2	026F2601.D	04/22/11 00:28
Calibration Check	1D11214-CCV3	035F3501.D	04/22/11 06:48
MPT-351-2-MW05S-20110414	1104191-01	036F3601.D	04/22/11 07:30
MPT-351-2-MW06S-20110414	1104191-02	037F3701.D	04/22/11 08:12
Calibration Check	1D11214-CCV4	039F3901.D	04/22/11 09:37

**LCS / LCS DUPLICATE RECOVERY
FLPRO**

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D19026

Laboratory ID: 1D19026-BS1

Preparation: EXT_3510

Initial/Final: 1000 mL / 2 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	3.200	3.112	97.2	55 - 118

ANALYTE	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
Petroleum Range Organics	3.200	3.040	95.0	2.34	30	55 - 118

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D19026 Batch Matrix: Water

Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW05S-20110414	1104191-01	04/20/11 13:45	1,070.00	2.00
MPT-351-2-MW06S-20110414	1104191-02	04/20/11 13:45	1,080.00	2.00
Blank	1D19026-BLK1	04/20/11 13:45	1,000.00	2.00
LCS	1D19026-BS1	04/20/11 13:45	1,000.00	2.00
LCS Dup	1D19026-BSD1	04/20/11 13:45	1,000.00	2.00

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D10403

Instrument: GL-GCFID2

Calibration: 1104001

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
11B0728	FLPRO CAL6 85ppm	1D10403-CAL6	003F0101.D	04/13/11 15:31
11B0727	FLPRO CAL5 850ppm	1D10403-CAL5	004F0201.D	04/13/11 16:14
11B0726	FLPRO CAL4 2550ppm	1D10403-CAL4	005F0301.D	04/13/11 16:56
11B0725	FLPRO CAL3 4250ppm	1D10403-CAL3	006F0401.D	04/13/11 17:39
11B0724	FLPRO CAL2 5950ppm	1D10403-CAL2	007F0501.D	04/13/11 18:21
11B0723	FLPRO CAL1 8500ppm	1D10403-CAL1	008F0601.D	04/13/11 19:04

INITIAL CALIBRATION DATA

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1104001

Instrument: GL-GCFID2

Matrix: Water

Calibration Dates: 4/13/11 15:31 4/13/11 19:04

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/L	RF										
Petroleum Range Organics	85	1579.718	850	1838.869	2550	1705.804	4250	1710.376	5950	1645.856	8500	1652.894
2-Fluorobiphenyl	5	2272.8	10	3009.6	15	3284.4	25	3118.36	35	3090.714	50	2747.06
o-Terphenyl	5	3426.8	10	3721.9	15	3804.2	25	3999.32	35	3939.572	50	3924.96

INITIAL CALIBRATION DATA (Continued)

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1104001

Instrument: GL-GCFID2

Matrix: Water

Calibration Dates: 4/13/11 15:31 4/13/11 19:04

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Petroleum Range Organics	1688.919	5.182621	2.923	2.565533E-02			20	
2-Fluorobiphenyl	2920.489	12.42221	10.68433	0.709301			20	
o-Terphenyl	3802.792	5.518154	16.28583	7.880568E-02			20	

INITIAL CALIBRATION CHECK

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: GL-GCFID2

Calibration: 1104001

Lab File ID: 009F0701.D

Calibration Date: 04/13/11 00:00

Sequence: 1D10403

Injection Date: 04/13/11

Lab Sample ID: 1D10403-ICV1

Injection Time: 19:46

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	4522	1688.919	1909.501		13.1	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: GL-GCFID2

Calibration: 1104001

Lab File ID: 012F1201.D

Calibration Date: 04/13/11 00:00

Sequence: 1D11214

Injection Date: 04/21/11

Lab Sample ID: 1D11214-CCV1

Injection Time: 14:35

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3800	1688.919	1509.994		-10.6	25
2-Fluorobiphenyl	A	25.00	20.93	2920.489	2445.2		-16.3	25
o-Terphenyl	A	25.00	23.41	3802.792	3561		-6.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: GL-GCFID2

Calibration: 1104001

Lab File ID: 026F2601.D

Calibration Date: 04/13/11 00:00

Sequence: 1D11214

Injection Date: 04/22/11

Lab Sample ID: 1D11214-CCV2

Injection Time: 00:28

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4055	1688.919	1611.352		-4.6	25
2-Fluorobiphenyl	A	25.00	21.34	2920.489	2493.52		-14.6	25
o-Terphenyl	A	25.00	22.10	3802.792	3362.24		-11.6	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: GL-GCFID2

Calibration: 1104001

Lab File ID: 035F3501.D

Calibration Date: 04/13/11 00:00

Sequence: 1D11214

Injection Date: 04/22/11

Lab Sample ID: 1D11214-CCV3

Injection Time: 06:48

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4015	1688.919	1595.455		-5.5	25
2-Fluorobiphenyl	A	25.00	21.62	2920.489	2526.04		-13.5	25
o-Terphenyl	A	25.00	22.17	3802.792	3371.72		-11.3	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: GL-GCFID2

Calibration: 1104001

Lab File ID: 039F3901.D

Calibration Date: 04/13/11 00:00

Sequence: 1D11214

Injection Date: 04/22/11

Lab Sample ID: 1D11214-CCV4

Injection Time: 09:37

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3957	1688.919	1572.663		-6.9	25
2-Fluorobiphenyl	A	25.00	21.67	2920.489	2531.04		-13.3	25
o-Terphenyl	A	25.00	22.41	3802.792	3408.84		-10.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

**SURROGATE STANDARD RECOVERY AND RT SUMMARY
FLPRO**

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Sequence: 1D11214

SDG:
 Project: NAS Mayport CTO JM33 2010
 Instrument: GL-GCFID2
 Calibration: 1104001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1D11214-CCV1) mg/L			Lab File ID: 012F1201.D		Analyzed: 04/21/11 14:35			
2-Fluorobiphenyl	25.00	83.7	75 - 125	10.61	10.61	0.0000	+/-0.050	
o-Terphenyl	25.00	93.6	75 - 125	16.236	16.236	0.0000	+/-0.050	
Blank (1D19026-BLK1) mg/L			Lab File ID: 014F1401.D		Analyzed: 04/21/11 16:00			
2-Fluorobiphenyl	0.05000	70.7	50 - 150	10.673	10.61	0.0630	+/-0.050	*
o-Terphenyl	0.05000	66.2	82 - 142	16.26	16.236	0.0240	+/-0.050	*
LCS (1D19026-BS1) mg/L			Lab File ID: 015F1501.D		Analyzed: 04/21/11 16:43			
2-Fluorobiphenyl	0.05000	79.7	50 - 150	10.616	10.61	0.0060	+/-0.050	
o-Terphenyl	0.05000	73.9	82 - 142	16.233	16.236	-0.0030	+/-0.050	*
LCS Dup (1D19026-BSD1) mg/L			Lab File ID: 016F1601.D		Analyzed: 04/21/11 17:25			
2-Fluorobiphenyl	0.05000	73.9	50 - 150	10.623	10.61	0.0130	+/-0.050	
o-Terphenyl	0.05000	74.0	82 - 142	16.236	16.236	0.0000	+/-0.050	*
Calibration Check (1D11214-CCV2) mg/L			Lab File ID: 026F2601.D		Analyzed: 04/22/11 00:28			
2-Fluorobiphenyl	25.00	85.4	75 - 125	10.623	10.61	0.0130	+/-0.050	
o-Terphenyl	25.00	88.4	75 - 125	16.243	16.236	0.0070	+/-0.050	
Calibration Check (1D11214-CCV3) mg/L			Lab File ID: 035F3501.D		Analyzed: 04/22/11 06:48			
2-Fluorobiphenyl	25.00	86.5	75 - 125	10.626	10.61	0.0160	+/-0.050	
o-Terphenyl	25.00	88.7	75 - 125	16.243	16.236	0.0070	+/-0.050	
MPT-351-2-MW05S-20110414 (1104191-01) mg/L			Lab File ID: 036F3601.D		Analyzed: 04/22/11 07:30			
2-Fluorobiphenyl	0.04673	70.9	50 - 150	10.59	10.61	-0.0200	+/-0.050	
o-Terphenyl	0.04673	53.4	82 - 142	16.24	16.236	0.0040	+/-0.050	*
MPT-351-2-MW06S-20110414 (1104191-02) mg/L			Lab File ID: 037F3701.D		Analyzed: 04/22/11 08:12			
2-Fluorobiphenyl	0.04630	76.9	50 - 150	10.586	10.61	-0.0240	+/-0.050	
o-Terphenyl	0.04630	69.9	82 - 142	16.24	16.236	0.0040	+/-0.050	*
Calibration Check (1D11214-CCV4) mg/L			Lab File ID: 039F3901.D		Analyzed: 04/22/11 09:37			
2-Fluorobiphenyl	25.00	86.7	75 - 125	10.623	10.61	0.0130	+/-0.050	
o-Terphenyl	25.00	89.6	75 - 125	16.24	16.236	0.0040	+/-0.050	

HOLDING TIME SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-351-2-MW05S-20110414	04/14/11 09:56	04/15/11 09:00	04/20/11 13:45	6.16	7.00	04/22/11 07:30	1.74	40.00	
MPT-351-2-MW06S-20110414	04/14/11 10:32	04/15/11 09:00	04/20/11 13:45	6.13	7.00	04/22/11 08:12	1.77	40.00	

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Instrument: GL-GCFID2

Analyte	MDL	MRL	Units	Method
Petroleum Range Organics	0.170	0.680	mg/L	FLPRO

Data for SW6010C Forms

ANALYSIS DATA SHEET

MPT-351-2-MW05S-20110414

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/14/11 09:56
 % Solids: 0.00

SDG: 1104191
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104191-01
 Received: 04/15/11 09:00

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	921	30.0	60.0	100	1	N	SW6010C	1D26001	04/28/11 12:37
7440-23-5	Sodium	7950	200	3000	5000	1		SW6010C	1D26001	04/28/11 12:37

ANALYSIS DATA SHEET

MPT-351-2-MW06S-20110414

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/14/11 10:32
 % Solids: 0.00

SDG: 1104191
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104191-02
 Received: 04/15/11 09:00

CAS NO.	Analyte	Conc. (ug/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	1870	30.0	60.0	100	1	N	SW6010C	1D26001	04/28/11 12:41
7440-23-5	Sodium	31300	200	3000	5000	1		SW6010C	1D26001	04/28/11 12:41

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: ME-ICP

Calibration: 1118004

Sequence: 1D11813

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1D11813-ICV1	Iron	10000	10600	106	ug/L	+/- 10.00%
	Sodium	50000	51290	103	ug/L	+/- 10.00%
1D11813-CCV1	Iron	10000	10400	104	ug/L	+/- 10.00%
	Sodium	50000	50340	101	ug/L	+/- 10.00%
1D11813-CCV2	Iron	10000	10260	103	ug/L	+/- 10.00%
	Sodium	50000	50210	100	ug/L	+/- 10.00%

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: ME-ICP

Calibration: 1118004

Sequence: 1D11813

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limits
1D11813-CRL1	Iron	60.00	65.88	110	ug/L	80 - 120
	Sodium	3000	2994	99.8	ug/L	80 - 120

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: ME-ICP

Calibration: 1118004

Sequence: 1D11813

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D11813-ICB1	Iron	3.178	30.0	100	ug/L	U	SW6010C
	Sodium	2.910	200	5000	ug/L	U	SW6010C
1D11813-CCB1	Iron	2.51	30.0	100	ug/L	U	SW6010C
	Sodium	0.870	200	5000	ug/L	U	SW6010C
1D26001-BLK1	Iron	1.53	30.0	100	ug/L	U	SW6010C
	Sodium	9.52	200	5000	ug/L	U	SW6010C
1D11813-CCB2	Iron	3.34	30.0	100	ug/L	U	SW6010C
	Sodium	16.3	200	5000	ug/L	U	SW6010C

ICP INTERFERENCE CHECK SAMPLE

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: ME-ICP

Calibration: 1118004

Sequence: 1D11813

Lab Sample ID	Analyte	True	Found	%R	Units
1D11813-IFA1	Iron	200000	196,470.00	98.2	ug/L
	Sodium		24.72		ug/L
1D11813-IFB1	Iron	200000	203,460.00	102	ug/L
	Sodium		25.05		ug/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW6010C

MPT-351-2-MW06S-20110414

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D26001

% Solids:

Source Sample Name: **1104191-02**

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Iron	1000	1874	3166	129	N	80 - 120
Sodium	5000	31330	38920	152		80 - 120

ANALYTE	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD	Q	QC LIMITS	
						RPD	REC.
Iron	1000	3239	137	2.27	N	20	80 - 120
Sodium	5000	39890	171	2.47		20	80 - 120

POST DIGEST SPIKE SAMPLE RECOVERY

SW6010C

MPT-351-2-MW06S-20110414

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Laboratory ID: 1D26001-PS1

Batch: 1D26001

Lab Source ID: 1104191-02

Preparation: MET_3005A

Initial/Final: 20 mL / 20 mL

Analyte	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R	Control Limit %R
Iron	3042	1874	1000	117	80 - 120
Sodium	37750	31330	5000	128	80 - 120

LCS / LCS DUPLICATE RECOVERY

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D26001

Laboratory ID: 1D26001-BS1

Preparation: MET_3005A

Initial/Final: 50 mL / 50 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Iron	1000	977.4	97.7	80 - 120
Sodium	5000	4859	97.2	80 - 120

SERIAL DILUTION

SW6010C

MPT-351-2-MW06S-20110414

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Laboratory ID: 1D26001-DUP1

Sequence: 1D11813

Lab Source ID: 1104191-02

Preparation: MET_3005A

Initial/Final: 50 / 50

Analyte	Initial Sample Result (I) ug/L	Serial Dilution Result (S) ug/L	% Difference	Q	Method	QC Limits % Difference
Iron	1873.8	1973.6	5.33		SW6010C	10.00
Sodium	31326	30001	-4.23		SW6010C	10.00

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Instrument: ME-ICP

Analyte	MDL	MRL	Units	Method
Iron	30.0	100	ug/L	SW6010C
Sodium	200	5000	ug/L	SW6010C

10A-IN
 ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC

Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: 1104191

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP

Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ag
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)Lab Name: Empirical Laboratories, LLCContract: Tetra Tech NUS, Inc. (T010)SDG No.: 1104191ICP-AES Instrument ID: Thermo Jarrell Ashe ICAPDate: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		As	B	Ba	Be	Cd
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLCContract: Tetra Tech NUS, Inc. (T010)SDG No.: 1104191ICP-AES Instrument ID: Thermo Jarrell Ashe ICAPDate: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cr	Cu	K	Mn
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)Lab Name: Empirical Laboratories, LLCContract: Tetra Tech NUS, Inc. (T010)SDG No.: 1104191ICP-AES Instrument ID: Thermo Jarrell Ashe ICAPDate: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Mo	Na	Ni	Pb	Sb
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLCContract: Tetra Tech NUS, Inc. (T010)SDG No.: 1104191ICP-AES Instrument ID: Thermo Jarrell Ashe ICAPDate: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Se	Sn	Ti	Tl	V
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

10A-IN
 ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC

Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: 1104191

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP

Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Zn				
Iron	261.1	0.0000000				
Sodium	330.2	0.0000000				

Comments:

FORM XA-IN

ICP-AES AND ICP-MS LINEAR RANGES (QUARTERLY)

Lab Name: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

SDG: 1104191

Project: NAS Mayport CTO JM33 2010

ICP Instrument ID: ME-ICP Date: 09/11/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Iron	15	500000	P
Sodium	15	500000	P

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D26001 Batch Matrix: Water

Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW05S-20110414	1104191-01	04/26/11 08:52	50.00	50.00
MPT-351-2-MW06S-20110414	1104191-02	04/26/11 08:52	50.00	50.00
Blank	1D26001-BLK1	04/26/11 08:52	50.00	50.00
LCS	1D26001-BS1	04/26/11 08:52	50.00	50.00
MPT-351-2-MW06S-20110414	1D26001-DUP1	04/26/11 08:52	50.00	50.00
MPT-351-2-MW06S-20110414	1D26001-MS1	04/26/11 08:52	50.00	50.00
MPT-351-2-MW06S-20110414	1D26001-MSD1	04/26/11 08:52	50.00	50.00
MPT-351-2-MW06S-20110414	1D26001-PS1	04/26/11 08:52	20.00	20.00

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory: <u>Empirical Laboratories, LLC</u>	SDG: <u>1104191</u>
Client: <u>Tetra Tech NUS, Inc. (T010)</u>	Project: <u>NAS Mayport CTO JM33 2010</u>
Sequence: <u>1D11813</u>	Instrument: <u>ME-ICP</u>
Calibration: <u>1118004</u>	

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1D11813-CAL1	042811A-001	04/28/11 09:36
Cal Standard	1D11813-CAL7	042811A-008	04/28/11 10:12
Cal Standard	1D11813-CAL8	042811A-009	04/28/11 10:17
Cal Standard	1D11813-CAL2	042811A-010	04/28/11 10:23
Cal Standard	1D11813-CAL3	042811A-011	04/28/11 10:31
Cal Standard	1D11813-CAL5	042811A-014	04/28/11 10:49
Cal Standard	1D11813-CAL6	042811A-015	04/28/11 10:55
Initial Cal Check	1D11813-ICV1	042811B-001	04/28/11 11:34
Initial Cal Blank	1D11813-ICB1	042811B-002	04/28/11 11:42
Instrument RL Check	1D11813-CRL1	042811B-003	04/28/11 11:46
Interference Check A	1D11813-IFA1	042811B-005	04/28/11 11:56
Interference Check B	1D11813-IFB1	042811B-006	04/28/11 12:03
Calibration Check	1D11813-CCV1	042811B-008	04/28/11 12:14
Calibration Blank	1D11813-CCB1	042811B-009	04/28/11 12:21
Blank	1D26001-BLK1	042811B-010	04/28/11 12:26
LCS	1D26001-BS1	042811B-011	04/28/11 12:30
MPT-351-2-MW05S-20110414	1104191-01	042811B-012	04/28/11 12:37
MPT-351-2-MW06S-20110414	1104191-02	042811B-013	04/28/11 12:41
MPT-351-2-MW06S-20110414	1D26001-MS1	042811B-014	04/28/11 12:46
MPT-351-2-MW06S-20110414	1D26001-MSD1	042811B-015	04/28/11 12:50
MPT-351-2-MW06S-20110414	1D26001-PS1	042811B-016	04/28/11 12:55
MPT-351-2-MW06S-20110414	1D26001-DUP1	042811B-017	04/28/11 13:00
Calibration Check	1D11813-CCV2	042811B-018	04/28/11 13:06
Calibration Blank	1D11813-CCB2	042811B-019	04/28/11 13:13

INITIAL CALIBRATION DATA

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1118004

Instrument: ME-ICP

Matrix: Water

Calibration Dates: 4/28/11 9:36

4/28/11 10:55

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Aluminum	0	0	5000	2.038E-05	10000	2.0703E-05			500000	2.0538E-05		
Antimony	0	0	100	0.0008813	1000	9.6012E-04					10000	9.2352E-04
Arsenic	0	0	100	0.0003882	1000	4.2259E-04					10000	4.1082E-04
Barium	0	0	50	0.0146502	1000	0.014153	5000	0.013868				
Beryllium	0	0	100	0.0028633	1000	0.0029696					10000	0.0028199
Boron	0	0	50	0.0000152	1000	1.478E-05					5000	1.4532E-05
Cadmium	0	0	100	0.016273	1000	0.0171					10000	0.015532
Calcium	0	0	1100	4.207273E-05	50000	4.1198E-05					10000	
Chromium	0	0	100	0.000039	1000	3.881E-05					10000	3.8927E-05
Cobalt	0	0	100	0.0070388	1000	0.0072523					10000	0.0071015
Copper	0	0	100	0.0000927	1000	9.081E-05					10000	8.7863E-05
Iron	0	0	5100	1.441176E-05	10000	1.4491E-05			500000	1.33908E-05	10000	
Lead	0	0	100	0.0015748	1000	0.0015763					10000	0.0015639
Magnesium	0	0	5100		50000	1.6234E-06			500000	1.71134E-06	10000	
Manganese	0	0	100	0.0002587	1000	0.0002513	10000	2.3381E-04			10000	
Molybdenum	0	0	100	0.0047919	1000	0.0049429					10000	0.0048392
Nickel	0	0	100	0.0039522	1000	0.0038771					10000	0.0038284
Potassium	0	0	1000	9.720001E-06	10000	1.1323E-05						
Selenium	0	0	100	0.0005231	1000	5.3298E-04					10000	5.1127E-04
Silver	0	0	20	0.0000595	500	5.534E-05	2000	5.633E-05				
Sodium	0	0	1000		50000	4.9134E-05						
Strontium	0	0	100	0.001771	1000	0.001781					10000	0.001755
Thallium	0	0	100	0.0009625	1000	0.0009998					10000	9.6348E-04
Tin	0	0	50	0.0014628	1000	0.00152					5000	0.0014774
Titanium	0	0	100	0.000231	1000	2.2875E-04					10000	2.2771E-04
Vanadium	0	0	100	0.0000472	1000	0.0000464					10000	4.6102E-05
Zinc	0	0	100	0.0063429	1000	0.0065742					10000	0.0063262

INITIAL CALIBRATION DATA (Continued)

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1118004

Instrument: ME-ICP

Matrix: Water

Calibration Dates: 4/28/11 9:36 4/28/11 10:55

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Aluminum												
Antimony												
Arsenic												
Barium												
Beryllium												
Boron												
Cadmium												
Calcium	100000		500000	4.0194E-05								
Chromium												
Cobalt												
Copper												
Iron												
Lead												
Magnesium			100000	1.6572E-06								
Manganese												
Molybdenum												
Nickel												
Potassium	100000	1.143E-05										
Selenium												
Silver												
Sodium	100000	4.8364E-05	500000	4.718E-05								
Strontium												
Thallium												
Tin												
Titanium												
Vanadium												
Zinc												

INITIAL CALIBRATION DATA (Continued)

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: 1104191

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Calibration: 1118004

Instrument: ME-ICP

Matrix: Water

Calibration Dates: 4/28/11 9:36

4/28/11 10:55

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Aluminum	1.540525E-05	66.67216	7.517297	189.6217	1		0.998	
Antimony	6.91235E-04	66.82927	4.042568	157.3458	0.9999817		0.998	
Arsenic	3.054025E-04	66.83022	5.48563	176.655	0.9999893		0.998	
Barium	0.0106678	66.73548	4.14564	151.3629	0.9999837		0.998	
Beryllium	0.0021632	66.73002	3.178708	175.0112	0.9999724		0.998	
Boron	1.1128E-05	66.71269	7.352828	168.9001	0.9999889		0.998	
Cadmium	1.222625E-02	66.87215	5.817933	167.849	0.9999015		0.998	
Calcium	3.086618E-05	66.71304	2.226953	140.3423	0.999994		0.998	
Chromium	2.918425E-05	66.66721	12.64232	183.5982	0.9999999		0.998	
Cobalt	5.34815E-03	66.68771	2.262073	114.3372	0.9999954		0.998	
Copper	6.784325E-05	66.73119	1.378575	61.25427	0.9999918		0.998	
Iron	1.057339E-05	66.83486	76.63949	198.7492	0.9999981		0.998	
Lead	1.17875E-03	66.66832	42.91209	194.7583	0.9999995		0.998	
Magnesium	1.247985E-06	66.72981	21.6778	196.2467	0.9999563		0.998	
Manganese	1.859525E-04	66.90247	10.62786	176.1129	0.9999498		0.998	
Molybdenum	0.0036435	66.68913	10.72598	184.1412	0.9999952		0.998	
Nickel	2.914425E-03	66.68956	2.873138	138.2073	0.9999989		0.998	
Potassium	8.11825E-06	67.35916	2.488665	145.6245	0.9999998		0.998	
Selenium	3.918375E-04	66.70513	5.214867	160.1425	0.999984		0.998	
Silver	4.27925E-05	66.79548	2.271715	126.0922	0.9999745		0.998	
Sodium	3.61695E-05	66.70369	2.007928	132.2011	0.9999727		0.998	
Strontium	1.32675E-03	66.67155	7.919675	183.8973	0.9999979		0.998	
Thallium	7.31445E-04	66.70889	5.922822	164.274	0.9999853		0.998	
Tin	1.11505E-03	66.70218	19.31599	192.1327	0.9999629		0.998	
Titanium	1.71865E-04	66.67145	1.030562	127.2654	0.9999999		0.998	
Vanadium	3.49255E-05	66.67988	3.435937	141.1789	0.9999997		0.998	
Zinc	4.810825E-03	66.70816	32.91867	195.0141	0.9999846		0.998	

Data for Wet Chemistry Forms

ANALYSIS DATA SHEET

MPT-351-2-MW05S-20110414

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/14/11 09:56
 % Solids: 0.00

SDG:
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104191-01
 Received: 04/15/11 09:00

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7664-41-7	Ammonia as N	59.4	1.10	1.50	3.00	10	D	SM4500NH3BG	1D26012	04/27/11 09:40
NA	Total Dissolved Solids	186	20.0	20.0	20.0	1		SM2540C	1D21007	04/26/11 13:00
14797-55-8	Nitrate as N		0.0330	0.100	0.200	1	U	E300.0	1D15005	04/15/11 15:53
14808-79-8	Sulfate as SO4	20.9	0.330	1.00	2.00	1		E300.0	1D15005	04/15/11 15:53

ANALYSIS DATA SHEET

MPT-351-2-MW06S-20110414

Laboratory: Empirical Laboratories, LLC
 Client: Tetra Tech NUS, Inc. (T010)
 Matrix: Ground Water
 Sampled: 04/14/11 10:32
 % Solids: 0.00

SDG:
 Project: NAS Mayport CTO JM33 2010
 Laboratory ID: 1104191-02
 Received: 04/15/11 09:00

CAS NO.	Analyte	Conc. (mg/L)	DL	LOD	LOQ	D.F.	Q	Method	Batch	Analyzed
7664-41-7	Ammonia as N	14.2	0.220	0.300	0.600	2	D	SM4500NH3BG	1D26012	04/27/11 09:33
NA	Total Dissolved Solids	412	20.0	20.0	20.0	1		SM2540C	1D21007	04/26/11 13:00
14797-55-8	Nitrate as N		0.0330	0.100	0.200	1	U	E300.0	1D15005	04/15/11 16:11
14808-79-8	Sulfate as SO4	13.6	0.330	1.00	2.00	1		E300.0	1D15005	04/15/11 16:11

INITIAL AND CONTINUING CALIBRATION CHECK

E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 0J29503

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
0J29503-ICV1	Nitrate as N	3.616	3.531	97.6	mg/L	+/- 10.00%
	Sulfate as SO4	24.00	23.53	98.0	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: WC-Lachat

Calibration: 1117001

Sequence: 1D11704

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1D11704-ICV1	Ammonia as N	2.000	2.105	105	mg/L	+/- 10.00%
1D11704-CCV1	Ammonia as N	2.000	2.187	109	mg/L	+/- 10.00%
1D11704-CCV2	Ammonia as N	2.000	2.159	108	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: WC-Lachat

Calibration: 1117001

Sequence: 1D11705

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1D11705-CCV1	Ammonia as N	2.000	2.121	106	mg/L	+/- 10.00%
1D11705-CCV2	Ammonia as N	2.000	2.153	108	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 1D11801

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1D11801-CCV1	Nitrate as N	2.500	2.432	97.3	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	24.27	97.1	mg/L	+/- 10.00%
1D11801-CCV2	Nitrate as N	2.500	2.485	99.4	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	25.00	100	mg/L	+/- 10.00%
1D11801-CCV3	Nitrate as N	2.500	2.480	99.2	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	25.08	100	mg/L	+/- 10.00%

CRDL STANDARD

E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 0J29503

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limits
0J29503-CRL2	Nitrate as N	0.1000	0.09500	95.0	mg/L	75 - 125
	Sulfate as SO4	1.000	1.023	102	mg/L	75 - 125

CRDL STANDARD

E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 1D11801

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limits
1D11801-CRL1	Nitrate as N	0.05000	0.05600	112	mg/L	75 - 125
1D11801-CRL2	Sulfate as SO4	1.000	0.7180	71.8	mg/L	75 - 125

METHOD BLANKS

E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D15005

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D15005-BLK1	Nitrate as N	0.00	0.0330	0.200	mg/L	U	E300.0
	Sulfate as SO4	0.00	0.330	2.00	mg/L	U	E300.0

METHOD BLANKS
SM2540C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D21007

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D21007-BLK1	Total Dissolved Solids	-16.0	20.0	20.0	mg/L	U	SM2540C

METHOD BLANKS
SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D26012

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D26012-BLK1	Ammonia as N	-0.00618	0.110	0.300	mg/L	U	SM4500NH3BG

BLANKS
E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 0J29503

Calibration: 0295001

Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
0J29503-ICB1	Nitrate as N	0.000	0.0330	0.200	mg/L	U	E300.0
	Sulfate as SO4	0.08000	0.330	2.00	mg/L	U	E300.0

BLANKS
SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11704

Calibration: 1117001

Instrument ID: WC-Lachat

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D11704-ICB1	Ammonia as N	-0.02777	0.110	0.300	mg/L	U	SM4500NH3BG
1D11704-CCB1	Ammonia as N	-0.0261	0.110	0.300	mg/L	U	SM4500NH3BG
1D11704-CCB2	Ammonia as N	-0.0245	0.110	0.300	mg/L	U	SM4500NH3BG

BLANKS
SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11705

Calibration: 1117001

Instrument ID: WC-Lachat

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D11705-CCB1	Ammonia as N	-0.0265	0.110	0.300	mg/L	U	SM4500NH3BG
1D11705-CCB2	Ammonia as N	-0.0132	0.110	0.300	mg/L	U	SM4500NH3BG

BLANKS
E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11801

Calibration: 0295001

Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1D11801-CCB1	Nitrate as N	0.00	0.0330	0.200	mg/L	U	E300.0
	Sulfate as SO4	0.00	0.330	2.00	mg/L	U	E300.0
1D11801-CCB2	Nitrate as N	0.00	0.0330	0.200	mg/L	U	E300.0
	Sulfate as SO4	0.00	0.330	2.00	mg/L	U	E300.0
1D11801-CCB3	Nitrate as N	0.00	0.0330	0.200	mg/L	U	E300.0
	Sulfate as SO4	0.00	0.330	2.00	mg/L	U	E300.0

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

MPT-351-2-MW06S-20110414

E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D15005

% Solids:

Source Sample Name: **1104191-02**

ANALYTE	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC.	Q	QC LIMITS REC.
Nitrate as N	2.778	ND	2.739	98.6		80 - 120
Sulfate as SO4	27.78	13.58	41.19	99.4		80 - 120

ANALYTE	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD	Q	QC LIMITS	
						RPD	REC.
Nitrate as N	2.778	2.756	99.2	0.607		20	80 - 120
Sulfate as SO4	27.78	41.25	99.6	0.132		20	80 - 120

DUPLICATES

T-351-2-MW06S-20110

E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Laboratory ID: 1D15005-DUP1

Batch: 1D15005

Lab Source ID: 1104191-02

Preparation: WC PREP ANIONS W

Initial/Final: 5 mL / 5 mL

Source Sample Name: MPT-351-2-MW06S-20110414

% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/L)	DUPLICATE CONCENTRATION (mg/L)	RPD %	Q	METHOD
Nitrate as N	20	0.200 U	0.200 U			E300.0
Sulfate as SO4	20	13.6	13.63	0.353		E300.0

LCS / LCS DUPLICATE RECOVERY

E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D15005

Laboratory ID: 1D15005-BS1

Preparation: WC_PREP_ANIONS_W

Initial/Final: 5 mL / 5 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Nitrate as N	3.616	3.555	98.3	90 - 110
Sulfate as SO4	24.00	23.57	98.2	90 - 110

LCS / LCS DUPLICATE RECOVERY

SM2540C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D21007

Laboratory ID: 1D21007-BS1

Preparation: pNone

Initial/Final: 20 mL / 100 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Total Dissolved Solids	970.0	870.0	89.7	80 - 120

LCS / LCS DUPLICATE RECOVERY

SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Batch: 1D26012

Laboratory ID: 1D26012-BS1

Preparation: pNone

Initial/Final: 100 mL / 100 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Ammonia as N	5.000	5.022	100	80 - 120

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Instrument:

Analyte	MDL	MRL	Units	Method
Total Dissolved Solids	20.0	20.0	mg/L	SM2540C

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Instrument: WC-IC

Analyte	MDL	MRL	Units	Method
Nitrate as N	0.0330	0.200	mg/L	E300.0
Sulfate as SO ₄	0.330	2.00	mg/L	E300.0

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Matrix: Water

Instrument: WC-Lachat

Analyte	MDL	MRL	Units	Method
Ammonia as N	0.110	0.300	mg/L	SM4500NH3BG

PREPARATION BATCH SUMMARY

E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D15005 Batch Matrix: Water

Preparation: WC_PREP_ANIONS_W

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW05S-20110414	1104191-01	04/15/11 12:02	5.00	5.00
MPT-351-2-MW05S-20110414	1104191-01	04/15/11 12:02	5.00	5.00
MPT-351-2-MW06S-20110414	1104191-02	04/15/11 12:02	5.00	5.00
MPT-351-2-MW06S-20110414	1104191-02	04/15/11 12:02	5.00	5.00
Blank	1D15005-BLK1	04/15/11 12:02	5.00	5.00
LCS	1D15005-BS1	04/15/11 12:02	5.00	5.00
MPT-351-2-MW06S-20110414	1D15005-DUP1	04/15/11 12:02	5.00	5.00
MPT-351-2-MW06S-20110414	1D15005-MS1	04/15/11 12:02	22.50	25.00
MPT-351-2-MW06S-20110414	1D15005-MSD1	04/15/11 12:02	22.50	25.00

PREPARATION BATCH SUMMARY

SM2540C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D21007 Batch Matrix: Water

Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW05S-20110414	1104191-01	04/21/11 15:05	100.00	100.00
MPT-351-2-MW06S-20110414	1104191-02	04/21/11 15:05	100.00	100.00
Blank	1D21007-BLK1	04/21/11 15:05	100.00	100.00
LCS	1D21007-BS1	04/21/11 15:05	20.00	100.00

PREPARATION BATCH SUMMARY

SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Batch: 1D26012 Batch Matrix: Water

Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-351-2-MW05S-20110414	1104191-01	04/26/11 12:50	100.00	100.00
MPT-351-2-MW06S-20110414	1104191-02	04/26/11 12:50	100.00	100.00
Blank	1D26012-BLK1	04/26/11 12:50	100.00	100.00
LCS	1D26012-BS1	04/26/11 12:50	100.00	100.00

ANALYSIS SEQUENCE SUMMARY

SM2540C

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	1D21007-BS1	042111-003	04/26/11 13:00
Blank	1D21007-BLK1	042111-002	04/26/11 13:00

ANALYSIS SEQUENCE SUMMARY

E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 0J29503

Instrument: WC-IC

Calibration: 0295001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	0J29503-CAL1	102110curve-057	10/21/10 10:28
Cal Standard	0J29503-CAL2	102110curve-058	10/21/10 10:45
Cal Standard	0J29503-CAL3	102110curve-059	10/21/10 11:02
Cal Standard	0J29503-CAL4	102110curve-060	10/21/10 11:20
Cal Standard	0J29503-CAL5	102110curve-061	10/21/10 11:37
Cal Standard	0J29503-CAL6	102110curve-062	10/21/10 11:55
Cal Standard	0J29503-CAL7	102110curve-063	10/21/10 12:12
Cal Standard	0J29503-CAL8	102110curve-064	10/21/10 12:29
Initial Cal Check	0J29503-ICV1	102110curve-065	10/21/10 12:47
Initial Cal Blank	0J29503-ICB1	102110curve-066	10/21/10 13:04
Instrument RL Check	0J29503-CRL2	102110curve-068	10/21/10 13:39

ANALYSIS SEQUENCE SUMMARY
SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11704

Instrument: WC-Lachat

Calibration: 1117001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1D11704-CAL1	M_4-27-2011_09-05-20AM-00	04/27/11 09:06
Cal Standard	1D11704-CAL2	M_4-27-2011_09-05-20AM-00	04/27/11 09:07
Cal Standard	1D11704-CAL3	M_4-27-2011_09-05-20AM-00	04/27/11 09:08
Cal Standard	1D11704-CAL4	M_4-27-2011_09-05-20AM-00	04/27/11 09:09
Cal Standard	1D11704-CAL5	M_4-27-2011_09-05-20AM-00	04/27/11 09:09
Cal Standard	1D11704-CAL6	M_4-27-2011_09-05-20AM-00	04/27/11 09:10
Cal Standard	1D11704-CAL7	M_4-27-2011_09-05-20AM-00	04/27/11 09:11
Cal Standard	1D11704-CAL8	M_4-27-2011_09-05-20AM-00	04/27/11 09:12
Initial Cal Check	1D11704-ICV1	M_4-27-2011_09-05-20AM-00	04/27/11 09:13
Initial Cal Blank	1D11704-ICB1	M_4-27-2011_09-05-20AM-01	04/27/11 09:14
Blank	1D26012-BLK1	M_4-27-2011_09-05-20AM-01	04/27/11 09:15
LCS	1D26012-BS1	M_4-27-2011_09-05-20AM-01	04/27/11 09:16
Calibration Check	1D11704-CCV1	M_4-27-2011_09-05-20AM-02	04/27/11 09:28
Calibration Blank	1D11704-CCB1	M_4-27-2011_09-05-20AM-02	04/27/11 09:29
MPT-351-2-MW06S-20110414	1104191-02	M_4-27-2011_09-05-20AM-03	04/27/11 09:33
Calibration Check	1D11704-CCV2	M_4-27-2011_09-05-20AM-03	04/27/11 09:34
Calibration Blank	1D11704-CCB2	M_4-27-2011_09-05-20AM-03	04/27/11 09:35

ANALYSIS SEQUENCE SUMMARY
SM4500NH3BG

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11705

Instrument: WC-Lachat

Calibration: 1117001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1D11705-CCV1	M_4-27-2011_09-38-02AM-00	04/27/11 09:38
Calibration Blank	1D11705-CCB1	M_4-27-2011_09-38-02AM-00	04/27/11 09:39
MPT-351-2-MW05S-20110414	1104191-01	M_4-27-2011_09-38-02AM-00	04/27/11 09:40
Calibration Check	1D11705-CCV2	M_4-27-2011_09-38-02AM-00	04/27/11 09:41
Calibration Blank	1D11705-CCB2	M_4-27-2011_09-38-02AM-00	04/27/11 09:42

ANALYSIS SEQUENCE SUMMARY

E300.0

Laboratory: Empirical Laboratories, LLC

SDG:

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM33 2010

Sequence: 1D11801

Instrument: WC-IC

Calibration: 0295001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1D11801-CCV1	041511-002	04/15/11 12:42
Calibration Blank	1D11801-CCB1	041511-003	04/15/11 12:59
Instrument RL Check	1D11801-CRL1	041511-005	04/15/11 13:34
Instrument RL Check	1D11801-CRL2	041511-006	04/15/11 13:51
LCS	1D15005-BS1	041511-007	04/15/11 14:09
Blank	1D15005-BLK1	041511-008	04/15/11 14:26
MPT-351-2-MW05S-20110414	1104191-01	041511-013	04/15/11 15:53
MPT-351-2-MW06S-20110414	1104191-02	041511-014	04/15/11 16:11
Calibration Check	1D11801-CCV2	041511-015	04/15/11 16:28
Calibration Blank	1D11801-CCB2	041511-016	04/15/11 16:45
MPT-351-2-MW06S-20110414	1D15005-MS1	041511-017	04/15/11 17:03
MPT-351-2-MW06S-20110414	1D15005-MSD1	041511-018	04/15/11 17:20
MPT-351-2-MW06S-20110414	1D15005-DUP1	041511-019	04/15/11 17:38
Calibration Check	1D11801-CCV3	041511-024	04/15/11 19:05
Calibration Blank	1D11801-CCB3	041511-025	04/15/11 19:22