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SITE ASSESSMENT REPORT FOR SITE 413 NS MAYPORT FL
3/1/2007
TETRA TECH NUS

Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62467-94-D-0888



Rev. 1
03/19/07

Site Assessment Report for Site 413

Naval Station Mayport
Mayport, Florida

Contract Task Order 0386

March 2007



Southeast

2155 Eagle Drive

North Charleston, South Carolina 29406

**SITE ASSESSMENT REPORT
FOR
SITE 413**

**NAVAL STATION MAYPORT
MAYPORT, FLORIDA**

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

**Submitted to:
Naval Facilities Engineering Command
Southeast
2155 Eagle Drive
North Charleston, South Carolina 29406**

**Submitted by:
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**CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0386**

MARCH 2007

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PROFESSIONAL CERTIFICATION

Site Assessment Report
for
Site 413
Naval Station Mayport, Florida

This Site Assessment Report 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.



March 19, 2007
Mark A. Peterson, P.G.
Florida License Number PG-0001852

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ACRONYMS

AST	Aboveground Storage Tank
BTEX	Benzene, Toluene, Ethylbenzene, and Total Xylenes
bls	Below Land Surface
°C	Degrees Celsius
CAR	Contamination Assessment Report
CLEAN	Comprehensive Long-term Environmental Action Navy
COCs	Constituents of Concern
CTO	Contract Task Order
DPT	Direct-Push Technology
ENCO	Environmental Conservation Laboratories, Inc.
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	Flame-Ionization Detector
FL-PRO	Florida Petroleum Range Organics
ft	Feet (or Foot)
ft/day	Feet (or Foot) per Day
ft/ft	Feet (or Foot) per Foot
GAG	Gasoline Analytical Group
GCTLs	Groundwater Cleanup Target Levels
HSAs	Hollow Stem Augers
ID	Inside Diameter
KAG	Kerosene Analytical Group
µg/L	Micrograms per Liter
mg/d	Million Gallons per Day
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
msl	Mean Sea Level
MTBE	Methyl Tertiary-Butyl Ether
NAVSTA	Naval Station
OVA	Organic Vapor Analyzer
PAHs	Polynuclear Aromatic Hydrocarbons
PVC	Polyvinyl Chloride
SA	Site Assessment
SAR	Site Assessment Report
SCH	Schedule
SCTLs	Soil Cleanup Target Levels

ACRONYMS (Continued)

SOPs	Standard Operating Procedures
TOC	Top-of-Casing
TRPH	Total Recoverable Petroleum Hydrocarbons
TtNUS	Tetra Tech NUS, Inc.
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOCs	Volatile Organic Compounds

EXECUTIVE SUMMARY

Tetra Tech NUS, Inc. (TtNUS) has completed a Site Assessment (SA) at Site 413, Naval Station (NAVSTA) Mayport, Mayport, Florida in accordance with the requirements of Chapter 62-770, Florida Administrative Code (FAC). This Site Assessment Report (SAR) is being submitted to the Florida Department of Environmental Protection (FDEP) for approval. A Contamination Assessment Report (CAR) summary sheet is included as Appendix A.

To complete this SA, TtNUS:

- Reviewed available United States Navy (Navy) documents to:
 - Identify potential sources and receptors for 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.
- Advanced 12 soil borings on site using Direct-Push Technology (DPT) and collected soil and groundwater samples from the borings for analysis by mobile and fixed-base laboratories.
- Performed a soil vapor survey in the unsaturated zone to delineate areas of excessively contaminated soil, if present.
- Referenced and obtained appropriate aquifer data from the United States Geological Survey (USGS) to calculate aquifer characteristics at NAVSTA Mayport.

The investigation was centered on an aboveground storage tank (AST) and associated piping and former sump area located near the northwestern corner of Building 413.

"Excessively contaminated soil," as defined by Chapter 62-770.200(12), FAC, was not identified at the site.

Mobile laboratory groundwater analytical results identified benzene, total xylenes, and the naphthalene compounds (naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene) at concentrations slightly exceeding regulatory criteria in shallow groundwater grab samples collected by DPT near the former sump location extending to the northeast approximately 15 feet (ft). Fixed-base groundwater and soil

samples in this same area recorded petroleum impacts, but not greater than the groundwater cleanup target levels (GCTLs) and soil cleanup target levels (SCTLs).

Based on current soil and groundwater analysis and the action levels set in Chapter 62-770, FAC, it is recommended that no further action is warranted.

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

TtNUS performed a SA at Site 413, NAVSTA Mayport, for the Naval Facilities Engineering Command Southeast under Contract Task Order (CTO) 0386 of the Comprehensive Long-term Environmental Action Navy (CLEAN) III, Contract Number N62467-94-D-0888. The data collected during the investigation were used to prepare a SAR. Information from the field investigation has been assimilated into this SAR to provide a characterization of site conditions from which to base future courses of action. A CAR Summary Sheet is included as Appendix A.

The purpose of the SA recently completed was to evaluate the presence or absence of petroleum hydrocarbons in subsurface soils and groundwater at Site 413 that may have resulted from releases from the 560-gallon heating oil AST or associated AST piping system. A former sump associated with this current system is part of the assessment. A summary of site investigative history is provided below in Section 1.8.

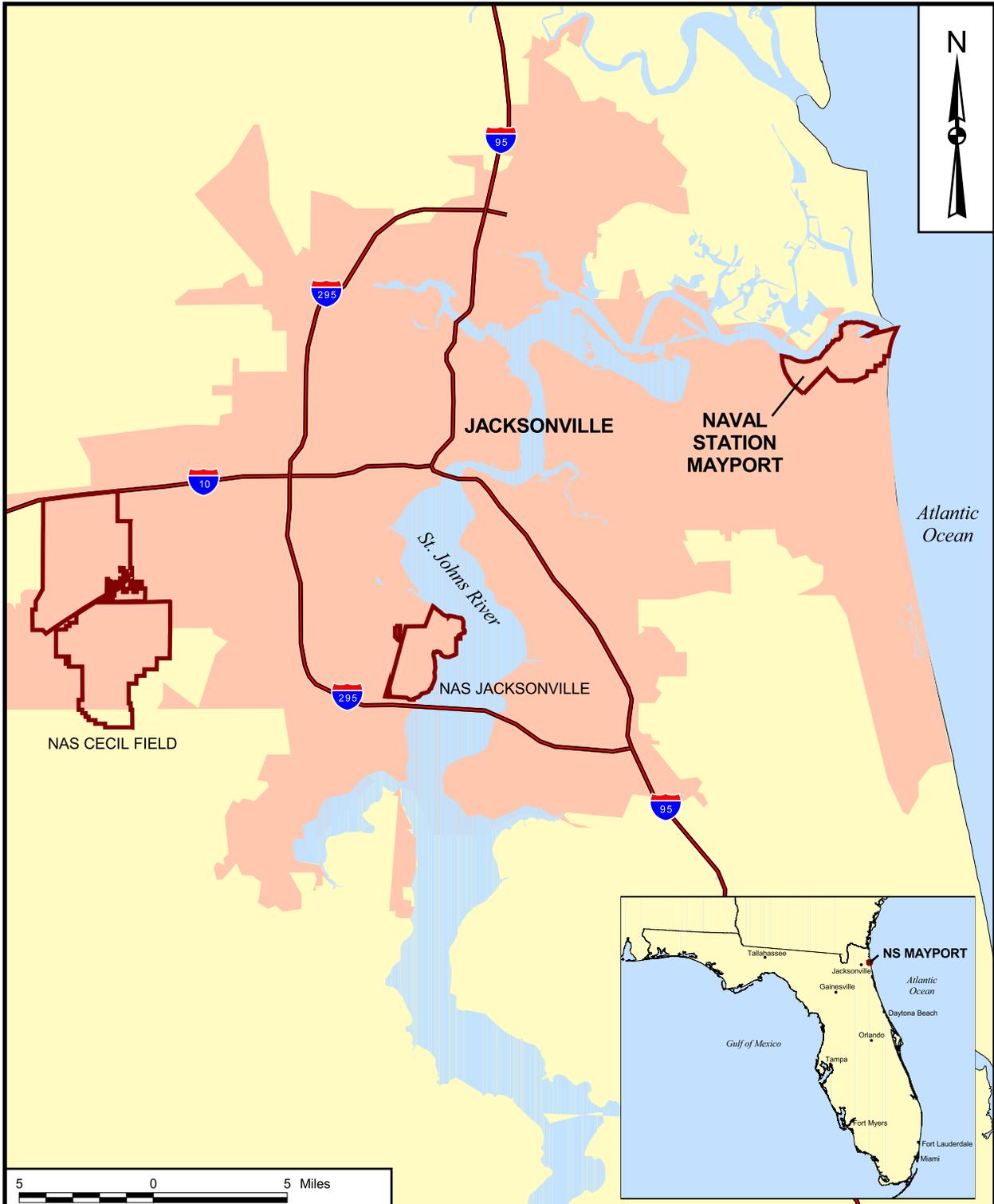
1.2 FACILITY AND SITE LOCATION

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 413 is located near the northeastern tip of the peninsula as shown on the Site Location Map provided as Figure 1-2.

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 in the vicinity of 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 ft below land surface (bls) (USGS, 1992).



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REGIONAL AREA MAP
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

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P:\GIS\MAYPORT_NS\MAPDOCS\APR\STATEMENT_BASIS.APR SITE 413 REGIONAL AREA 5/18/06 MKB (KOP)

The surficial aquifer system consists of fine-grained sands near the surface interspersed with thin (less than 1 ft) clay lenses, and generally grades to a mixture of sand and coarse shell fragments from 30 to 50 ft 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).

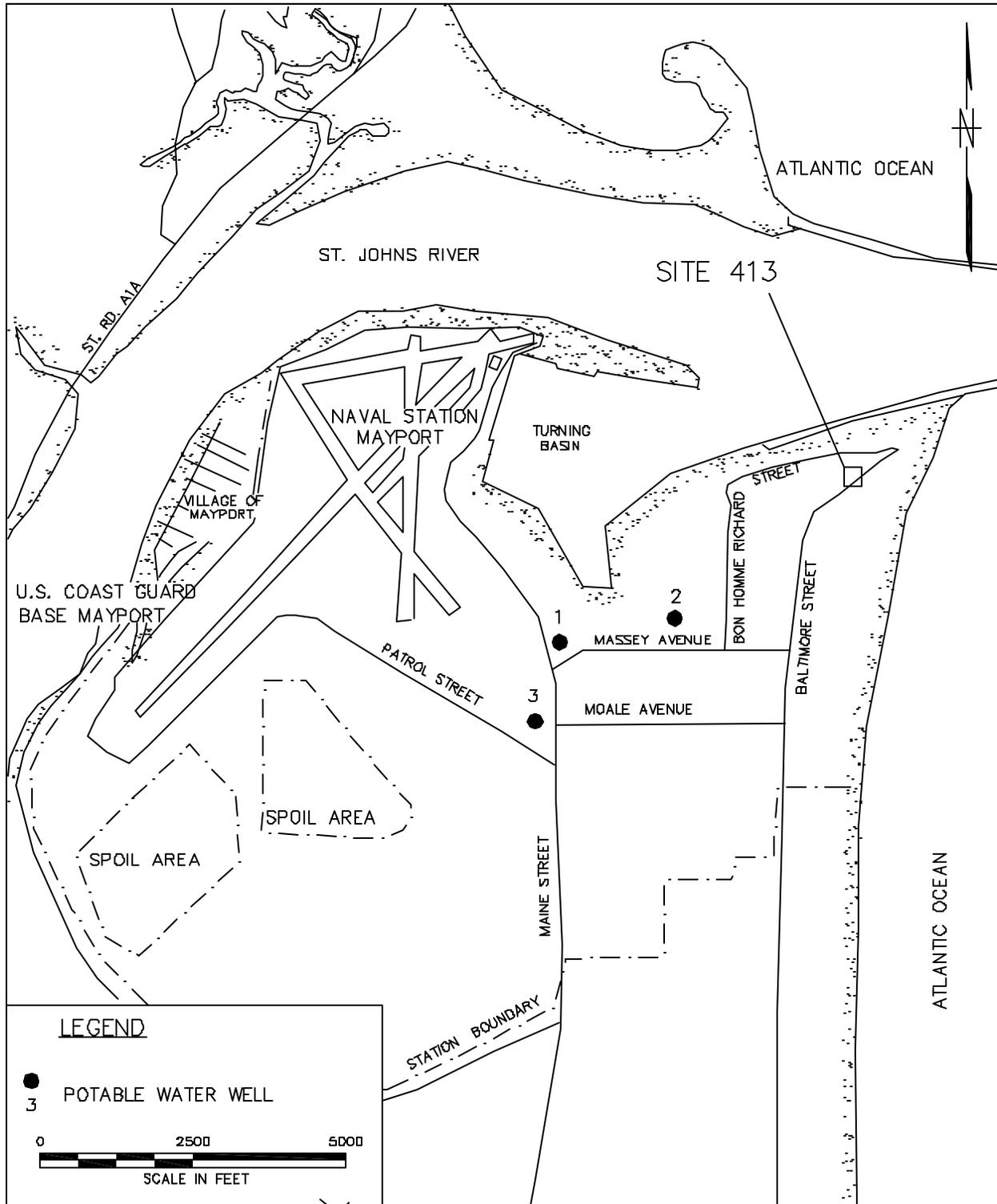
The Floridan aquifer system is the principal source of groundwater for public drinking water in most of northeastern Florida. In the area of investigation, the system is comprised of (from youngest to oldest) the Ocala Formation, the Avon Park Formation, and the Oldsmar Limestone. The Hawthorn Group,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

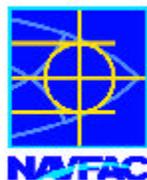
The potable water supply information presented in this report was obtained from a Contamination Assessment Report prepared by the United States Army Corps of Engineers (USACE) for a nearby site (Site 1330) in 1992 (USACE, 1992). Personnel at the water treatment plant confirmed the accuracy of the water well information. Potable well information is summarized on Table 1-1. The locations of the potable wells are depicted on Figure 1-3.

<p align="center">Table 1-1 Potable Water Well Survey Results</p> <p align="center">Site Assessment Report, Site 413 Naval Station Mayport Mayport, Florida</p>				
Well ID	Approximate Distance from Site (miles)	Diameter (inches)	Depth of Well (ft bls)	Use
1	1.05	12	1,000	In use
2	0.72	16	1,000	In use
3	1.35	16	1,000	In use

Potable water is supplied to NAVSTA Mayport by three on-base supply wells. The closest supply well to the site is nearly three-fourths a mile from the site (Well Number 2) as shown on Figure 1-3. 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 ft bls. Well capacities range between 2.1 and 2.9 million gallons per day (mg/d) with a combined total pumping capacity of 10.0 mg/d. The water is treated by the base water treatment plant prior to distribution.



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POTABLE WATER WELL LOCATIONS
SITE 413
SITE ASSESSMENT REPORT
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

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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 ft above mean sea level (msl) (USGS, 1992).

Site 413 is virtually flat with the exception of a storm water drainage ditch that is located at along the south side of Baltimore Road and abuts the area of investigation. The site is located at the northeastern tip of NAVSTA Mayport on a parcel of land separating the St. Johns River from the Atlantic Ocean as shown on Figure 1-2. A portion of the USGS Mayport, Florida 7.5-minute quadrangle has been reproduced as Figure 1-4 to show the site location relative to its topographic surroundings. More site specifically, a large drainage ditch parallels Baltimore Road to the north separating the road from the site. The ditch collects stormwater runoff from the site, Baltimore Road, and various parking lots. From the site the stormwater flow is west until a culvert "Ts" into the ditch from the north, redirecting the flow to the north to the river.

1.6 LAND USE IN SITE VICINITY

Land uses in the vicinity are classrooms and structurally undeveloped properties. The site is bound to the north by Baltimore Road, to the south a parking lot, to the east Building 1556 (classrooms) and its parking lot, and to the west Building 1809 (classrooms).

1.7 SITE DESCRIPTION

A site plan depicting Site 413 and its nearby surroundings is provided as Figure 1-5. Building 413 is a cement block building used as a classroom training facility which comprises slightly less than 10,000 square ft and is constructed with its long dimension oriented northeast to southwest. Figure 1-5 is a site plan for the facility. The 560-gallon heating oil AST is located near the northwestern corner of the building inside a wood fence enclosure. A former sump, which was used to transfer fuel oil, is buried near land surface. The sump is centrally in the grassy area along the northern end of the cement slab. The tank appears to be in good condition and rests on a cement slab.

Utilities, such as water, electricity, and a communication line parallel a large ditch, are located on the northern side of the building. The communication line enters the eastern side of the building passing nearby to the AST, while the water and electrical lines maintain a close proximity to the road. No other utilities were identified within the area of investigation.

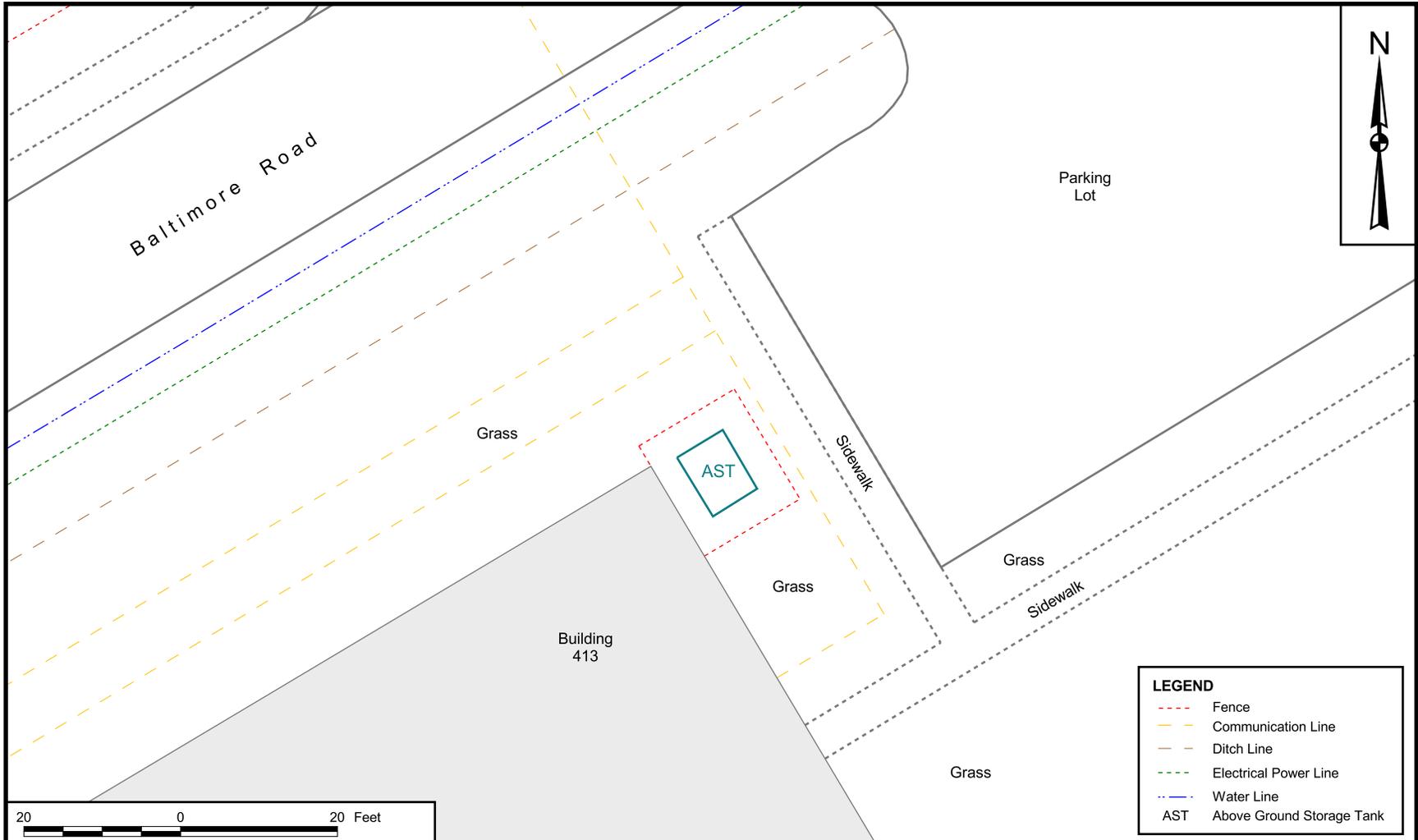


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CTO 0386



LEGEND	
	Fence
	Communication Line
	Ditch Line
	Electrical Power Line
	Water Line
	AST Above Ground Storage Tank

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SITE PLAN
BUILDING 413
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

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1.8 SITE OPERATIONS AND INVESTIGATIVE HISTORY

In April 2001, closure activities for the underground piping and sumps associated with the AST (Tank Number N413) were completed. No documented leaks of spills or overflows have been reported with this AST system other than what was observed during a Closure Report prepared by Earth systems, of Jacksonville Beach, FL (see Appendix B).

According to the closure report, the piping was removed and the sump was closed in place during April 2001. In July 2004, Earth Systems performed a closure assessment for the underground piping and sump associated with the AST. A copy of the Tank Closure Report is provided as. "Excessively contaminated" soil (corrected organic vapor response of 640 parts per million) was identified in a soil sample collected 3 ft bls at the location of the closed sump on the northern side of the AST. A duplicate of this sample (SB-2) was analyzed by a fixed-base laboratory and total recoverable petroleum hydrocarbons (TRPH) were identified at a concentration of 23,600 milligrams per kilogram (mg/kg), exceeding FDEP's industrial SCTL of 2700 mg/kg. Other petroleum constituents, including benzene, toluene, ethylbenzene, and total xylenes (BTEX) and the three naphthalene compounds (naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene) were reported at concentrations exceeding leachability SCTLs based on groundwater criteria. The assessment completed by Earth Systems did not identify soil contamination outside of the sump area.

Benzene, ethylbenzene, total xylenes, and naphthalene were identified at concentrations exceeding FDEP GCTLs in a groundwater sample collected from a temporary monitoring installed near the sump.

Earth Systems documents the depth to groundwater during their investigation to be 3.5 ft bls.

1.9 PURPOSE OF CURRENT INVESTIGATION

The objective of the SA was to assess the extent and magnitude of soil and/or groundwater contamination at Site 413 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, FAC. This SAR provides a characterization of site conditions from which to base future courses of action. A CAR summary sheet is provided as Appendix A.

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-001/92).

2.2 ASSESSMENT STRATEGY

Soil and groundwater quality was assessed at the site in two phases: a screening phase (Phase I) in which soil and groundwater grab samples were collected by DPT methods and analyzed by an on-site mobile laboratory and a second phase (Phase II) in which permanent monitoring wells were installed at optimum locations based upon Phase I analytical results. Soil samples were also collected based on the screening results and groundwater samples were collected from the wells of which both sample mediums were analyzed by a fixed-base laboratory for gasoline analytical group (GAG) and kerosene analytical group (KAG) constituents of concern (COCs) per Chapter 62-777, FAC.

2.3 DETERMINATION OF GROUNDWATER GRADIENT

Prior to the inception of the soil and groundwater assessment, four piezometers were installed such that when surveyed and groundwater elevation measurements taken, groundwater contours for the site could be calculated. The piezometers were completed approximately 3 ft into groundwater table on August 8, 2005 using a DPT rig. Based on the surveyed piezometers groundwater flow pattern, permanent wells were installed on January 11, 2006. The well locations were influenced by this preliminary piezometer flow data which determined the groundwater flow was to the northeast at 0.0026 feet per foot (ft/ft) gradient.

Permanent monitoring wells 1, 2, 3, 4, and 5, were surveyed by ARC Surveying of Jacksonville, FL, a Florida registered surveyor on March 31, 2006. The elevation of the northern side of the riser, top-of-casing, (TOC) was surveyed to the nearest 0.01 ft. Elevations above msl were established using the North American Datum 1983.

A TtNUS representative recorded depth to groundwater on January 20, 2006, and February 13, 2006. Groundwater elevation measurements were determined by subtracting the measured depth to groundwater for each well from its respective surveyed TOC elevation. Depth to groundwater measurements taken in January ranged from 3.68 to 4.39 ft bls, and February measurements ranged from 3.73 to 4.48 ft bls. Section 3.1.3 discusses the depths to groundwater measurements.

2.4 SOIL QUALITY ASSESSMENT

2.4.1 Soil Borings

Locations of 12 soil borings completed during the Phase I of the assessment are shown on Figure 2-1. Soil boring were advanced to a depth of 4 ft bls using an stainless steel, 3-inch inside diameter (ID) hand-auger assembly for the purpose of locating utilities and collecting soil screening samples. Soil boring SB-11 was subsequently advanced from 4 ft bls to 17 ft bls using a DPT (Geoprobe®) to establish a site lithologic profile. A 5-ft long, stainless steel macocore sampler lined with plastic sleeves was attached to the end of the DPT push rod. Continuous samples were collected with the macrocore tool from 4 to 17 ft bls where a homogeneous fine sand was observed. The DPT rig met refusal at 17 ft bls due to very fine tightly packed sands.

2.4.2 Field Screening Procedures

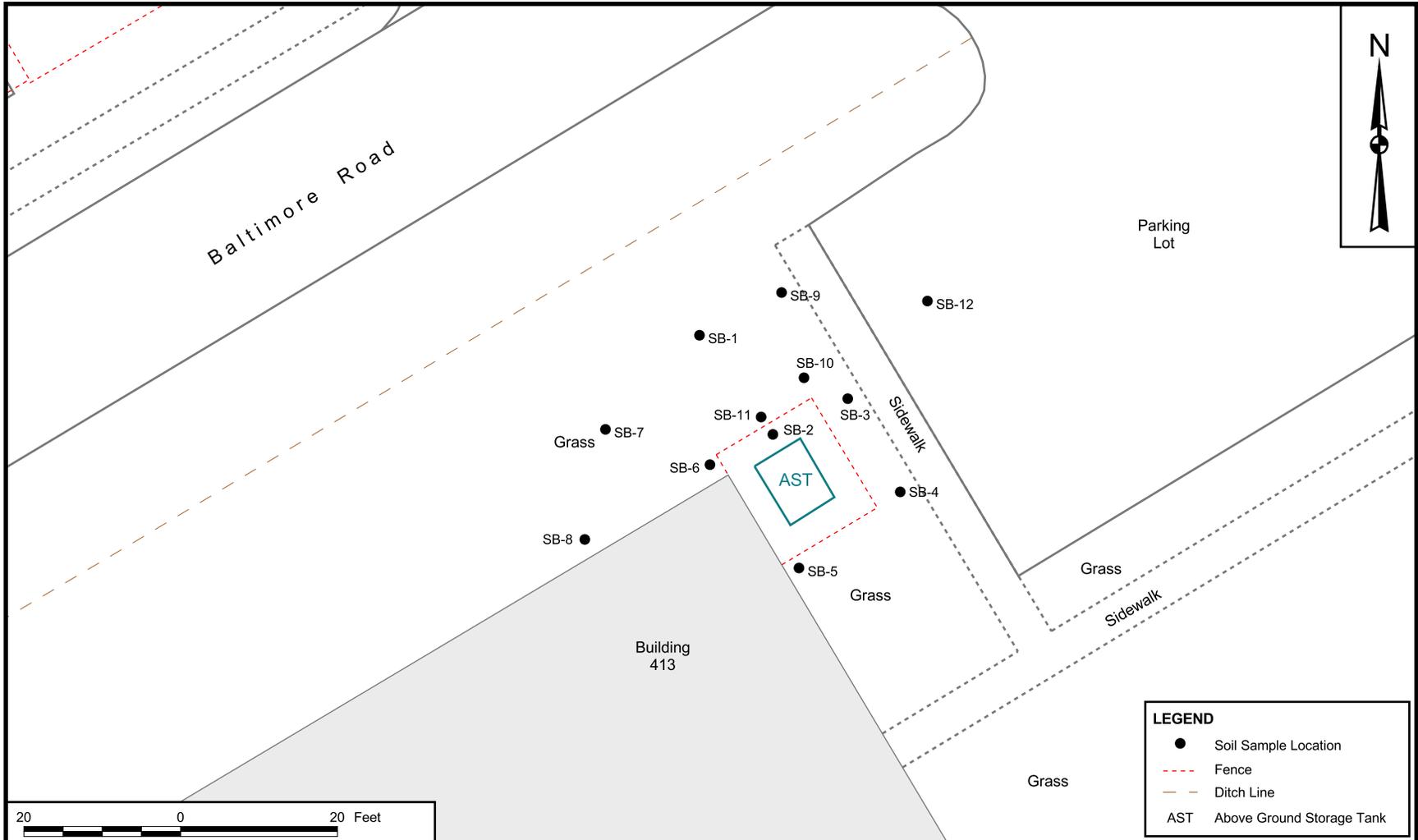
Twelve soil borings (SB-01 through SB-12) were completed at Site 413 during the Phase I assessment for the purpose of the soil quality assessment. Boring locations are shown on Figure 2-1. Soil samples were collected from each location at depths of 1 ft and 2 ft bls and screened for organic vapors using an Organic Vapor Analyzer (OVA) equipped with a Flame Ionization Detector (FID). Soil vapor analyses were performed in accordance with the headspace screening method described in Chapter 62-770.200(2), FAC. Results of the soil vapor screening survey conducted at Site 413 are discussed in Section 3.2.

The focus of the Phase I soil screening event was centered on the sump area located at the north central end of the AST where closure sampling indicated excessively contaminated soil. A slender unpaved area of soil was present between the cement slab, which the AST was built upon, and the security fence. Numerous attempts were made at collecting soil samples in this unpaved area of which only one was able to be completed to the desired depth of 2 ft bls due to underground obstructions causing boring advancement refusal. Soil collected from SB-02 at depths of 1 ft and 2 ft bls were screened using the OVA. It was observed from SB-02 that soils removed at depths of 3 ft and 4 ft bls were moist and contained petroleum odors. Due to the numerous attempts to collect a sample to depth, the soil in the sump area became mixed allowing for only one representative sample to depth (SB-02). Because of the churned soil, the second closest sample was collected at the closest location from just outside the fence (SB-11). SB-11 is approximately 3 ft from the sump area. Soil samples were collected for screening no deeper than 2 ft bls because the capillary region of the water table extended to 3 ft bls.

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2-3

CTO 0386



LEGEND	
●	Soil Sample Location
- - - -	Fence
- - - -	Ditch Line
AST	Above Ground Storage Tank



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SOIL BORING LOCATIONS
BUILDING 413
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

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Additional soil assessment of the site during Phase I operations, included collecting soil samples from 8 of the 12 borings (soil borings 1-8). These samples were analyzed at a mobile laboratory for BTEX, methyl tertiary-butyl ether (MTBE), naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene. All collected samples were above the capillary region and therefore obtained from 1 ft and 2 ft bls.

2.4.3 Soil Sampling Strategy for Fixed-Base Laboratory Analysis

2.4.3.1 Fixed-Base Laboratory

Based on the initial assessment (Phase I), two soil samples were submitted to Environmental Conservation Laboratories, Inc. (ENCO) of Jacksonville, Florida, a fixed-base laboratory, for analysis of GAG/KAG constituents, which include volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and TRPH. Soil samples submitted for fixed-base laboratory analysis are typically based on field screening results, although for this site the screening results were all equal to background levels. The basis for the sample collection was then determined on possible location of a surface release and the information provided in the Closure Report. Soil in the area of SB-2, was collected from the sump at a similar location as the sample collected by Earth Systems. Soils in the area of the sump were mixed due to repeated refusal attempts to get to depth and, therefore, a duplicate sample collected for the purpose of fixed-base laboratory analysis of SB-2 was unattainable. The second closest sample location to the sump became SB-11, which is located approximately 3 ft north of the sump area. The second sample SB-03 was collected from the area where mobile laboratory groundwater impacts were present. Since there was no high, medium, and low screened sample reading using the OVA and no visible evidence of a release, only two soil samples were collected.

2.5 GROUNDWATER ASSESSMENT METHODS

2.5.1 DPT Grab Samples (Phase I)

The primary purpose of the DPT investigation (August 8, 2005) was to collect groundwater grab samples from the upper 4 ft of the saturated zone and, in conjunction with quick turnaround of mobile laboratory analyses, estimate the lateral and vertical extent of contamination in the shallow surficial aquifer, if present. Grab samples were collected by DPT (GeoProbe[®]) from the approximate depth interval 4 ft to 8 ft bls at 11 of the 12 boring locations. For soil boring SB-02, a hand auger completed the boring approximately 2 ft into the groundwater. The hand auger was used in place of the probe due to the limited area between the AST and fence. All groundwater samples were collected using 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 influx of groundwater to the retractable screen. For groundwater recovery, tubing was inserted into

the probe and connected to a peristaltic pump. Several screen volumes were then pumped from the probe in order to reduce turbidity. After purging, groundwater samples were collected by pumping directly into 40-milliliter vials and immediately submitted to the on-site mobile laboratory for analysis of BTEX, MTBE, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene.

2.5.2 Permanent Monitoring Wells (Phase II)

Six permanent monitoring wells [MPT-413-MW-01S (MW-01S), MW-02S, MW-03S, MW-04S, MW-05S and MW-06S] were installed at the site on January 11, 2006 and August 4, 2006 by Partridge Well Drilling, Inc. of Jacksonville, Florida under TtNUS supervision. All wells are shallow monitoring wells with 10-ft screened sections intersecting the water table. Monitoring well locations are shown on Figure 2-2. Well locations were selected based upon analytical results and groundwater flow data generated from piezometers installed during Phase I. The general positions of the new wells relative to the potential source area(s) of contamination are as follows: MW-06S source area well; MW-01S and MW-02S up gradient; and MW-03S, MW-04S, and MW-05S down gradient.

2.5.2.1 Drilling Method

The six monitoring wells were installed by Partridge Well Drilling of Jacksonville, Florida under the supervision of a TtNUS representative. At six of the monitoring well locations, a posthole digger was used to excavate boreholes from ground surface to a depth of 5 ft bls to verify absence of subsurface utilities. For five of the six wells, boreholes were advanced using 4¼-inch ID hollow stem augers (HSAs) attached to a truck-mounted drill rig. The sixth well was installed using a DPT drill rig. Soil boring logs for wells MW-01S through MW-05S, descriptions of cuttings generated during drilling are provided in Appendix C. No drill cuttings were generated using the DPT drill rig.

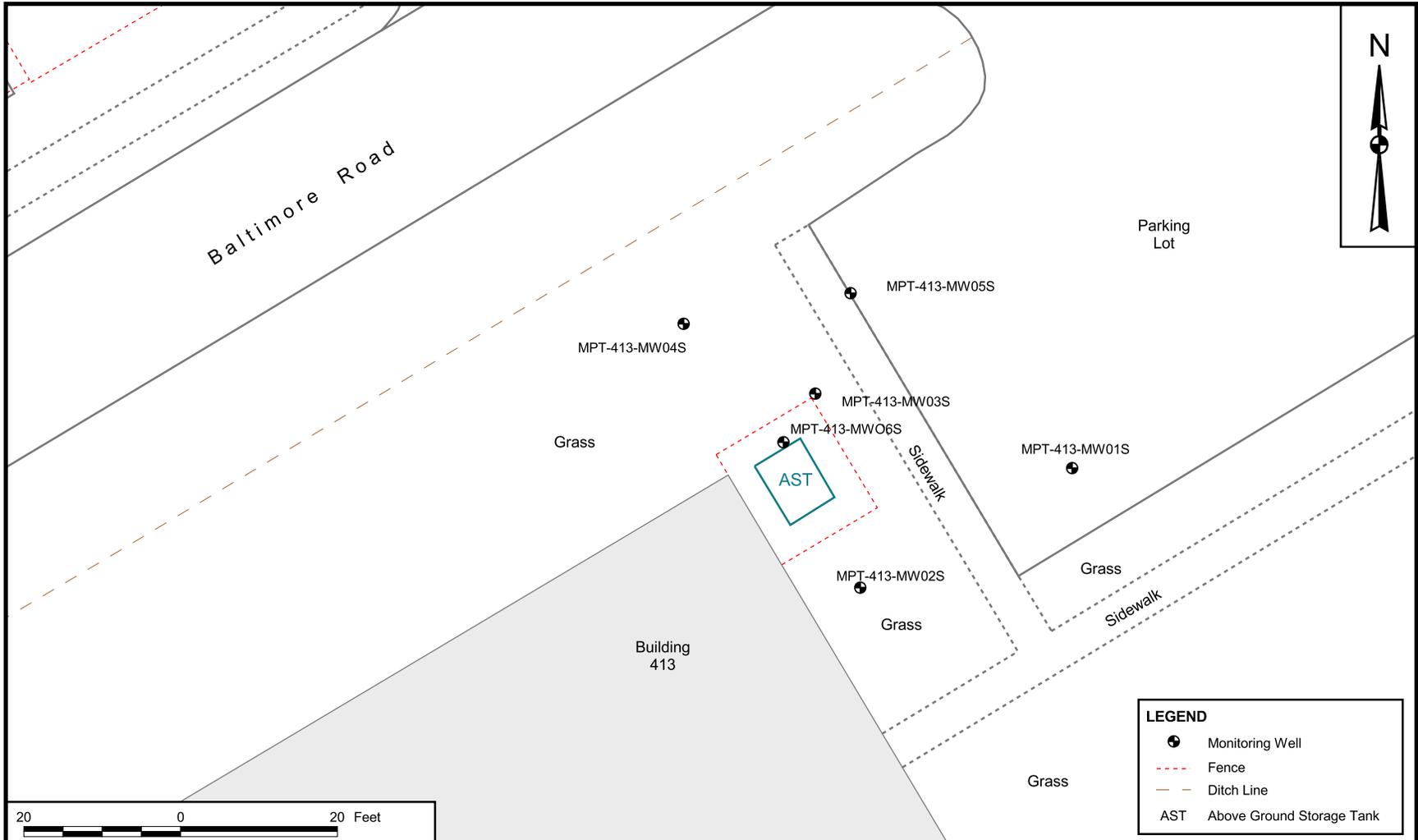
2.5.2.2 Construction and Development

Boreholes for shallow wells MW-01S through MW-05S were advanced to total depths ranging from 12.50 to 13.50 ft bls. Monitoring wells constructed of 2-inch diameter, 0.010-inch mill slotted schedule (SCH) 40 polyvinyl chloride (PVC) screen attached to a suitable length of solid riser (flush threaded) were inserted through the drilling rods after attaining total depth. All shallow wells were constructed with 10-ft screens. Graded 20/30 silica sand was poured from the surface between the PVC well and HSAs as the augers were being removed from the borehole to create a filter pack in the annular space between borehole and screened section of the monitoring well. During construction of the shallow wells, the filter pack was poured into the annular space to a depth approximately 1 ft above the top of the screen and was capped by approximately 0.5 ft of 30/65 fine sand. The remaining annular space from the top of the fine sand seal to within 6 inches of ground surface was filled with Type I Portland cement grout.

06JAX0027

2-6

CTO 0386



LEGEND	
	Monitoring Well
	Fence
	Ditch Line
	Above Ground Storage Tank

DRAWN BY	DATE
C. SPEHAR	8/15/05
CHECKED BY	DATE
D. SIEFKEN	9/28/06
COST/SCHEDULE-AREA	
SCALE AS NOTED	



MONITORING WELL LOCATIONS
BUILDING 413
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

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

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Rev. 1
03/19/07

Monitoring well MW-06S was installed using 10 ft of 1-inch diameter, 0.010-inch mill slotted SCH 40 PVC screen attached to a suitable length of solid riser (flush threaded) were inserted through the rods after attaining a total depth of 13 ft. A pre-packed filter was fitted on the well using 20/30 sands and 0.5 ft of 30/65 sands sealed the well with Type I Portland cement filling the annular space to almost land surface.

Each well was completed at the surface with an 8-inch diameter steel manhole equipped with a boltdown cover. Manholes were secured in place with concrete pads 2 ft square and 6 inches thick. A locking, expansible gasket cap was inserted at the top of the PVC casing after well installation. A schematic diagram showing details of well construction (shallow and deep) is provided as Figure 2-3. Construction diagrams for the individual wells are provided in Appendix D.

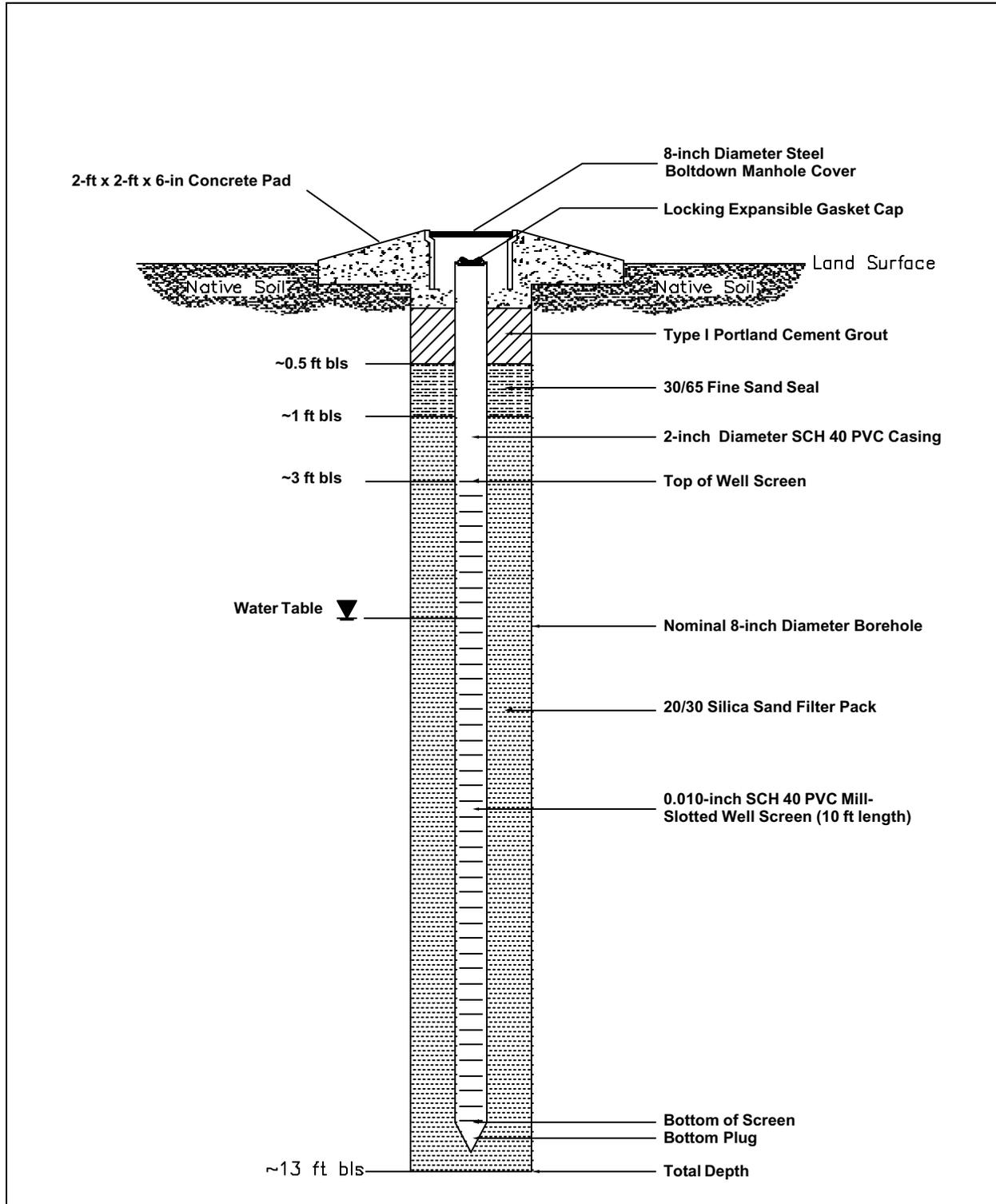
Piezometers were installed to an approximate depth of 6 ft bls. Each piezometer was constructed with 1.25-inch diameter, 0.010-inch mill slotted SCH 40 PVC screen that was attached to a suitable length of riser. The piezometers were installed using direct push technology. The annular space was filled with 20/30 filter sand to land surface.

Wells were developed a by Partridge Well Drilling, Inc. representative using a submersible Whale pump. Wells were developed until water became virtually clear. All development water was containerized for disposal in 55-gallon steel drums.

2.5.2.3 Groundwater Sampling

Groundwater samples were collected from the five newly-installed shallow monitoring wells on January 17, 2006 and August 9, 2006. Groundwater sampling was conducted in general accordance with SOPs adopted by FDEP in 2002. A minimum one well volume was pumped from each shallow well (partially 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, temperature, and oxidation/reduction potential were measured periodically (minimum 3-minute intervals) using a 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 degrees 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.



DRAWN BY LLK	DATE 10/17/02	E:\CAD\ELDCS\SOUTH\IV.TIF TYPICAL MONITORING WELL DESIGN SITE ASSESSMENT REPORT SITE 413 MAYPORT NAVAL STATION MAYPORT, FLORIDA	CONTRACT NO. 00103	
CHECKED BY	DATE		APPROVED BY	DATE
COST/SCHED-AREA			APPROVED BY	DATE
SCALE NOT TO SCALE			DRAWING NO. FIGURE 2-3	REV. 1

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

After collection, samples were immediately placed on ice and delivered to ENCO Laboratory in Jacksonville, Florida the following morning under proper chain-of-custody and preservation (4 °C) protocol. Samples were analyzed for VOCs using United States Environmental Protection Agency (USEPA) Method 8260, PAHs using USEPA Method 8270, ethylene dibromide using USEPA Method 504.1, lead using USEPA Method 200.7, and TRPH using Florida Petroleum Range Organics (FL-PRO).

3.0 RESULTS OF INVESTIGATION

3.1 SITE GEOLOGY AND HYDROGEOLOGY

3.1.1 Lithology

The most resolute description of material underlying Site 413 was obtained during retrieval of soil during well installation on August 15, 2003. Soil cuttings generated during excavation of monitoring well boreholes by HSAs were also described by TtNUS' on-site scientist. Soil borings logs containing these lithologic descriptions are provided in Appendix C.

3.1.2 Groundwater Flow Direction

As discussed in Section 2.3, the direction of groundwater flow in the surficial aquifer underlying the site was estimated to be northeasterly. This preliminary indication of groundwater flow direction using data from temporary piezometers was one of the criteria used in selecting permanent monitoring well locations. After installation of the permanent monitoring wells, direction of groundwater flow was determined using the wells as control points in the same fashion that the piezometers were used in the preliminary determination.

Surveyed TOC elevations of the permanent monitoring wells were subtracted from depth-to-water measurements obtained on January 20, 2006, and February 13, 2006. The depth to water table elevation values for these two sets of measurements are presented in Table 3-1 and equipotential contour lines have been added to depict groundwater flow direction in Figures 3-1 and Figure 3-2, respectively. The groundwater flow during the January measurements is north, while the February measurements depicted northwestern flow direction, while the piezometers data established a northeastern flow pattern. This effect is caused by the tidal influences associated with the nearby Atlantic Ocean. Historical regional groundwater flow patterns for a nearby site Building 351 (across the street to the north) is towards the St. Johns River (TtNUS, 2004).

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 ft per day (ft/day) (TtNUS, 2001).

<p align="center">Table 3-1 Water Table Elevation Data</p> <p align="center">Site Assessment Report, Site 413 Naval Station Mayport Mayport, Florida</p>						
Well ID Number MPT-413-	Total Well Depth (ft)	TOC Elevation (ft msl)	January 20, 2006		February 13, 2006	
			Depth to Water Below TOC (ft)	Water Table Elevation (ft msl)	Depth to Water Below TOC (ft)	Water Table Elevation (ft msl)
MW-1	12.0	6.68	3.79	2.89	3.90	2.78
MW-2	13.0	7.20	4.30	2.90	4.40	2.80
MW-3	13.0	7.26	4.39	2.87	4.48	2.78
MW-4	13.0	6.64	3.82	2.82	3.91	2.73
MW-5	12.0	6.50	3.69	2.81	3.73	3.77
MW-6	13.0	NM	NM	NM	NM	NM
NM = not measured						

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. As these data and figures indicate, the hydraulic gradient at the site is subject to hydraulic gradient reversal due to the site's position on a narrow peninsula roughly equidistant between two water bodies (St. Johns River and Atlantic Ocean). 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 ft/ft.

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:

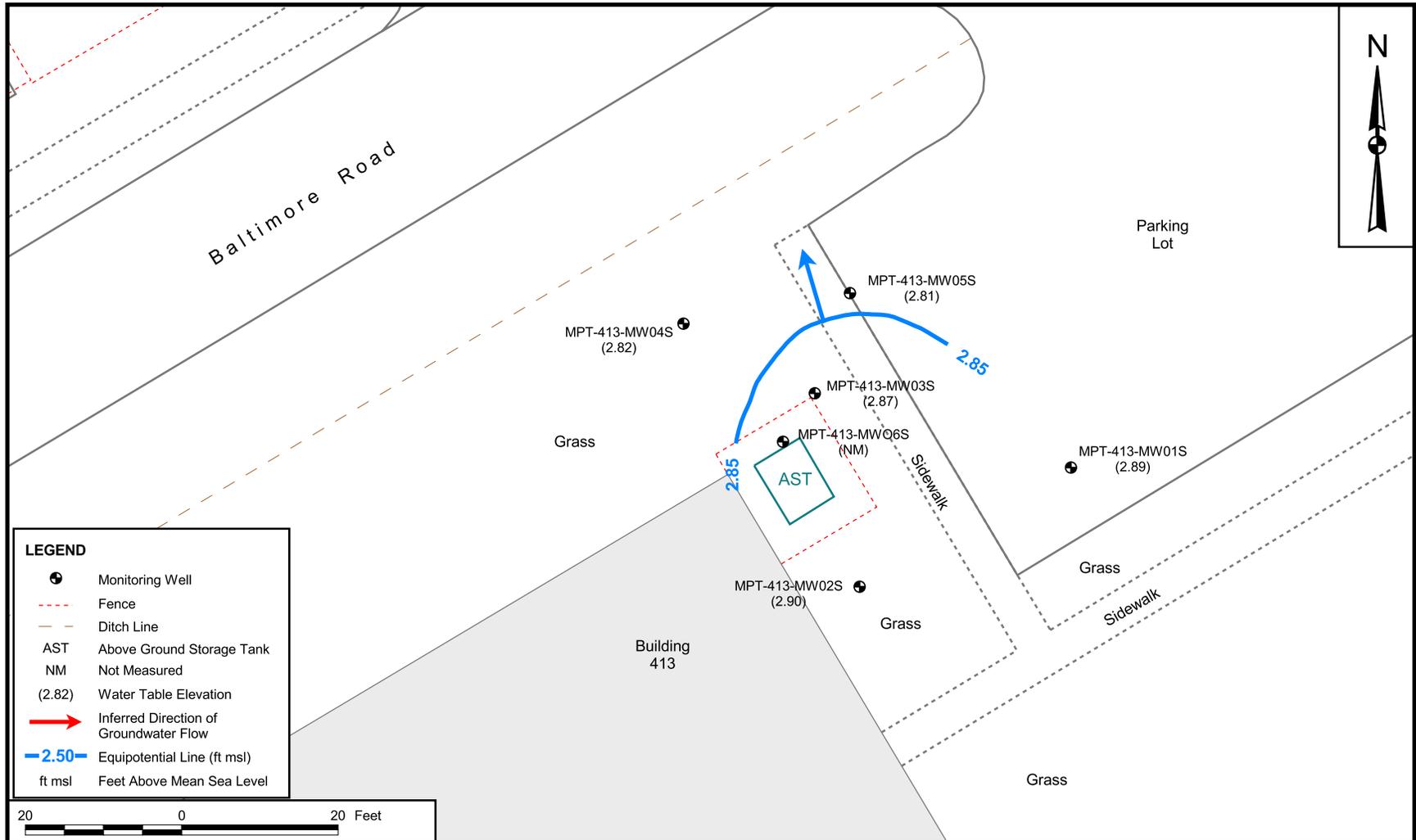
$$V = \frac{(K \times I)}{n}$$

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

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3-3

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LEGEND	
	Monitoring Well
	Fence
	Ditch Line
AST	Above Ground Storage Tank
NM	Not Measured
(2.82)	Water Table Elevation
	Inferred Direction of Groundwater Flow
	Equipotential Line (ft msl)
ft msl	Feet Above Mean Sea Level



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CHECKED BY D. SIEFKEN	DATE 9/28/06
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SCALE AS NOTED	

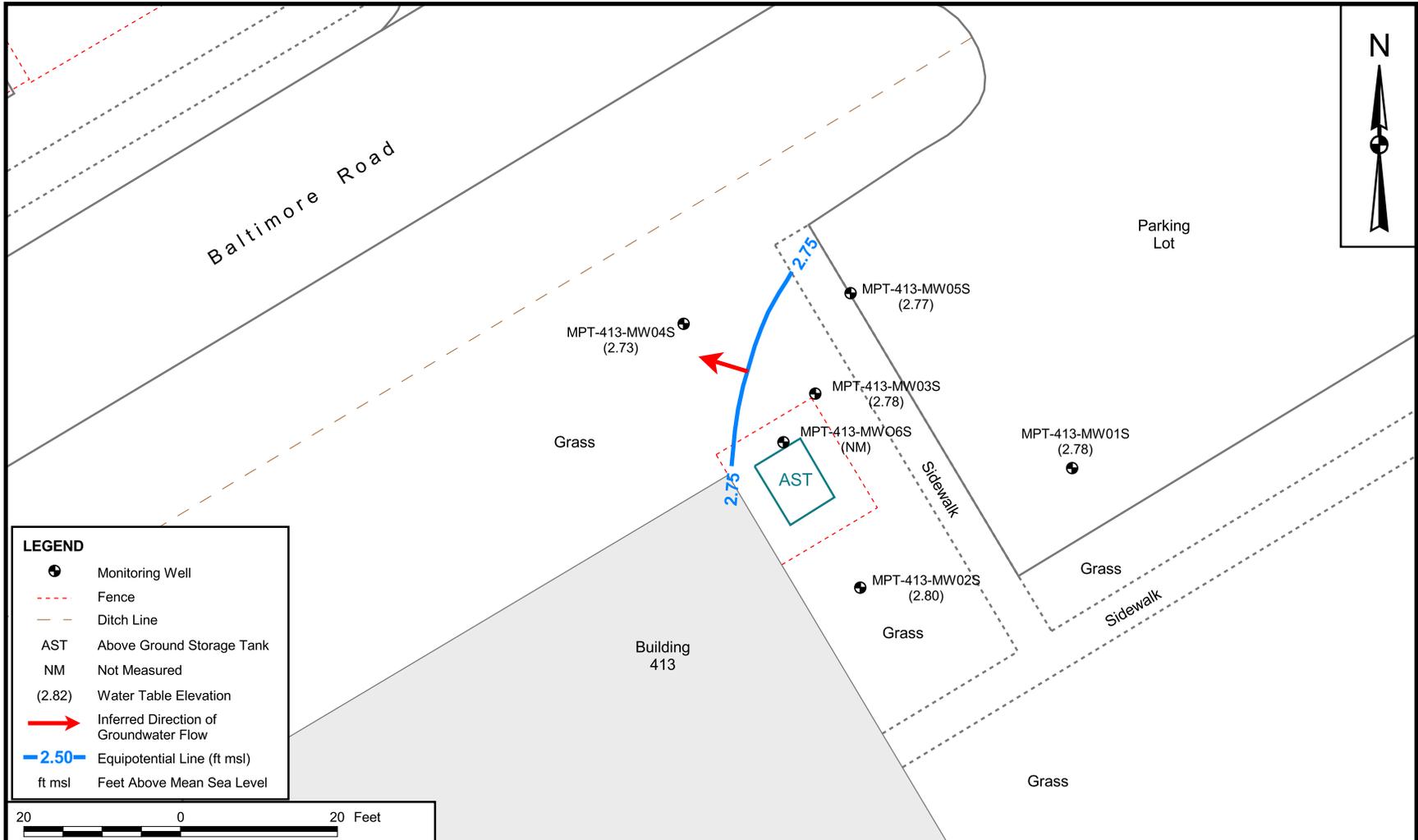


GROUNDWATER ELEVATION CONTOUR
JANUARY 20, 2006
BUILDING 413
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT NUMBER CTO 00103	
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APPROVED BY	DATE
DRAWING NO. FIGURE 3-1	REV 0

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Rev. 1
03/19/07



LEGEND	
	Monitoring Well
	Fence
	Ditch Line
AST	Above Ground Storage Tank
NM	Not Measured
(2.82)	Water Table Elevation
	Inferred Direction of Groundwater Flow
	Equipotential Line (ft msl)
ft msl	Feet Above Mean Sea Level



DRAWN BY K. PEILA	DATE 4/12/06
CHECKED BY D. SIEFKEN	DATE 9/28/06
COST/SCHEDULE-AREA	
SCALE AS NOTED	



GROUNDWATER ELEVATION CONTOUR
FEBRUARY 13, 2006
BUILDING 413
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

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

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Using a hydraulic conductivity of 4.34 ft/day, a hydraulic gradient of 0.0026 ft/ft, an inferred effective porosity value of 0.30, and Darcy's law, the groundwater seepage velocity across the site was calculated at 0.0376 ft/day or 13.724 ft per year. However, the reversal in flow direction with tidal influences likely results in a lower velocity.

3.2 SOIL SCREENING RESULTS

Soil vapor screening methods and sampling locations for headspace analyses are discussed in Section 2.4.1. Twenty-four samples were screened for organic vapors, 2 from each of the 12 borings. None of the samples produced an instrument response greater than background concentrations. The screening locations can be viewed on the Soil Boring Locations figure (see Figure 2-1).

3.3 SOIL SAMPLE ANALYTICAL RESULTS

3.3.1 Mobile Laboratory

No targeted constituent was detected in the eight soil samples analyzed by the mobile laboratory. Detection limits were 0.01 mg/kg for BTEX and 0.05 mg/kg for MTBE and the three naphthalene compounds. A copy of KB Laboratories' analytical report is provided in Appendix F, and Figure 2-1 depicts the corresponding soil sample locations of the collected soil samples numbers 1-8.

3.3.2 Fixed-Base Laboratory

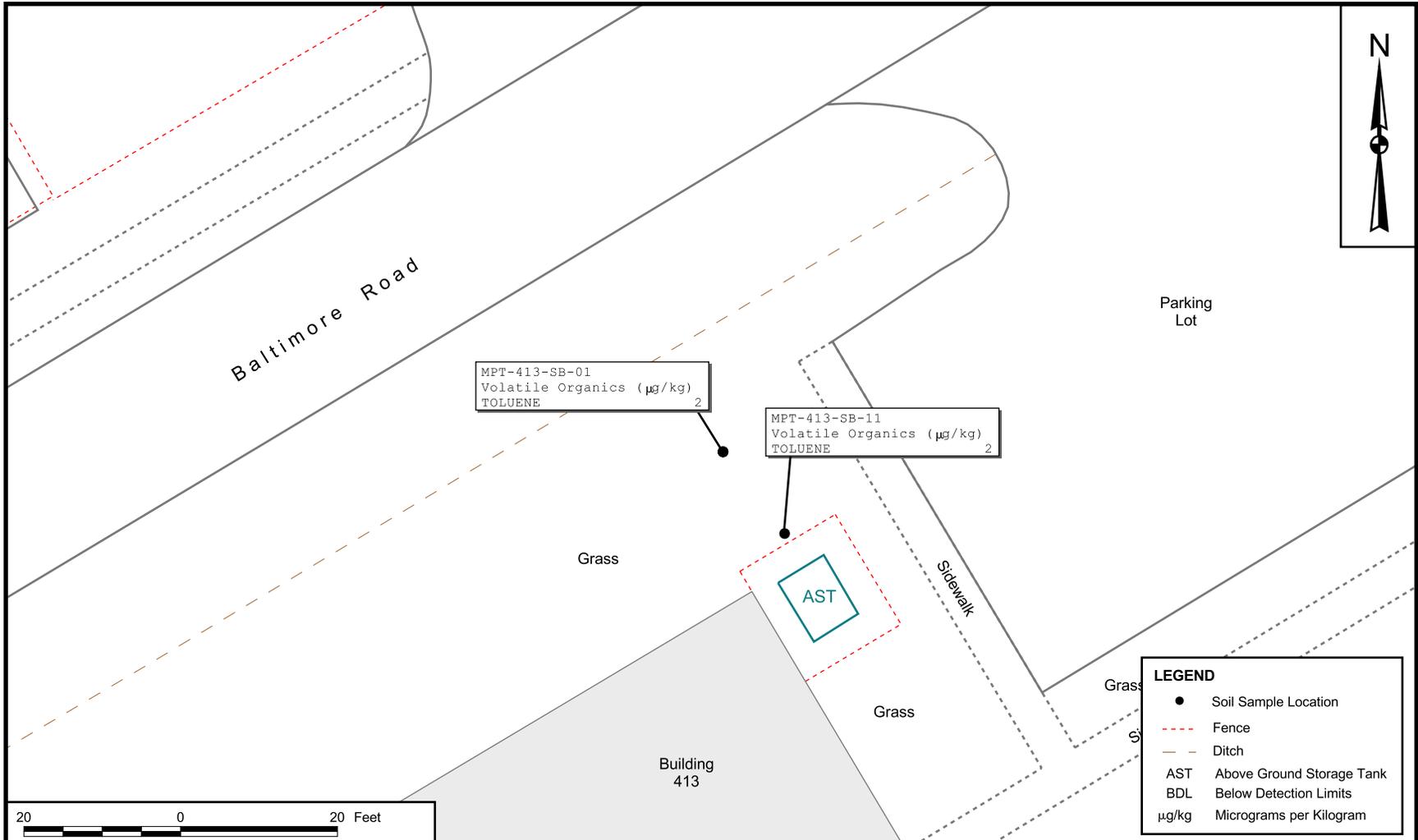
Soil samples submitted to ENCO for GAG/KAG analysis were SB-011 (2 ft) and SB-01 (2 ft). Detected concentrations reported by the laboratory are listed in Table 3-2. Toluene was reported at 2 parts per billion in both soil samples which is just above the lab detection limits as shown on Figure 3-3. The laboratory report submitted by ENCO is provided as Appendix G. No other detections were recorded.

Table 3-2 Compounds Detected in Soil Samples by Fixed-Base Laboratory Site Assessment Report, Site 413 Naval Station Mayport Mayport, Florida					
Compound	FDEP SCTL (mg/kg)			Sample ID and Sample Interval	
	Residential	Industrial	Leachability	SB-03 2 ft	SB-11 2 ft
<u>VOCs (USEPA Method 8260B) (mg/kg)</u>					
Toluene	380	2600	0.5	0.002	0.002

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3-6

CTO 0386



LEGEND	
●	Soil Sample Location
- - -	Fence
- - -	Ditch
AST	Above Ground Storage Tank
BDL	Below Detection Limits
µg/kg	Micrograms per Kilogram

DRAWN BY K. PEILA	DATE 3/28/06
CHECKED BY D. SIEFKEN	DATE 5/18/06
COST/SCHEDULE-AREA	
SCALE AS NOTED	



**FIXED-BASE LABORATORY SOIL
 ANALYTICAL RESULTS
 BUILDING 413
 NAVAL STATION MAYPORT
 MAYPORT, FLORIDA**

CONTRACT NUMBER CTO 00103	
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DRAWING NO. FIGURE 3-3	REV 0

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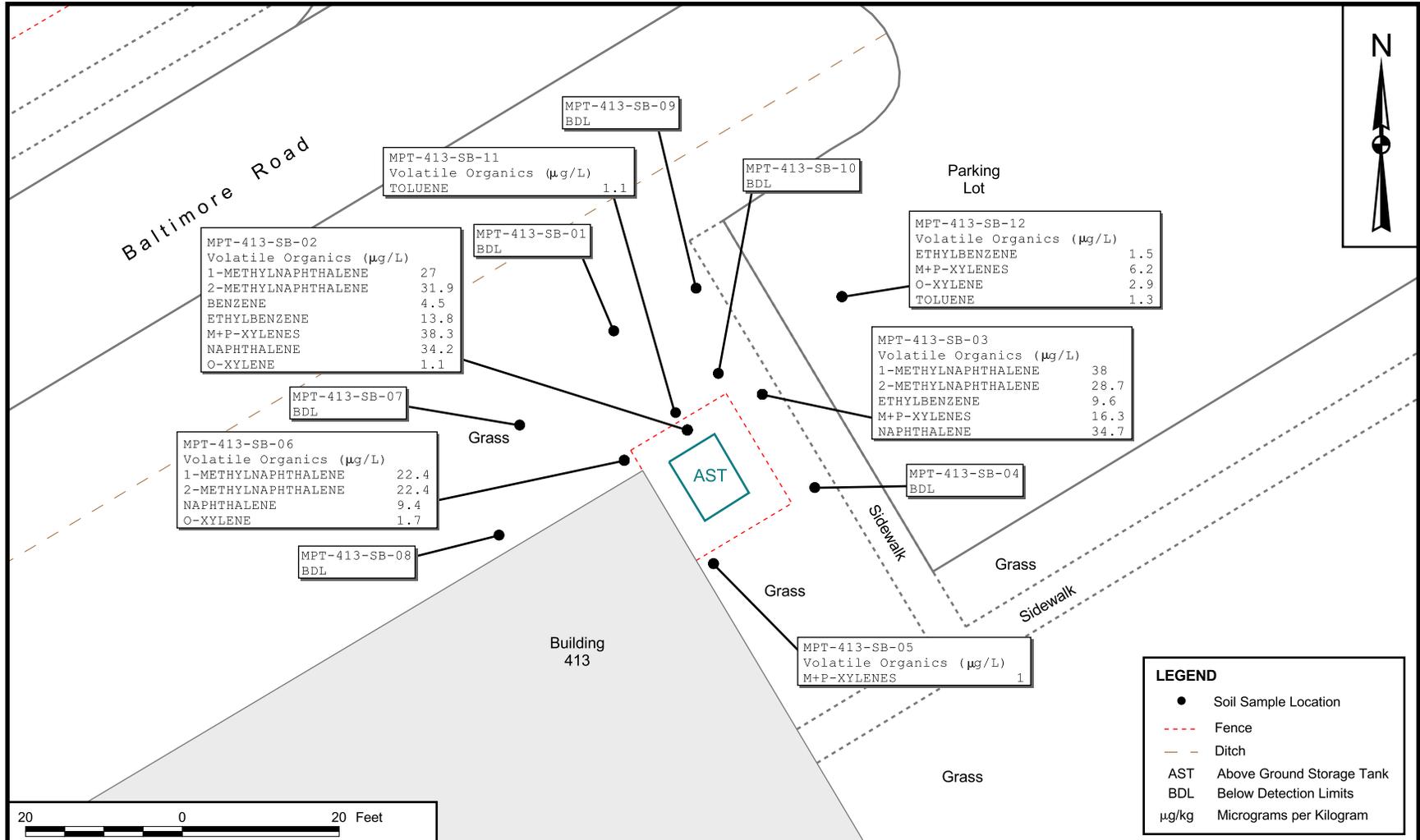
3.4 GROUNDWATER ANALYTICAL RESULTS

3.4.1 Mobile Laboratory

Detected concentrations of COCs reported by the mobile laboratory are listed on Table 3-3 and illustrated on Figure 3-4. The largest number of detections and GCTL exceedances were reported in the sample collected from SB-02 on the northern side of the AST near the former sump location where Earth Systems had reported contamination in their closure report (Earth Systems, 2004). In this sample, concentrations exceeding GCTLs were reported for benzene [4.5 micrograms per liter (µg/L)], total xylenes (39.4 µg/L), naphthalene (34.2 µg/L), and 2-methylnaphthalene (31.9 µg/L). Values slightly exceeding GCTLs were reported for the three naphthalene compounds in samples collected from SB-03, located approximately 15 ft east of SB-02. As shown on Figure 3-4, detections were reported in five other samples analyzed; however, exceedances were only reported in samples from SB-02 and -03. During Phase I of the field operations, an attempt was made to reach depths near 40 ft bls, but refusal was met at 17 ft bls. One sample collected from SB-11 was collected from 17ft bls to assess vertical extent. Analytical results for the vertical extent sample (SB-11) were equal to laboratory detection limits for VOCs for both the mobile laboratory and fixed-base laboratory. The analytical report submitted by KB Laboratories is included in Appendix F.

Table 3-3							
Compounds Detected in Groundwater Samples by Mobile Laboratory							
Site Assessment Report, Site 413							
Naval Station Mayport							
Mayport, Florida							
Compound	GCTL (µg/L)	Sample ID and Sample Date					
		SB-01	SB-02	SB-03	SB-04	SB-05	SB-06
		8/08/05	8/08/05	8/08/05	8/08/05	8/08/05	8/08/05
VOCs, USEPA Method 8260B (µg/L)							
Benzene	1	<1.0	4.5	<1.0	<1.0	<1.0	<1.0
Toluene	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	30	<1.0	13.8	9.6	<1.0	<1.0	<1.0
Total Xylenes	20	<1.0	39.4	16.3	<1.0	1.0	1.7
Naphthalene	14	<5.0	34.2	34.7	<50	<50	9.4
1-Methylnaphthalene	28	<5.0	27.0	38.0	<5.0	<5.0	22.4
2-Methylnaphthalene	28	<5.0	31.9	28.7	<5.0	<5.0	22.4
Compound	GCTL (µg/L)	Sample ID and Sample Date					
		SB-07	SB-08	SB-09	SB-10	SB-11	SB-12
		8/08/05	8/08/05	8/08/05	8/08/05	8/08/05	8/09/05
VOCs, USEPA Method 8260B (µg/L)							
Benzene	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	40	<1.0	<1.0	<1.0	<1.0	1.1	1.3
Ethylbenzene	30	<1.0	<1.0	<1.0	<1.0	<1.0	1.5
Total Xylenes	20	<1.0	<1.0	<1.0	<1.0	<1.0	9.1
Naphthalene	14	<5.0	<5.0	<5.0	<5.0	<50	<5.0
1-Methylnaphthalene	28	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Methylnaphthalene	28	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

Note: Bold exceeds Chapter 62-770, FAC, GCTLs.



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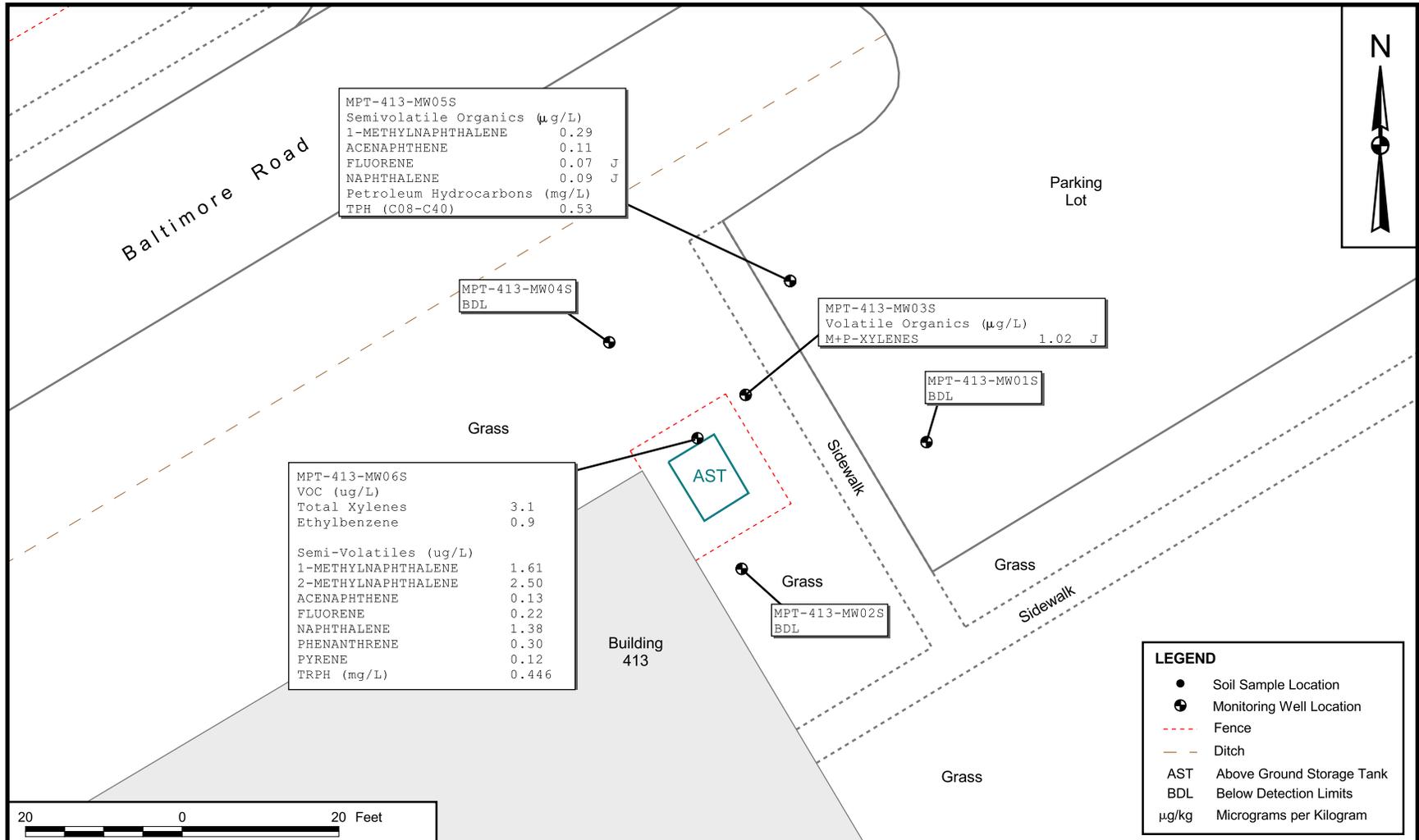
MOBILE LABORATORY GROUNDWATER
ANALYTICAL RESULTS
BUILDING 413
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT NUMBER CTO 00103	
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3-10

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COST/SCHEDULE-AREA	
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**FIXED-BASE LABORATORY GROUNDWATER
 ANALYTICAL RESULTS
 BUILDING 413
 NAVAL STATION MAYPORT
 MAYPORT, FLORIDA**

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FIGURE 3-5	0

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4.0 DISCUSSION

In April 2001, closure activities for the underground piping and sump associated with AST N413 were completed. The sump was closed in place, and the piping was removed. New piping to service the AST is attached to the building wall. In July 2004, Earth Systems performed a closure assessment for the underground piping and sump associated with the AST. "Excessively contaminated" soil was identified in a soil sample collected 3 ft bls at the location of the closed sump on the northern side of the AST. A duplicate of this sample was analyzed by a fixed-base laboratory. TRPH, BTEX, and the three naphthalene compounds (naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene) were reported at concentrations exceeding SCTLs based on soil leachability criteria. No soil contamination outside of the sump area was recorded. Earth Systems documents the depth to groundwater during their investigation being 3.5 ft bls.

Based on the Earth Systems limited assessment, groundwater impacts were also only detected near the sump area. Constituents of benzene, ethylbenzene, total xylenes, and naphthalene were identified at concentrations exceeding FDEP GCTLs in a groundwater sample collected from a temporary monitoring installed near the sump.

Approximately 2 years later, TtNUS was tasked with completing an assessment of the same area. The assessment of the soil and groundwater surrounding the AST was the focus by both TtNUS and Earth Systems. Although similar sample locations were selected, there was limited similarity in the findings. The disjunction of the soil sample results between the Earth Systems and TtNUS assessments rests in the determination of groundwater hydrology. For soil vapor measurements, TtNUS did not screen below 2 ft bls, while Earth Systems recorded "excessively contaminated" soils only at 3 ft bls. TtNUS field personnel did identify an area approximately 3 ft bls near the sump (SB-02) which did contain petroleum odors in the soil. This soil appeared damp and, therefore, was not collected for field screening. The soil samples were not collected for screening below 2 ft bls because the samples were to be collected from above the capillary region. Heavy rain events can easily temporarily raise the capillary region of the water table a foot or more creating a broader smear zone. TtNUS personnel screened soils down to 2 ft bls, which did not elicit an instrument response.

Groundwater sample results were collected in the region of the former sump from the following three sources: a temporary well (Earth Systems), a DPT groundwater sampler, and monitoring well MW-06S (TtNUS). During Phase 1 of the TtNUS assessment groundwater samples collected from the DPT groundwater sampler were sent to an on-site mobile laboratory for analysis. In both cases, similarities were present with exceedances in VOCs and PAHs. Exceedances during the TtNUS assessment were recorded in boring numbers SB-02 and SB-03 which are approximately 15 ft apart. Soil boring SB-02 is

located within a few feet of the sump while SB-03 is located approximately 15 ft to the east. Both groundwater analytical results collected from SB-02 and SB-03 and analyzed by a mobile lab were similar in concentration and most constituents. To assess this potential release, Phase II of the assessment began with the installation of monitoring wells. Six monitoring wells were installed with monitoring wells MW-01S, MW-02S, MW-04S, MW-05S, and MW-06S located in positions surrounding the AST, and monitoring well MW-06S was installed in the source area near the sump. Groundwater samples were collected for analyses of GAG/KAG constituents at a fixed-base laboratory. Based on these groundwater analytical results, minimal petroleum impacts (VOC, PAH, and TRPH) are present, but below GCTL values.

Based on findings no vadose soil impacts are present. The presence of petroleum was found in the groundwater at levels below GCTLs.

5.0 SUMMARY

A SA was performed at Site 413, NAVSTA Mayport, in which soil samples were screened with an OVA-FID for organic vapor content, and soil and groundwater samples were analyzed by mobile and fixed-base laboratories for GAG and KAG constituents. The investigation was centered on a former sump area which was located on the northern side of AST N413.

Prior to soil and groundwater assessment activities, four piezometers were installed. Based on the groundwater flow determination from these piezometers, five permanent monitoring wells were installed. Based on the wells and historical documentation, groundwater flow is to the north towards the St. Johns River, but is heavily influenced by tidal fluctuations.

Twelve soil borings were advanced by DPT in and around the sump area during the preliminary phase of the assessment evaluation of soil and groundwater quality, and five permanent monitoring wells were installed and sampled during a follow-up phase. The water table was encountered at approximately 4 ft bls, and soil samples were collected at the 1ft and 2 ft intervals above the water table. Collected soil samples were screened with an OVA-FID and had no "excessively contaminated soil" per Chapter 62-770, FAC, since no sample was recorded above background levels.

Eight of the 12 soil samples were analyzed by the mobile laboratory. None of the petroleum constituents targeted were reported a concentrations equal to or exceeding regulatory criteria.

Concentrations exceeding GCTLs were reported in 2 of 12 groundwater grab samples (SB-02 and SB-03) analyzed by the mobile laboratory during DPT assessment. Groundwater sample collected from soil borings SB-02 concentrations exceeding GCTLs were reported for benzene (4.5 µg/L), total xylenes (39.4 µg/L), naphthalene (34.2 µg/L), and 2-methylnaphthalene (31.9 µg/L). Similar values slightly exceeding GCTLs were reported for the three naphthalene compounds in samples collected from TMW-03, located approximately 15 ft east of TMW-02. Both of these samples were collected in the area of the former sump with TWM-02 being located at the former sump.

No exceedances were reported by the fixed-base laboratory in groundwater samples collected from 5 permanent monitoring wells. Monitoring well MW-03S is located between soil boring SB-02 (source area) and SB-03 where both mobile laboratory groundwater samples recorded exceedances to the GCTLs.

Based on the findings of the assessment, petroleum impacts are not present in the soil but are present in the groundwater at concentrations below GCTLs.

6.0 RECOMMENDATIONS

Due to the lack of impact to soils and groundwater above FDEP criteria, TtNUS recommends No Further Action for Site 413.

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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
CONTAMINATION ASSESSMENT REPORT (CAR) SUMMARY SHEET

CONTAMINATION ASSESSMENT REPORT SUMMARY SHEET

Facility Name: Site 413 Reimbursement Site:

Location: NS 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: none Free product Removal: _____ (gals)
Line break. Soil Removal: _____ (cubic yds)
 Soil Incineration: _____ (cubic yds)

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

(5) Maximum Groundwater contamination levels (ppb):
 Total VOA: 0.40 µg.L benzene: BDL EDB: BDL
 lead: BDL MTBE: BDL 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: 0 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: 1/17/06 Date of last soil sampling: 8/12/05

(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: 4.0 (ft)

(13) Observed range of seasonal groundwater fluctuations: 0.1 ft (ft) (Based on water level data collected during the CAR investigation)

(14) Estimated rate of groundwater flow: 0.0376 (ft/day)

(15) Hydraulic gradient across site: 0.0026 (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>ft</u>	<u>Literature</u>
Effective soil porosity	<u>0.30</u>	<u>%</u>	<u>Literature</u>
Transmissivity	_____	<u>gal/day/ft</u>	<u>Specific Capacity Tests</u>

(17) Other remarks: None

APPENDIX B
TANK CLOSURE REPORT

**CLOSURE ASSESSMENT REPORT
Naval Station Building 413
Naval Station Mayport, Florida**

August 2004

Prepared For:

**Jim Bryant
Johnson Controls-Hill, LLC
P.O. Box 77
Naval Station Mayport, Florida 32212**

Prepared By:

**EARTH SYSTEMS, INC.
223 12th Avenue North
Jacksonville Beach, Florida 32250**



EARTH SYSTEMS

August 5, 2004

Mr. Jim Bryant
Johnson Controls-Hill, LLC
P.O. Box 77
Naval Station Mayport, Florida, 32212

**Re: Closure Assessment Results
Naval Station Building 413
Naval Station Mayport, Florida, 32212**

Dear Mr. Bryant:

Earth Systems, Inc. (Earth Systems) completed a Closure Assessment for the underground piping and sumps associated with aboveground storage tank (AST) N413. The underground piping was closed in place and the sumps were removed in April 2001. Under this scope of work, Earth Systems installed five soil borings, converted one of the borings into a temporary monitoring well, and collected soil and groundwater samples for laboratory analysis. Sampling was performed in accordance with Earth Systems' comprehensive quality assurance plan. As detailed below, closure results indicate that petroleum impacted soil and groundwater were encountered in the vicinity of the removed sump on the northern side of the AST. A site plan showing the location of the soil borings and temporary well is provided as **Figure 1**.

Soil Assessment

On July 8, 2004, Earth Systems installed five soil borings (SB-1 and SB-5) in the vicinity of the removed product lines and closed sumps. The soil borings were completed to a depth of one foot below the water table. The soil samples were screened with an organic vapor analyzer (OVA) in accordance with the methodology prescribed in 62-770 Florida Administrative Code (FAC). The depth to water was approximately 3.5 feet below land surface (BLS). Vadose zone methane corrected OVA responses ranged from 0 to greater than 640 parts per million (ppm).

A duplicate soil sample was retained for laboratory analysis from soil boring SB-2 at 3 feet BLS. The sample produced a methane corrected OVA response of 640 ppm. The soil sample was collected in accordance with Florida Department of Environmental Protection (FDEP) Standard Operating Procedure PCS-004. The soil sample was delivered to IntraLabs, Inc. and analyzed for Volatile Organic Aromatics (VOAs), Polynuclear Aromatic Hydrocarbons (PAHs), and Total Recoverable Petroleum Hydrocarbons (TRPH).

Soil sample SB-2 contained Benzene (0.181 mg/kg), Toluene (3.78 mg/kg), Ethylbenzene (3.61 mg/kg), Total Xylenes (33.1 mg/kg) TRPH (23600 mg/kg), Naphthalene (12.1 mg/kg), 1-Methyl Naphthalene (16.1 mg/kg), and 2-Methyl Naphthalene (26.90 mg/kg) in concentrations that exceed Soil Cleanup Target Levels (SCTLs).

A summary of the headspace data is provided on **Table 1**. The soil analytical results are summarized on **Table 2**. The soil boring locations, their highest methane corrected OVA vadose zone results, and the soil analytical results are illustrated on **Figure 2**. Soil boring logs are provided in **Appendix A**. A copy of the soil analytical report is included in **Appendix B**.

Groundwater Assessment

On July 8, 2004, soil boring SB-2 was converted into temporary well TMW-1. The temporary monitoring well was installed using a stainless steel hand auger to a depth of six feet BLS. After its installation, the well was purged and sampled in accordance with FDEP's Standard Operating Procedures. The groundwater sample was then delivered to IntraLabs and analyzed for VOAs, PAHs, and TRPH.

The groundwater sample from well TMW-1 contained Benzene [28.8 micrograms per liter (ug/L)], Ethylbenzene (45.6 ug/L), Total Xylenes (233 ug/L), Naphthalene (32 ug/L), 1-Methyl Naphthalene (22.3 ug/L), and 2-Methyl Naphthalene (24.9 ug/L) in concentrations that exceed Florida's Groundwater Cleanup Target Levels (GCTLs). The horizontal and vertical extent of the groundwater impacts has not been delineated.

Groundwater analytical data is summarized on **Table 3**. Groundwater analytical results are illustrated on **Figure 3**. Copies of the groundwater analytical report and the groundwater sampling log are included in **Appendix B**.

Summary and Recommendation

Earth Systems has completed a closure assessment at the subject property for the underground piping and sumps associated with the AST N413. The underground piping was closed in place and the sumps were removed in April 2001.

On July 8, 2004, Earth Systems installed five soil borings, converted one of the borings into a temporary monitoring well, and collected soil and groundwater samples for laboratory analysis. Analytical testing confirmed the presence of petroleum impacted soil and groundwater in the vicinity of the sump on the northern side of AST N413. Soil and groundwater contaminant levels exceed cleanup levels and will require further assessment.

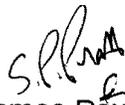
Based upon the results of this investigation, Earth Systems recommends the following:

- A Discharge Reporting Form (DRF) should be submitted to the Jacksonville Environmental Resources Management Department (ERMD). The DRF will document the presence of petroleum impacts on the property.
- A source removal excavation should be performed to remove petroleum-impacted soils from the site.
- Following completion of the closure assessment and within nine months of submittal of the DRF, a Site Assessment Report should be submitted to ERMD. The report will describe the vertical and horizontal extent of soil and groundwater contamination and make recommendations for further environmental activities, as conditions warrant.

If you have any questions concerning this Closure Assessment Report, please call me at (904) 247-0740.

Sincerely,

EARTH SYSTEMS


James Paxton
Project Manager

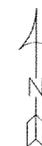
Certification:

I hereby certify that I have supervised the field work and preparation of this report, in accordance with Florida Rules and Regulations. As a registered professional geologist and/or professional engineer, as authorized by Chapters 471 or 492, Florida Statutes, I certify that I am a qualified groundwater professional, as defined by the Florida State Board of Professional Geologists.

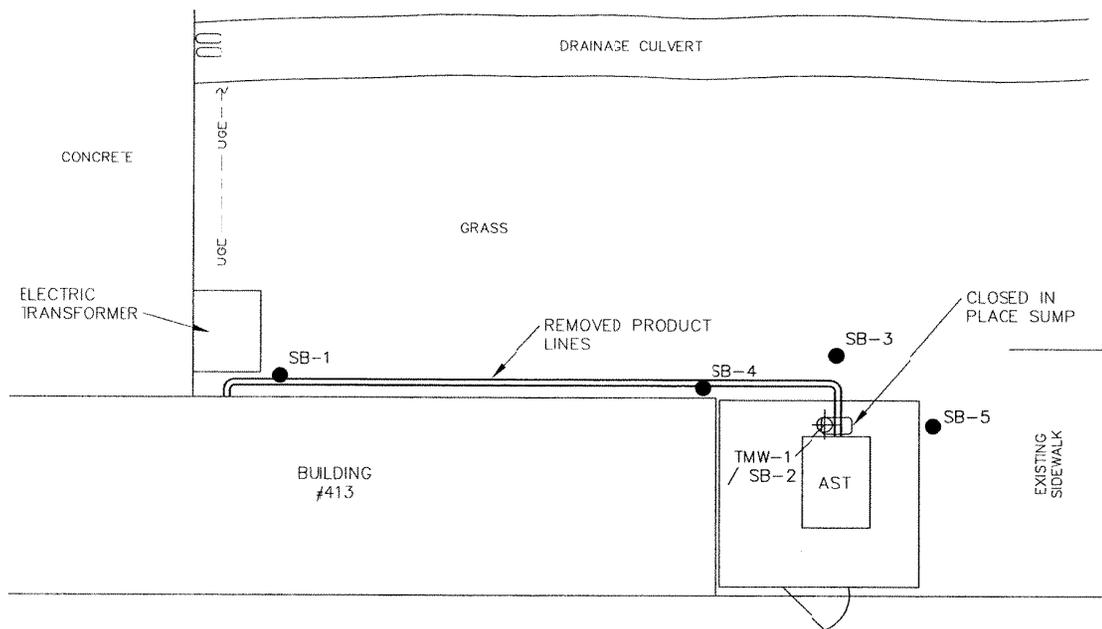
Consultant Name: Samuel P. Pratt, PG No. 01824

Signature: _____

Date: _____



BALTIMORE STREET



LEGEND	
	TEMPORARY WELL LOCATION
	SOIL BORING LOCATION



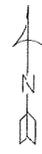
DATE:	08/04
DRAWN BY:	KMM
SCALE:	1" = 10'
FILENAME:	FIG1

FIGURE 1
SITE PLAN WITH SOIL BORING &
TEMPORARY WELL LOCATION

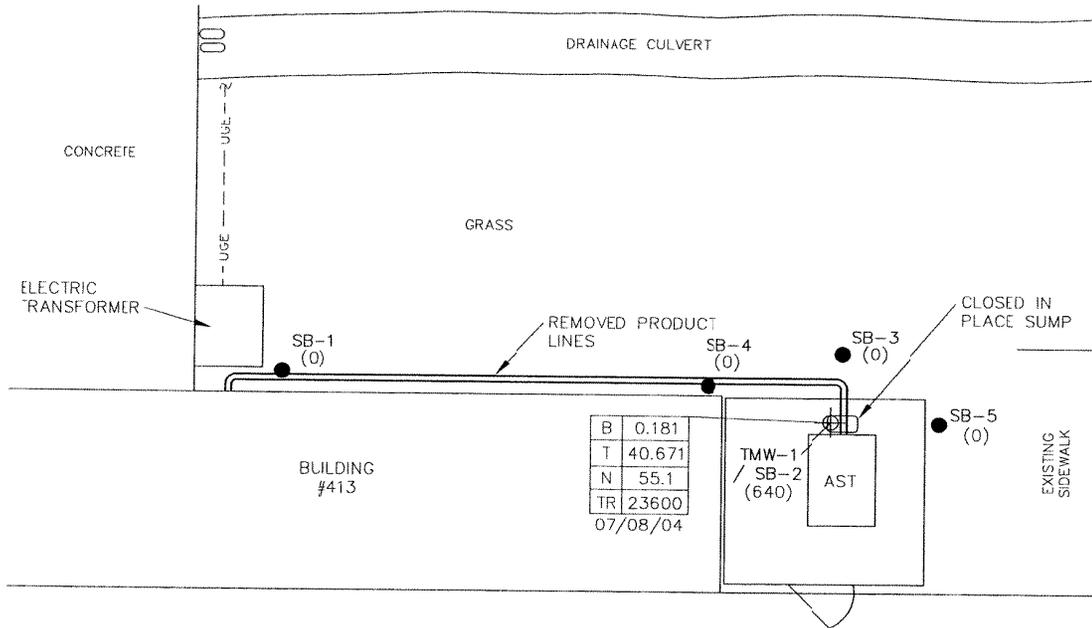


223 12TH AVENUE NORTH
JACKSONVILLE BEACH, FL 32250
OFFICE (904) 247-0740 FAX (904) 247-7650

MAYPORT NAVAL STATION
BUILDING #413
MAYPORT, FLORIDA



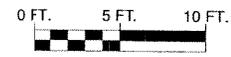
BALTIMORE STREET



B	0.181
T	40.671
N	55.1
TR	23600
07/08/04	

TMW-1
/ SB-2
(640)
AST

LEGEND	
	TEMPORARY WELL LOCATION
	SOIL BORING LOCATION
B	BENZENE (ug/L)
T	TOTAL BTEX (ug/L)
N	TOTAL NAPHTHALENES (ug/L)
TR	TRPH (ug/L)



DATE:	08/04
DRAWN BY:	KMM
SCALE:	1" = 10'
FILENAME:	FIG2

FIGURE 2
VADOSE ZONE OVA & SOIL ANALYTICAL
RESULTS MAP



EARTH SYSTEMS
223 12TH AVENUE NORTH
JACKSONVILLE BEACH, FL 32250
OFFICE (904) 247-0740 FAX (904) 247-7650

MAYPORT NAVAL STATION
BUILDING #413
MAYPORT, FLORIDA

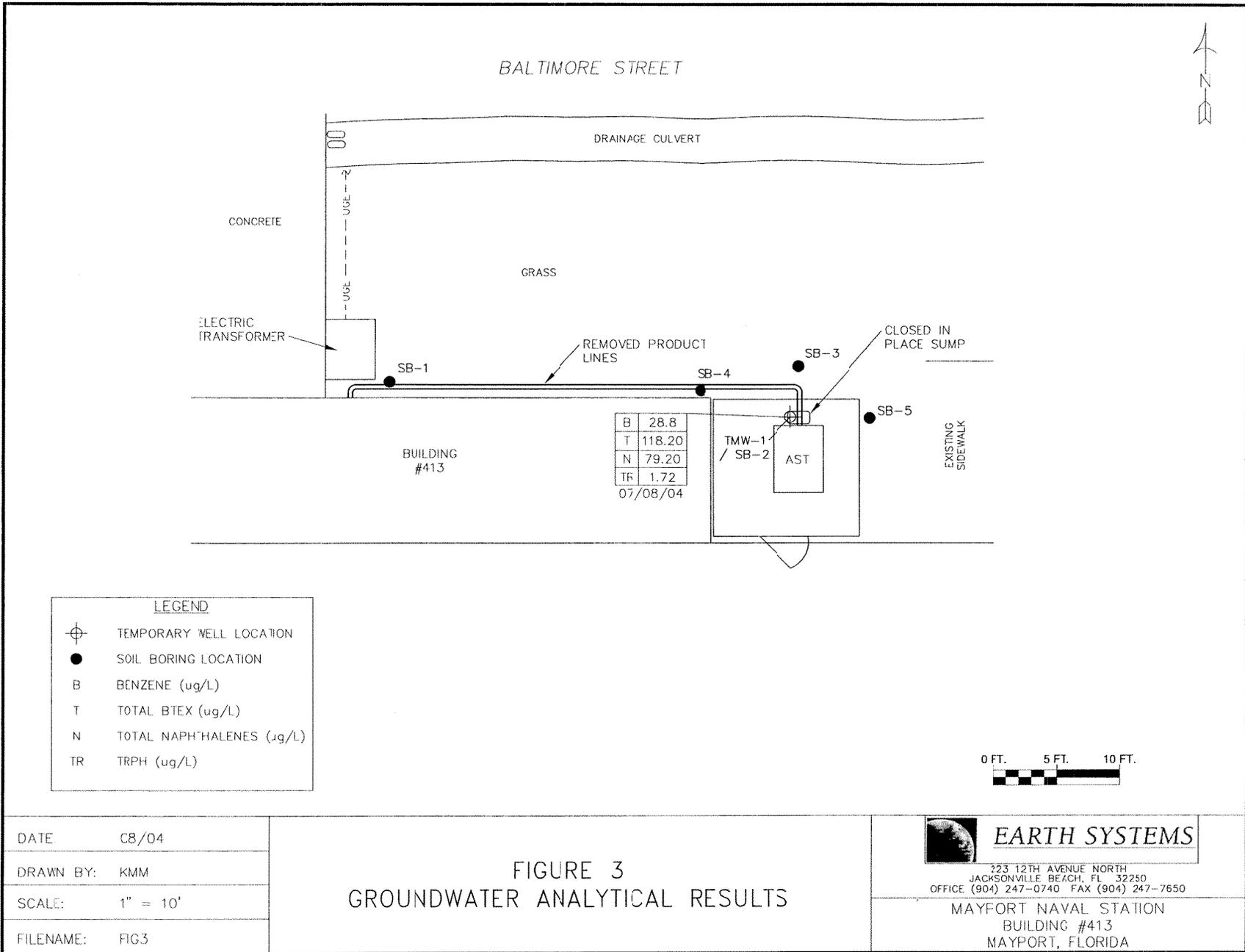


TABLE 1: SOIL SCREENING SUMMARY

Facility Name: Mayport Naval Station Bldg. 413

SAMPLE				OVA SCREENING RESULTS			
BORING NO.	DATE COLLECTED	DEPTH TO WATER	SAMPLE INTERVAL (FBLs)	TOTAL READING (ppm)	CARBON FILTERED (ppm)	NET READING (ppm)	COMMENTS
SB-1	07/08/04	3.5	1	0	NM	0	
			2	0	NM	0	
			3	0	NM	0	
			4	0	NM	0	
SB-2	07/08/04	3.5	1	0	NM	0	
			2	80	10	70	
			3	700	60	640	Sample Collected, Install TMW-1
			4	800	10	790	
SB-3	07/08/04	3.5	1	0	NM	0	
			2	0	NM	0	
			3	0	NM	0	
			4	0	NM	0	
SB-4	07/08/04	3.5	1	0	NM	0	
			2	0	NM	0	
			3	0	NM	0	
			4	0	NM	0	
SB-5	07/08/04	3.5	1	0	NM	0	
			2	0	NM	0	
			3	0	NM	0	
			4	0	NM	0	

NM = Not Measured

TABLE 2: SOIL ANALYTICAL RESULTS

Facility Name: Mayport Naval Station Bldg. 413

Sample				Benzene	Toluene	Ethylbenzene	Total Xylenes	MTEE	TRPH	Naphthalene	2-Methyl Naphthalene	1-Methyl Naphthalene
Location	Date	Collection Interval	OVA Response									
SB-2	7/8/2004	3	640	0.181	3.78	3.61	33.1	0.00789	23600	12.10	26.90	16.1
Direct Exposure, Residential				1.1	380	1100	5900	3200	340	40	30	68
Leachability (based on GW)				0.007	0.5	0.6	0.2	0.2	340	1.7	6.1	2.2

< = below laboratory detection limit

Analytical Results = mg/kg

TRPH = Total Recoverable Petroleum Hydrocarbons

Exposure values based upon 62-777 F.A.C. criteria (August 5, 1999)

ft BLS = feet below land surface

TABLE 3: GROUNDWATER ANALYTICAL RESULTS

Facility Name: Mayport Naval Station Bldg. 413

Sample		Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	MTBE	Naphthalene	1-Methyl Naphthalene	2-Methyl Naphthalene	Total Naphthalenes	TRPH mg/L
Location	Date											
TMW-1	07/08/04	28.8	15	45.6	233	118.20	1.70	32	22.3	24.9	79.20	1.72
FDEP Target Levels		1	40	30	20		50	20	20	20		5
NA Default Concentrations		100	400	300	200		500	200	200	200		50

< = below laboratory detection limit

Analytical Results = ug/l unless noted otherwise

NCD = no compounds detected

MTBE = Methyl tert-Butyl Ether

Concentrations in bold are above FDEP Target Levels

NS = not sampled

APPENDIX A –
SOIL BORING LOGS

PROJECT: *Mayport Bldg 413*
 FDEP FAC. ID#: _____ BORING NO.: *SB-1*
 JOB NO.: _____ LOGGED BY: *JP*
 PROJ. MGR: *SP* EDITED BY: _____
 DRILLING CONTRACTOR: *Earth Systems*
 DRILL RIG TYPE: *Hand Auger*
 DRILLER'S NAME: *JP*
 SAMPLING METHODS: *Hand auger OVA*
 DRILLING TECHNIQUE: _____
 HAMMER WT.: _____ DROP: _____
 STARTED TIME: *940* DATE: *7/8/04*
 COMPLETED TIME: *1000* DATE: *7/8/04*
 BORING DEPTH (ft.): *4'* BOREHOLE DIA: *4"*
 CASING DEPTH (ft.): _____
 WATER DEPTH (ft.): *3.5*
 TIME: _____
 DATE: _____
 BACKFILLED TIME: _____ DATE: *7/8/04* BY: *JP*
 TOP OF CASING ELEV.: _____ DATUM: _____
 LITHOLOGIC DESCRIPTION: _____

SAMPLE DEPTH	SAMPLER TYPE	BLOWS/6INC	INCHES DRIVEN	MOISTURE (dry,mois; wet,sat.)	ODOR	UNFILTERED OVA (PPM)	FILTERED OVA (PPM)	CORRECTED OVA (PPM)	DEPTH IN FEET	USCS OR ASTM CODE
<i>1</i>				<i>2</i>	<i>NO</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>Sw</i>
<i>2</i>				<i>1</i>	<i>NO</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>Sw</i>
<i>3</i>				<i>3</i>	<i>NO</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>Sw</i>
<i>4</i>				<i>4</i>	<i>NO</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>Sw</i>
									<i>5</i>	
									<i>6</i>	
									<i>7</i>	
									<i>8</i>	
									<i>9</i>	
									<i>10</i>	

PROJECT: *Mayport Oldg 413*
 FDEP FAC. ID#: _____ BORING NO.: *SB-2*
 JOB NO.: _____ LOGGED BY: *JP*
 PROJ. MGR: *Sam Pratt* EDITED BY: _____
 DRILLING CONTRACTOR: *Furth Systems*
 DRILL RIG TYPE: *Hand Auger*
 DRILLER'S NAME: *JP*
 SAMPLING METHODS: *Handforce*
 DRILLING TECHNIQUE: *" "*
 HAMMER WT.: _____ DROP: _____
 STARTED TIME: *1020* DATE: *7/8/04*
 COMPLETED TIME: *1030* DATE: *7/8/04*
 BORING DEPTH (ft.) *4* BOREHOLE DIA: *4"*
 CASING DEPTH (ft.) _____
 WATER DEPTH (ft.) *3.5*
 TIME: _____
 DATE: _____
 BACKFILLED TIME: _____ DATE: *7/8/04* BY: *JY*
 TOP OF CASING ELEV.: _____ DATUM: _____
 LITHOLOGIC DESCRIPTION:

SAMPLE DEPTH	SAMPLER TYPE	BLOWS/6INC	INCHES DRIVEN	MOISTURE (dry, moist, wet, sat)	ODOR	UNFILTERED OVA (PPM)	FILTERED OVA (PPM)	CORRECTED OVA (PPM)	DEPTH IN FEET	USCS OR ASTM CODE
1				d no	0	-	0		1	Sw
2				d yes	80	10	70		2	Sw
3				W yes	700	60	640		3	Sw
4				W yes	800	10	790		4	Sw
									5	
									6	
									7	
									8	
									9	
									10	

collected soil sample
 install Truwell 6'
 collect water sample

PROJECT: *Maryport Bldg 413*
 FDEP FAC. ID#: _____ BORING NO.: *3*
 JOB NO.: _____ LOGGED BY: *JP*
 PROJ. MGR: *JP* EDITED BY: _____
 DRILLING CONTRACTOR: *Earle Systems*
 DRILL RIG TYPE: *Hand Auger*
 DRILLER'S NAME: *JP*
 SAMPLING METHODS: *OVA Headspace*
 DRILLING TECHNIQUE: *Hand Auger*
 HAMMER WT.: _____ DROP: _____
 STARTED TIME: *1200* DATE: *7/8/04*
 COMPLETED TIME: *1315* DATE: *7/8/04*
 BORING DEPTH (ft.) *2* BOREHOLE DIA: *1/2*
 CASING DEPTH (ft.) *3*
 WATER DEPTH (ft.) *2.5*
 TIME: _____
 DATE: _____
 BACKFILLED TIME: _____ DATE: *7/8/04* BY: *JP*
 TOP OF CASING ELEV.: _____ DATUM: _____
 LITHOLOGIC DESCRIPTION: _____

SAMPLE DEPTH	SAMPLER TYPE	BLOWS/6INC	INCHES DRIVEN	MOISTURE (dry, moist wet, sat.)	ODOR	UNFILTERED OVA (PPM)	FILTERED OVA (PPM)	CORRECTED OVA (PPM)	DEPTH IN FEET	USCS OR ASTM CODE
<i>1</i>				<i>2</i>	<i>W</i>	<i>0</i>	<i>-</i>	<i>0</i>	<i>1</i>	<i>SW</i>
<i>2</i>				<i>2</i>	<i>W</i>	<i>0</i>	<i>-</i>	<i>0</i>	<i>2</i>	
<i>3</i>				<i>2</i>	<i>W</i>	<i>0</i>	<i>-</i>	<i>0</i>	<i>3</i>	
<i>4</i>				<i>2</i>	<i>W</i>	<i>0</i>	<i>-</i>	<i>0</i>	<i>4</i>	
									<i>5</i>	
									<i>6</i>	
									<i>7</i>	
									<i>8</i>	
									<i>9</i>	
									<i>10</i>	

PROJECT: *Maryland Bldg 413*
 FDEP FAC. ID#: _____ BORING NO.: *SB-4*
 JOB NO.: _____ LOGGED BY: *JP*
 PROJ. MGR: *SP* EDITED BY: _____
 DRILLING CONTRACTOR: *Earth Systems*
 DRILL RIG TYPE: *Hand Auger*
 DRILLER'S NAME: *JP*
 SAMPLING METHODS: *OVA Newspace*
 DRILLING TECHNIQUE: *Hand Auger*
 HAMMER WT.: _____ DROP: _____
 STARTED TIME: *1330* DATE: *7/8/04*
 COMPLETED TIME: *1740* DATE: *7/8/04*
 BORING DEPTH (ft.) *4* BOREHOLE DIA: *4"*
 CASING DEPTH (ft.) _____
 WATER DEPTH (ft.) *3.5*
 TIME: _____
 DATE: _____
 BACKFILLED TIME: _____ DATE: *7/8/04* BY: *JP*
 TOP OF CASING ELEV.: _____ DATUM: _____
 LITHOLOGIC DESCRIPTION: _____

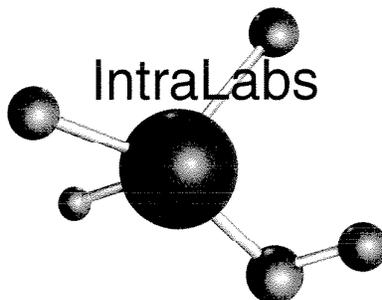
SAMPLE DEPTH	SAMPLER TYPE	BLOWS/6INC	INCHES DRIVEN	MOISTURE (dry, moist wet, sat.)	ODOR	UNFILTERED OVA (PPM)	FILTERED OVA (PPM)	CORRECTED OVA (PPM)	DEPTH IN FEET	USCS OR ASTM CODE
<i>1</i>				<i>1</i>	<i>no</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>SW</i>
<i>2</i>				<i>2</i>	<i>no</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>2</i>	<i>SW</i>
<i>3</i>				<i>3</i>	<i>no</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>3</i>	<i>SW</i>
<i>4</i>				<i>4</i>	<i>no</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>4</i>	<i>SW</i>
									<i>5</i>	
									<i>6</i>	
									<i>7</i>	
									<i>8</i>	
									<i>9</i>	
									<i>10</i>	

PROJECT: *Maywood Bldg 413*
 FDEP FAC. ID#: _____ BORING NO.: *SB-5*
 JOB NO.: _____ LOGGED BY: *JF*
 PROJ. MGR: *SP* EDITED BY: _____
 DRILLING CONTRACTOR: *Earth Systems*
 DRILL RIG TYPE: *Hand Auger*
 DRILLER'S NAME: *JF*
 SAMPLING METHODS: *DSM Hand Spun*
 DRILLING TECHNIQUE: *Hand Auger*
 HAMMER WT.: _____ DROP: _____
 STARTED TIME: *1345* DATE: *7/8/04*
 COMPLETED TIME: *1355* DATE: *7/9/04*
 BORING DEPTH (ft.) *4* BOREHOLE DIA: *4"*
 CASING DEPTH (ft.) _____
 WATER DEPTH (ft.) *3.5*
 TIME: _____
 DATE: _____
 BACKFILLED TIME: _____ DATE: *7/8/04* BY: *JF*
 TOP OF CASING ELEV.: _____ DATUM: _____
 LITHOLOGIC DESCRIPTION: _____

SAMPLE DEPTH	SAMPLER TYPE	BLOWS/6INC	INCHES DRIVEN	MOISTURE (dry,moist,wet,sat.)	ODOR	UNFILTERED OVA (PPM)	FILTERED OVA (PPM)	CORRECTED OVA (PPM)	DEPTH IN FEET	USCS OR ASTM CODE
<i>1</i>				<i>2</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>sw</i>
<i>2</i>				<i>2</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>sw</i>
<i>3</i>				<i>2</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>sw</i>
<i>4</i>				<i>2</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>4</i>	<i>sw</i>
									<i>5</i>	
									<i>6</i>	
									<i>7</i>	
									<i>8</i>	
									<i>9</i>	
									<i>10</i>	

APPENDIX B –

LABORATORY ANALYTICAL REPORT
AND GROUNDWATER SAMPLING LOGS



S. Pratt
 Earth Systems, Inc.
 223 12th. Ave. North

Jacksonville Beach, FL 32250

Page 1
 July 16, 2004
 Report # 407000379
 Order # 55793
 FDEP CompQAP# 990102

Site Location/Project
 Mayport Bldg 413

Sample I.D.: SB-2 2' 3'
 Collected: 07/08/04 10:30
 Received: 07/09/04 10:00
 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Percent Solids	86.5	%	160.3	0.10	07/14/2004	07/15/2004	E86349
8260B-LL VOA Compounds in Soils {Low Level}			MEDF	2			
Methyl-tert-butyl-ether	7.89	ug/Kg	5035/8260B	2.000	07/15/2004	07/15/2004	E86349
Benzene	181	ug/Kg	5035/8260B	2.000	07/15/2004	07/15/2004	E86349
Toluene	3780	ug/Kg	5035/8260B	2.000	07/15/2004	07/15/2004	E86349
Chlorobenzene	BDL	ug/Kg	5035/8260B	2.000	07/15/2004	07/15/2004	E86349
Ethylbenzene	3610	ug/Kg	5035/8260B	2.000	07/15/2004	07/15/2004	E86349
m & p Xylene	20100	ug/Kg	5035/8260B	2.000	07/15/2004	07/15/2004	E86349
o- Xylene	13000	ug/Kg	5035/8260B	2.000	07/15/2004	07/15/2004	E86349
Total Xylene	33100	ug/Kg	5035/8260B	2.000	07/15/2004	07/15/2004	E86349
1,3-Dichlorobenzene	BDL	ug/Kg	5035/8260B	2.000	07/15/2004	07/15/2004	E86349
1,4-Dichlorobenzene	BDL	ug/Kg	5035/8260B	2.000	07/15/2004	07/15/2004	E86349
1,2-Dichlorobenzene	BDL	ug/Kg	5035/8260B	2.000	07/15/2004	07/15/2004	E86349
8270C PAHs (610) in SOILS and Wastes by GC-MS			MEDF	1			
Naphthalene	12.1	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
2-Methylnaphthalene	26.9	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
1-Methylnaphthalene	16.1	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Phenanthrene	11.2	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349

S. Pratt
 Earth Systems, Inc.
 223 12th. Ave. North

Jacksonville Beach, FL 32250

Page 2
 July 16, 2004
 Report # 407000379
 Order # 55793
 FDEP CompQAP# 990102

Site Location/Project
 Mayport Bldg 413

Sample I.D.: SB-2 ^{3'} 58'
 Collected: 07/08/04 10:30
 Received: 07/09/04 10:00
 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/12/2004	07/13/2004	E86349
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Pyrene	6.16	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/12/2004	07/13/2004	E86349
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/12/2004	07/13/2004	E86349
FL-PRO (Petroleum Residual Organic w/ranges)-SOIL			MEDF	1			
GRO (C8-C10) Range	1570	mg/Kg	FL-PRO	2.000	07/12/2004	07/13/2004	E86349
DRO (C10-C28) Range	22000	mg/Kg	FL-PRO	2.000	07/12/2004	07/13/2004	E86349
TRO (C28-C40) Range	46.7	mg/Kg	FL-PRO	2.000	07/12/2004	07/13/2004	E86349

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July 16, 2004
Report # 407000379
Order # 55793
FDEP CompQAP# 990102

Site Location/Project
Mayport Bldg 413

Sample I.D.: SB-2 ^{3'} _{2'} s.e.
Collected: 07/08/04 10:30
Received: 07/09/04 10:00
Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
TOTAL PRO (C8-C40)	23600	mg/Kg	FL-PRO	2.000	07/12/2004	07/13/2004	E86349

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Qualifier following result conforms to FAC 62-160 Table 7 Unless otherwise noted, mg/Kg denotes wet weight
62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion,
the PQL shall be used.

Unless otherwise noted in the analyst section, all work was performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550

* MATRIX INTERFERENCE WITH SURROGATE AND DILUTION.



Thomas A. Carr, Principal

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 July 16, 2004
 Report # 407000379
 Order # 55795
 FDEP CompQAP# 990102

Site Location/Project
 Mayport Bldg 413

Sample I.D.: TMW-1
 Collected: 07/08/04 13:50
 Received: 07/09/04 10:00
 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
8260.B VOA {602} Compounds in Water by GC/MS			MEDF	1			
Methyl-tert-butyl-ether	1.70	ug/L	5030/8260B	1.000	07/15/2004	07/15/2004	E86349
Benzene	28.8	ug/L	5030/8260B	1.000	07/15/2004	07/15/2004	E86349
Toluene	15.0	ug/L	5030/8260B	1.000	07/15/2004	07/15/2004	E86349
Chlorobenzene	BDL	ug/L	5030/8260B	1.000	07/15/2004	07/15/2004	E86349
Ethylbenzene	45.6	ug/L	5030/8260B	1.000	07/15/2004	07/15/2004	E86349
m & p Xylene	162	ug/L	5030/8260B	1.000	07/15/2004	07/15/2004	E86349
o- Xylene	70.5	ug/L	5030/8260B	1.000	07/15/2004	07/15/2004	E86349
Total Xylene	233	ug/L	5030/8260B	1.000	07/15/2004	07/15/2004	E86349
1,3-Dichlorobenzene	BDL	ug/L	5030/8260B	1.000	07/15/2004	07/15/2004	E86349
1,4-Dichlorobenzene	BDL	ug/L	5030/8260B	1.000	07/15/2004	07/15/2004	E86349
1,2-Dichlorobenzene	BDL	ug/L	5030/8260B	1.000	07/15/2004	07/15/2004	E86349
8270C PAHs (610) in WATER by GC/MS (Ion Trap)			MEDF	1			
Naphthalene	32.0	ug/L	3510/8270C	5.000	07/12/2004	07/13/2004	E86349
2-Methylnaphthalene	24.9	ug/L	3510/8270C	5.000	07/12/2004	07/13/2004	E86349
1-Methylnaphthalene	22.3	ug/L	3510/8270C	5.000	07/12/2004	07/13/2004	E86349
Acenaphthene	BDL	ug/L	3510/8270C	3.000	07/12/2004	07/13/2004	E86349
Phenanthrene	BDL	ug/L	3510/8270C	5.000	07/12/2004	07/13/2004	E86349
Fluoranthene	BDL	ug/L	3510/8270C	0.300	07/12/2004	07/13/2004	E86349
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	07/12/2004	07/13/2004	E86349
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	07/12/2004	07/13/2004	E86349
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	07/12/2004	07/13/2004	E86349

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Jacksonville Beach, FL 32250

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 July 16, 2004
 Report # 407000379
 Order # 55795
 FDEP CompQAP# 990102

Site Location/Project
 Mayport Bldg 413

Sample I.D.: TMW-1
 Collected: 07/08/04 13:50
 Received: 07/09/04 10:00
 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	07/12/2004	07/13/2004	E86349
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	07/12/2004	07/13/2004	E86349
Fluorene	BDL	ug/L	3510/8270C	5.000	07/12/2004	07/13/2004	E86349
Anthracene	BDL	ug/L	3510/8270C	0.300	07/12/2004	07/13/2004	E86349
Pyrene	BDL	ug/L	3510/8270C	0.300	07/12/2004	07/13/2004	E86349
Chrysene	BDL	ug/L	3510/8270C	1.000	07/12/2004	07/13/2004	E86349
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	07/12/2004	07/13/2004	E86349
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	07/12/2004	07/13/2004	E86349
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	07/12/2004	07/13/2004	E86349
FL-PRO (Petroleum Residual Organic w/ranges)-WATER			MEDF	1			
GRO (C8-C10) Range	BDL	mg/L	FL-PRO	0.500	07/12/2004	07/13/2004	E86349
DRO (C10-C28) Range	1.72	mg/L	FL-PRO	0.500	07/12/2004	07/13/2004	E86349
TRO (C28-C40) Range	BDL	mg/L	FL-PRO	0.500	07/12/2004	07/13/2004	E86349
TOTAL PRO (C8-C40)	1.72	mg/L	FL-PRO	0.500	07/12/2004	07/13/2004	E86349

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effectuated Dilution Factor
 Qualifier following result conforms to FAC 62-160 Table 7 Unless otherwise noted, mg/Kg denotes wet weight
 62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion,
 the PQL shall be used.

Unless otherwise noted in the analyst section, all work was performed by STL MIAMI.
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 Thomas A. Carr, Principal

APPENDIX C
SOIL BORING LOGS AND LITHOLOGIC DESCRIPTIONS

APPENDIX D
CONSTRUCTION DIAGRAMS

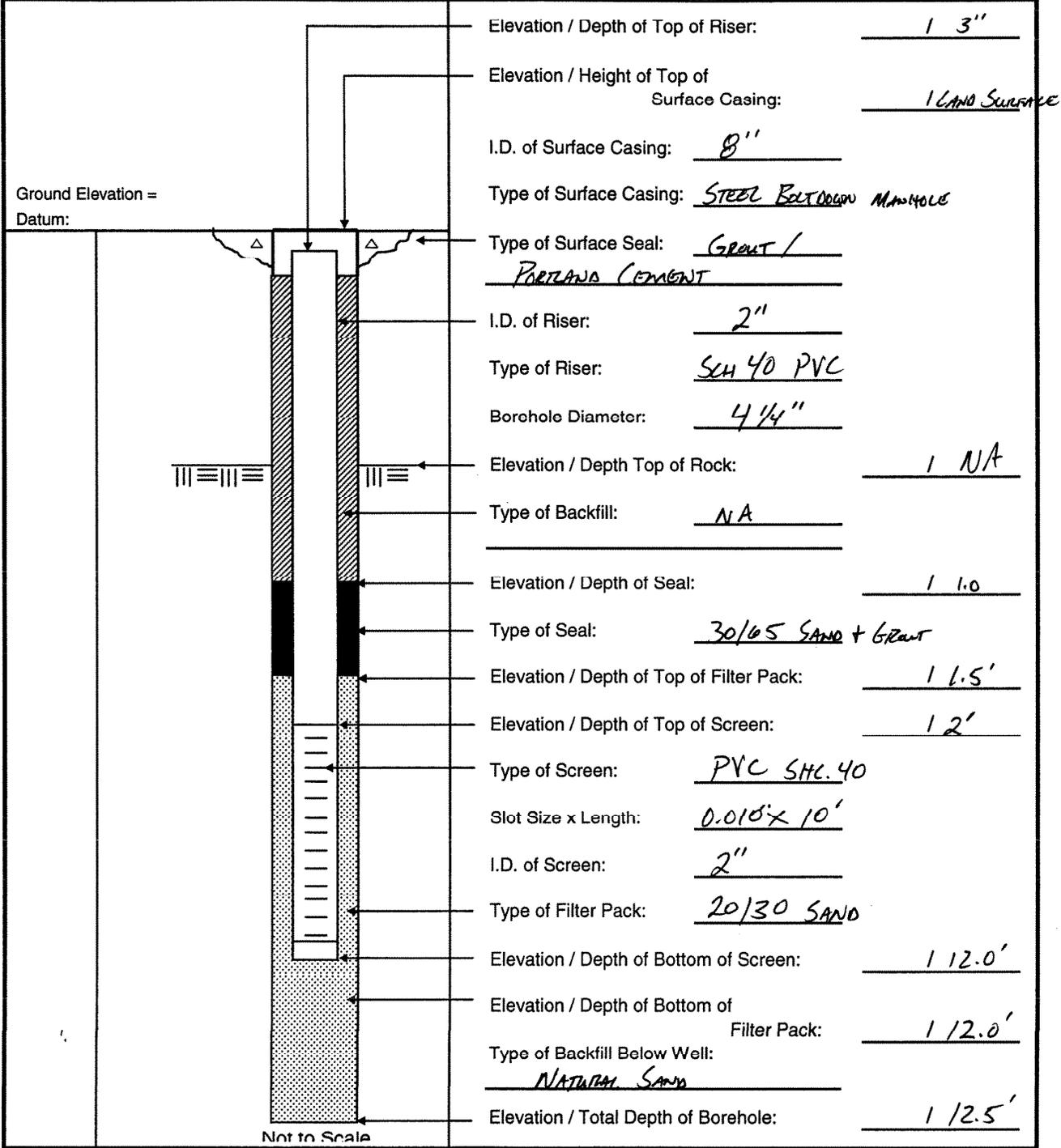


Tetra Tech NUS, Inc.

WELL No.: MPT-413-MW015'

MONITORING WELL SHEET

PROJECT: SITE 413 DRILLING Co.: PARTRIDGE BORING No.: MW015'
 PROJECT No.: 112600163 DRILLER: M. NICHOLSON DATE COMPLETED: 1/11/06
 SITE: 413 DRILLING METHOD: HSA NORTHING: _____
 GEOLOGIST: P. LEVYNETTE DEV. METHOD: PUMP EASTING: _____



Ground Elevation = Datum:

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 BOLTED MANHOLE
 Type of Surface Seal: GRAUT / 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 + GRANT
 Elevation / Depth of Top of Filter Pack: 1 1.5'
 Elevation / Depth of Top of Screen: 1 2'
 Type of Screen: PVC SCH. 40
 Slot Size x Length: 0.015' 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'

Not to Scale



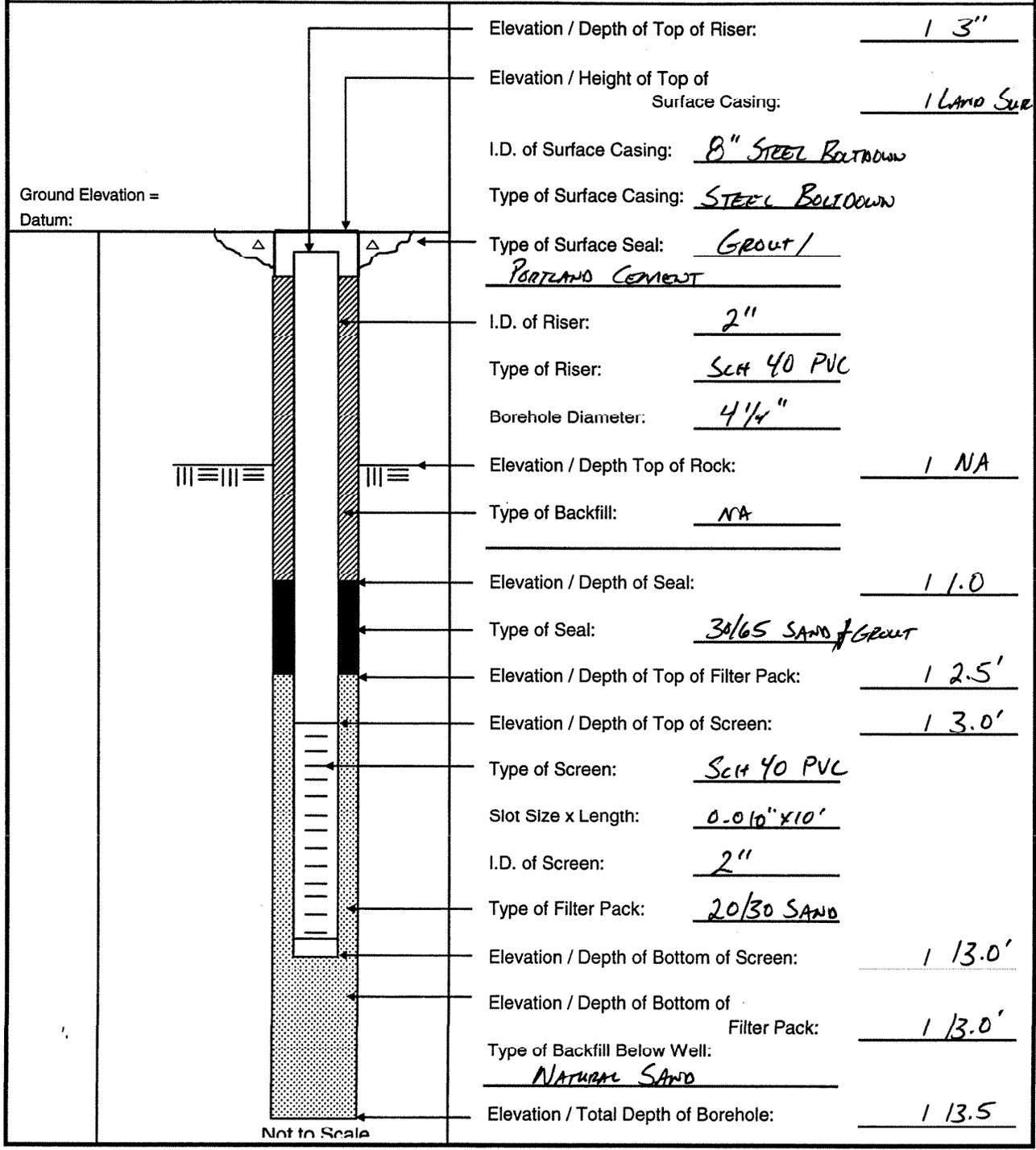
Tetra Tech NUS, Inc.

WELL No.:

NAPT-413-MW025

MONITORING WELL SHEET

PROJECT: SITE 413 DRILLING Co.: PARTRIDGE BORING No.: MW025
 PROJECT No.: 112600103 DRILLER: M. NICHOLSON DATE COMPLETED: 1/11/06
 SITE: 413 DRILLING METHOD: HSA NORTHING: _____
 GEOLOGIST: P. LEVERETTE DEV. METHOD: Pileand EASTING: _____





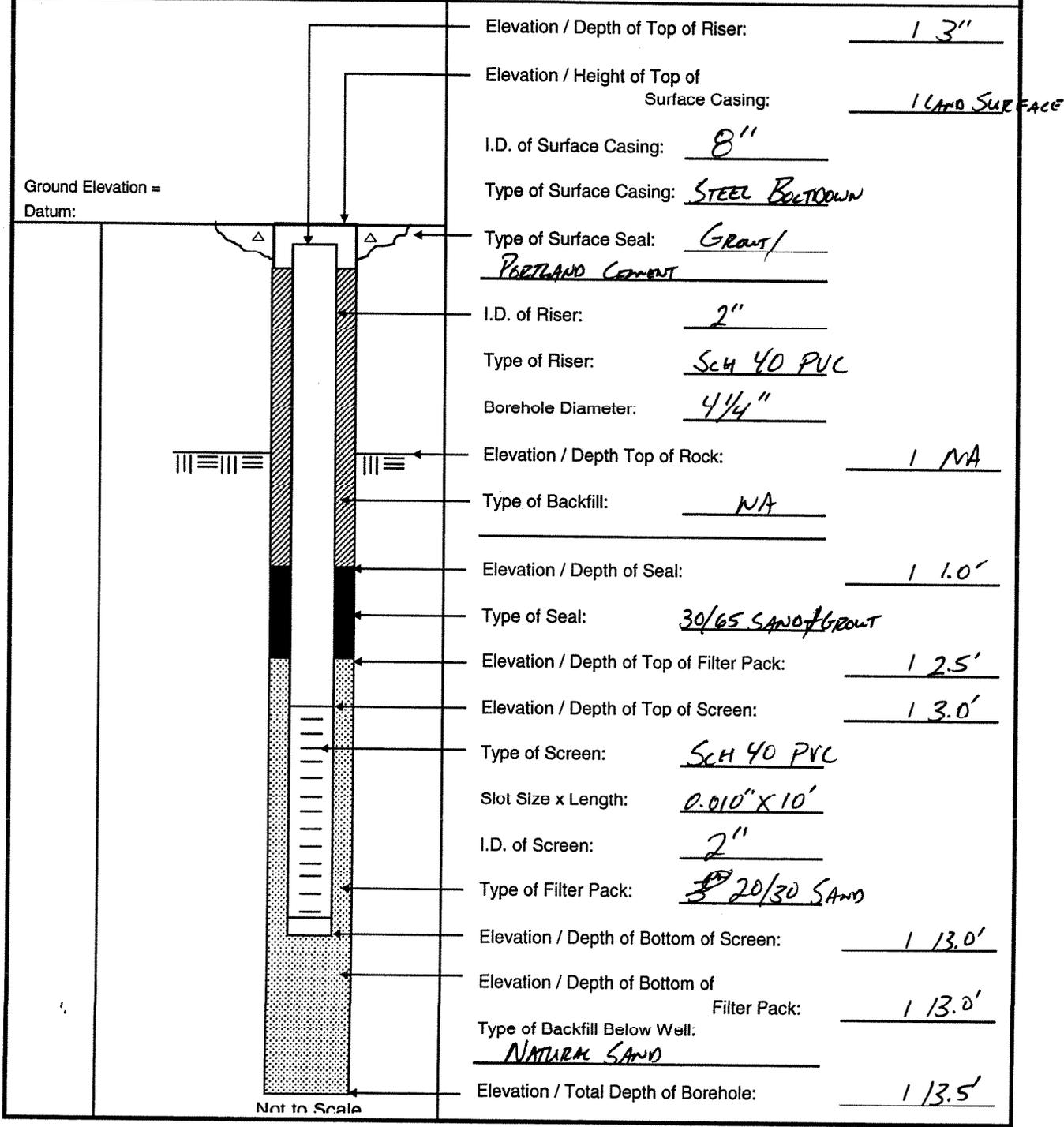
Tetra Tech NUS, Inc.

WELL No.:

MPT-413-MW03S

MONITORING WELL SHEET

PROJECT: SITE 413 DRILLING Co.: PARTRIDGE BORING No.: MW03S
 PROJECT No.: 112600103 DRILLER: M. NICHOLSON DATE COMPLETED: 7/11/06
 SITE: 413 DRILLING METHOD: HSA NORTHING: _____
 GEOLOGIST: P. LEVERETTE DEV. METHOD: PUMP EASTING: _____



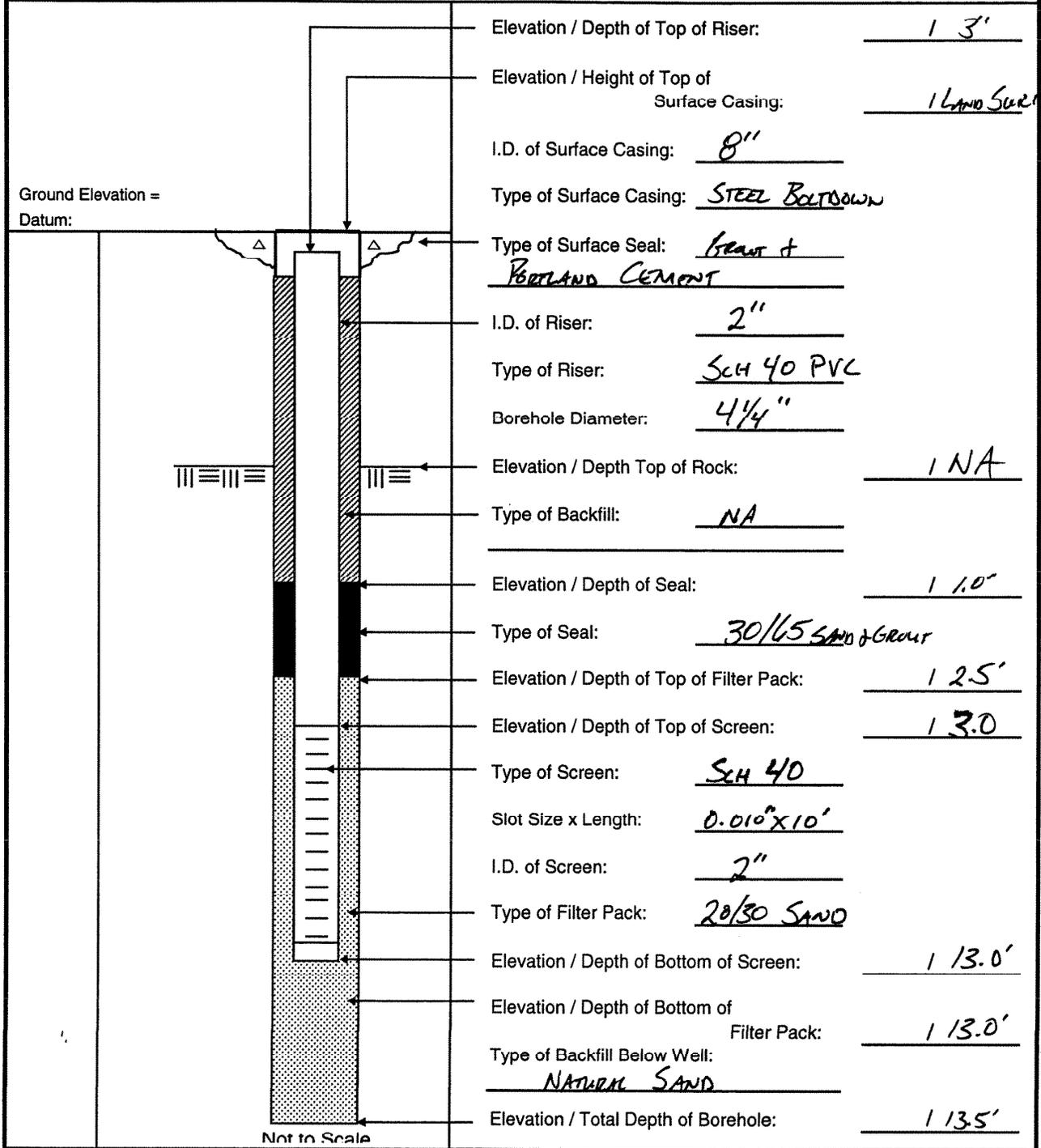


Tetra Tech NUS, Inc.

WELL No.: MPT-413-MW045'

MONITORING WELL SHEET

PROJECT: SITE 413 DRILLING Co.: PARTRIDGE BORING No.: MW045
 PROJECT No.: 112600103 DRILLER: M. NICHOLSON DATE COMPLETED: 1/11/06
 SITE: 413 DRILLING METHOD: HSA NORTHING: _____
 GEOLOGIST: P. LEVERETTE DEV. METHOD: PUMP EASTING: _____



Ground Elevation = Datum: _____

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 BOLTSOWN

Type of Surface Seal: GRAV & 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 & GRAV

Elevation / Depth of Top of Filter Pack: 1 2.5'

Elevation / Depth of Top of Screen: 1 3.0'

Type of Screen: SCH 40

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 13.0'

Elevation / Depth of Bottom of Filter Pack: 1 13.0'

Type of Backfill Below Well: NATURAL SAND

Elevation / Total Depth of Borehole: 1 13.5'

Not to Scale



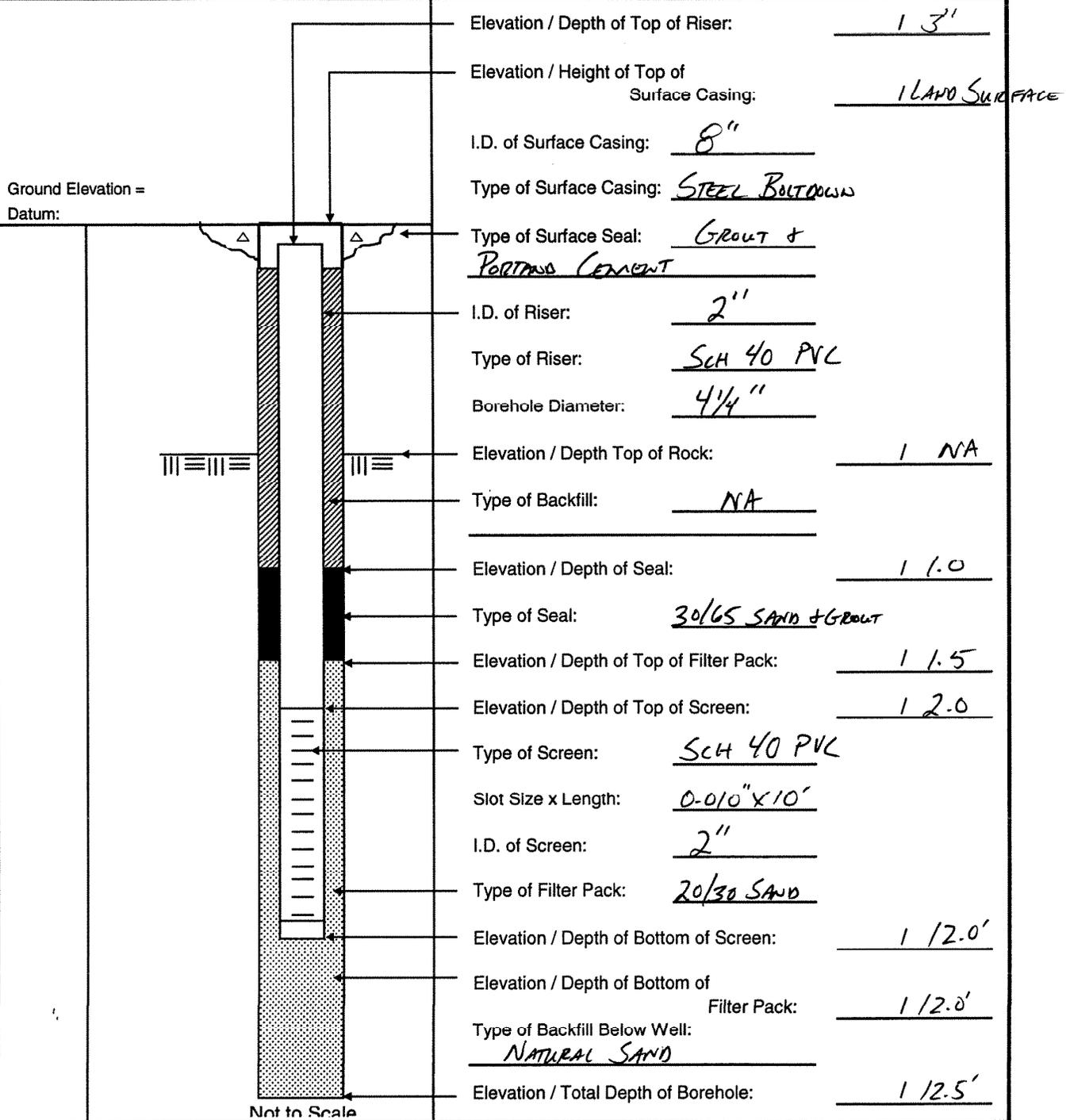
Tetra Tech NUS, Inc.

WELL No.:

MPT-413-MW055'

MONITORING WELL SHEET

PROJECT: SITE 413 DRILLING Co.: PATRIDGE BORING No.: MW055
 PROJECT No.: 112600103 DRILLER: M. NICHOLSON DATE COMPLETED: 1/11/06
 SITE: 413 DRILLING METHOD: HSA NORTHING: _____
 GEOLOGIST: P. LEVERETTE DEV. METHOD: PUMP EASTING: _____



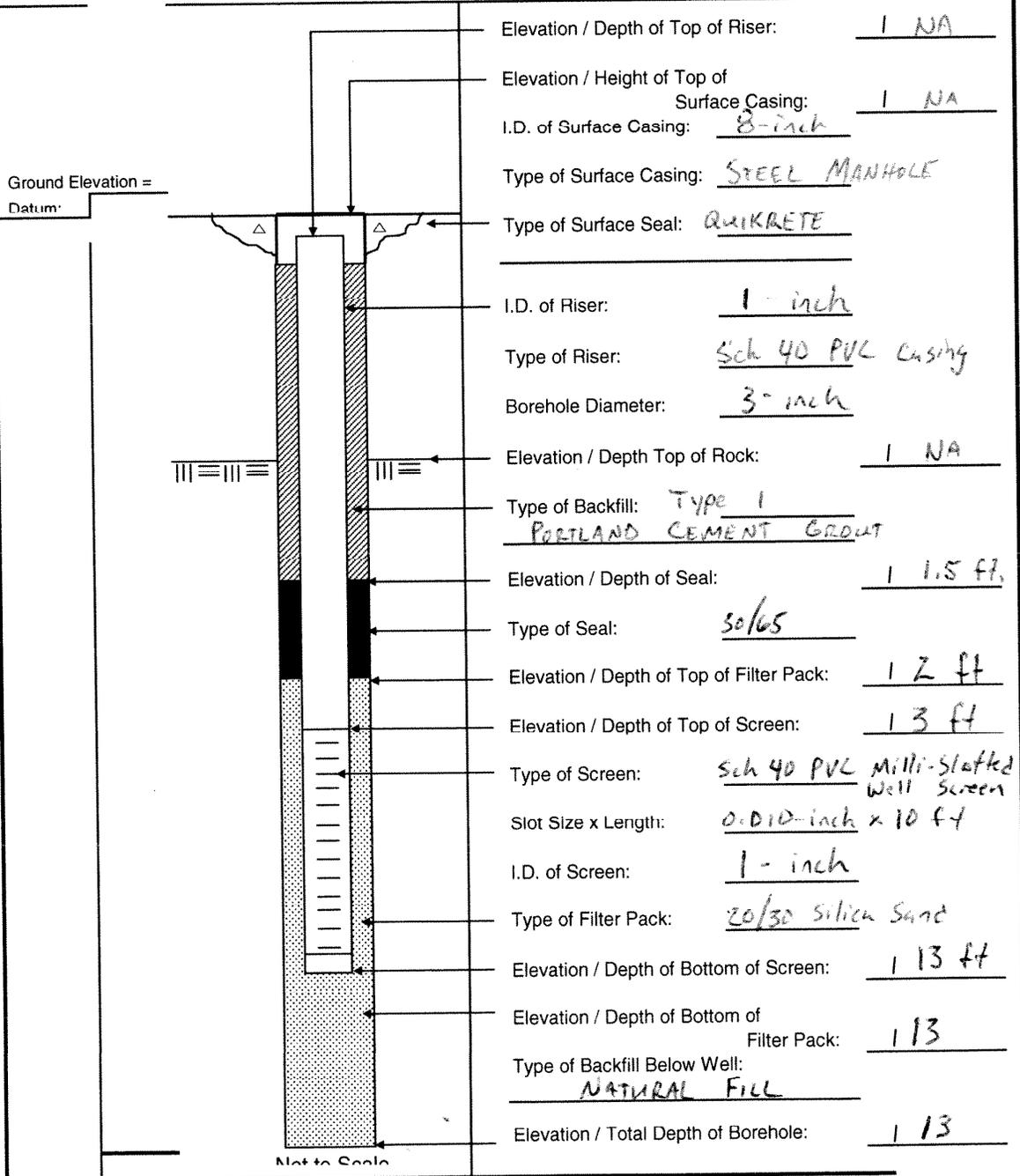


TECHNICAL SERVICES, INC.

WELL No.: MW-6

MONITORING WELL SHEET

PROJECT: CTO 386 DRILLING Co.: Partridge BORING No.: MW-6
 PROJECT No: 20G000103 DRILLER: GREG OAKES DATE COMPLETED: 8/4/06
 SITE: 413 DRILLING METHOD: DPT NORTHING: _____
 GEOLOGIST: TC DEV. METHOD: _____ EASTING: _____



APPENDIX E
GROUNDWATER FIELD SAMPLING DATA SHEETS

Tetra Tech NUS / FDEP Groundwater Sampling Sheet

SITE NAME: NAVSTA MAYPORT	SITE LOCATION: BUILDING 413
WELL NO: MW-015	SAMPLE ID: MPT-413-MW015-0106
DATE: 01/17/2006	

PURGING DATA

WELL DIAMETER (in): 2"	TOTAL WELL DEPTH (ft): 11.97	STATIC DEPTH TO WATER (ft): 4.70 @ 3.70	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) 5.0 Liters			
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)			
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6.97	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6.97	PURGING INITIATED AT: 1006	PURGING ENDED AT: 1026
		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
1006	-	-	300	3.70	-	-	-	-	-	CLEAR	NONE
1011	1.5	1.5	300	3.72	7.49	21.10	447	0.81	7.9	"	"
1016	1.5	3.0	300	3.72	7.50	21.10	447	0.57	7.8	"	"
1021	1.5	4.5	300	3.72	7.51	21.18	446	0.47	4.6	"	"
1026	1.5	6.0	300	3.72	7.51	21.13	446	0.44	3.8	"	"
SAMPLE TIME 1028											

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: 1028		SAMPLING ENDED AT: 1048	
PUMP OR TUBING DEPTH IN WELL (feet): 6.97			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	1 L	NONE	NONE	-	PAH / 8270 C	VT
PP	2	AG	1 L	H ₂ SO ₄	NONE	-	TRPH / FLPRD	VT
PP	1	PE	250 mL	HNO ₃	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 = 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 413
WELL NO: MW-053	SAMPLE ID: MPT-413-MW053-0106 DATE: 01/17/06

PURGING DATA

WELL DIAMETER (in): 2"	TOTAL WELL DEPTH (ft): 12.10	STATIC DEPTH TO WATER (ft): 3.60	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) 5.1 Liters											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7.10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.10	PURGING INITIATED AT: 1147	PURGING ENDED AT: 1207								
			TOTAL VOLUME PURGED (Liters): 6.0								
TIME	VOLUME PURGED (feet) (L)	CUMUL. VOLUME PURGED (feet) (L)	PURGE RATE (gpm) (mLpm)	DEPTH TO WATER (ft)	pH	TEMP. (°C)	COND. (µmhos/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR
1147	-	-	300	3.60	-	-	-	-	-	CLEAR	NONE
1152	1.5	1.5	300	3.62	7.18	21.17	554	0.70	11	"	"
1157	1.5	3.0	300	3.62	7.17	21.08	549	0.30	10	"	"
1202	1.5	4.5	300	3.62	7.18	21.16	548	0.26	8.3	"	"
1207	1.5	6.0	300	3.62	7.19	21.14	544	0.33	7.5	"	"
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> SAMPLE TIME 1210 </div>											
<small>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</small>											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: TINUS/ TERRY COTTENOIR				SAMPLER(S) SIGNATURES: <i>Terry Cottenoir</i>				SAMPLING INITIATED AT: 1210		SAMPLING ENDED AT: 1230	
PUMP OR TUBING DEPTH IN WELL (feet): 7.10				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				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		
PP	2	AG	1 L	H2SO4	NONE	-	TRPH/FLPRO		VT		
PP	1	PE	250 mL	HNO3	NONE	-	Pb		APP		
PP	2	CG	40 mL	NONE	NONE	2.2	EDB/9011		SM		
PP	3	CG	40 mL	HCl	NONE	2.2	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 EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump 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 413
WELL NO: MW-03S	SAMPLE ID: MPT-413-MW03S-0106 DATE: 01/17/2006

PURGING DATA

WELL DIAMETER (in): 2"	TOTAL WELL DEPTH (ft): 12.85	STATIC DEPTH TO WATER (ft): 4.29	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) 5.2 Liters											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7.85	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.85	PURGING INITIATED AT: 1241	PURGING ENDED AT: 1301								
			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
1241	-	-	300	4.29	-	-	-	-	-	CLEAR	NONE
1246	1.5	1.5	300	4.32	7.56	20.59	453	0.54	11	"	"
1251	1.5	3.0	300	4.32	7.54	20.51	451	0.19	6.9	"	"
1256	1.5	4.5	300	4.32	7.53	20.50	450	0.16	6.9	"	"
1301	1.5	6.0	300	4.32	7.51	20.50	451	0.14	5.2	"	"
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> SAMPLE TIME 1303 </div>											
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: 1303	SAMPLING ENDED AT: 1323					
PUMP OR TUBING DEPTH IN WELL (feet): 7.85	SAMPLE PUMP FLOW RATE (mL per minute): 200/5M	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	1 L	NONE	NONE	-	PAH/8270C	VT
PP	2	AG	1 L	H ₂ SO ₄	NONE	-	TRPH/FLPRD	VT
PP	1	PE	250 mL	HNO ₃	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 413
WELL NO: MW-028	SAMPLE ID: MPT-413-MW028-0106 DATE: 01/17/2006

PURGING DATA

WELL DIAMETER (in): 2"	TOTAL WELL DEPTH (ft): 12.55	STATIC DEPTH TO WATER (ft): 4.19	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) 5.1 Liters											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7.55	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.55	PURGING INITIATED AT: 1428	PURGING ENDED AT: 1448								
		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 (NTUe)	COLOR	ODOR
1428	-	-	300	4.19	-	-	-	-	-	CLEAR	NONE
1433	1.5	1.5	300	4.22	7.67	19.72	380	1.21	11	"	"
1438	1.5	3.0	300	4.22	7.65	19.79	381	1.02	13	"	"
1443	1.5	4.5	300	4.22	7.63	19.78	391	1.10	10	"	"
1448	1.5	6.0	300	4.22	7.63	19.74	392	1.05	9.4	"	"
SAMPLE TIME 1450											
<small>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</small>											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: TINUS/ TERRY COTTENOIR				SAMPLER(S) SIGNATURES: <i>Terry Cottenoir</i>				SAMPLING INITIATED AT: 1450		SAMPLING ENDED AT: 1510	
PUMP OR TUBING DEPTH IN WELL (feet): 7.55				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		
PP	2	AG	1 L	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	VOL/8260B		SM		
REMARKS:											
<small>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)</small>											

Florida Department of Environmental Protection GROUNDWATER SAMPLING LOG

SITE NAME: h-413	SITE LOCATION: NS May port
WELL NO: 1/holes	SAMPLE ID: MPT-413-MW065-0131 DATE: 8-9-06

PURGING DATA

WELL DIAMETER (in): 1	TOTAL WELL DEPTH (ft): 13	STATIC DEPTH TO WATER (ft): 4.44	WELL CAPACITY (gal/ft): 0.04
$1 \text{ WELL VOLUME (gal)} = (\text{TOTAL WELL DEPTH} - \text{DEPTH TO WATER}) \times \text{WELL CAPACITY} =$ $= (13 - 4.44) \times 0.04 = 134 \times 3.78 = 1.34$			
PURGE METHOD: peristaltic	PURGE INITIATED AT: 1013	PURGE ENDED AT: 1033	TOTAL VOLUME PURGED (gal): 5.25

TIME	VOLUME PURGED (gal)	CUMUL. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP. (°C)	COND. (µmhos)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR
1018	1.5	1.5	250	4.53	7.69	26.56	0.4417	1.66	59.9	124	none
1021	.75	2.25	250	4.54	7.67	26.55	0.4413	1.62	42.7	"	"
1024	.75	3.0	250	4.54	7.65	26.52	0.4412	1.29	36.7	"	"
1027	.75	3.75	250	4.54	7.61	26.79	0.4415	1.30	19.6	"	"
1030	.75	4.5	250	4.54	7.58	26.80	0.4418	1.46	13.4	"	"
1033	.75	5.25	250	4.55	7.57	26.79	0.4417	1.57	7.84	"	"
Sample time: 1035											

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: W. Harder / T+DUS			SAMPLER(S) SIGNATURE(S):		
SAMPLING METHOD(S): peristaltic, VT, SM			SAMPLING INITIATED AT: 1035		SAMPLING ENDED AT: 1045
FIELD DECONTAMINATION: Y <input checked="" type="checkbox"/>		FIELD-FILTERED: Y <input checked="" type="checkbox"/>		DUPLICATE: Y <input checked="" type="checkbox"/>	

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (mL)	FINAL pH	
1	AG	1L	H ₂ SO ₄		LL	TRPH
2	AG	1L	HCl		-	8270 PAHs
1	PE	350mL	HNO ₃		LL	Pb
2	CG	40mL	HCl		LL	EOD
3	CG	40mL	HCl		LL	BTEX + MTBE

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; PE = POLYETHYLENE; O = OTHER (SPECIFY)

NOTE: The above do not constitute all of the information required by Chapter 62-160, F.A.C.



Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

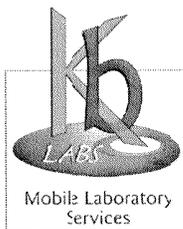
Project Name: NAVSTA Mayport **Project No.:** 112G00103
Location: Building 1585/413/1388/351/245 **Personnel:** T. Cottonoir
Weather Conditions: 50°F, SUNNY **Measuring Device:** ORS FREE PRODUCT PROBE
Tidally Influenced: Yes No **Remarks:** _____

Well or Piezometer Number MPT-	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	PID (ppm) BK/BH
1585-MW01S	2/13/2006	1129		14.75	7.86			
1585-MW02S	2/13/2006	1131		14.9	7.63			
1585-MW03S	2/13/2006	1133		14.6	9.89	L66		
T								
413-MW01S	2/13/2006	1113		11.97	3.90			
413-MW02S	2/13/2006	1115		12.55	4.40			
413-MW03S	2/13/2006	1117		12.85	4.48			
413-MW04S	2/13/2006	1119		12.85	3.91			
413-MW05S	2/13/2006	1121		12.1	3.73			
T								
1388-MW01S	2/13/2006	1045		11.65	4.08			
1388-MW02S	2/13/2006	1048		13.8	5.21			
1388-MW03S	2/13/2006	1054		14.05	6.75	L76		
1388-MW04D	2/13/2006	1052		39.45	5.85			
1388-MW05S	2/13/2006	1050		10.5				
T								
351-MW01S	2/13/2006	1056		12.95	5.43			
351-MW02S	2/13/2006	1104		12.75	5.38			
351-MW03S	2/13/2006	1106		12.85	5.29			
351-MW04S	2/13/2006	1102		10.9	6.02			
351-MW05S	2/13/2006	1100		7.3	5.84			
351-MW06S	2/13/2006	1058		9.45				

ppm=parts per million; BK=background; and BH=borehole of the well.

* All measurements to the nearest 0.01 foot

APPENDIX F
MOBILE LABORATORY ANALYTICAL RESULTS



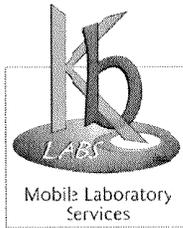
KB LABS, INC.

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
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MPT-413-SB01-04	8/8/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-413-SB04-02	8/8/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-413-SB02-02	8/8/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-413-SB03-02	8/8/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-413-SB05-02	8/8/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-413-SB06-02	8/8/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-413-SB07-02	8/8/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-413-SB08-02	8/8/05	Soil	1	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.050	< 0.050	< 0.050
MPT-413-TMW-01	8/8/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-413-TMW-02	8/8/05	Water	1	< 5.0	4.5	< 1.0	13.8	38.3	1.1	34.2	31.9	27.0
MPT-413-TMW-03	8/8/05	Water	1	< 5.0	< 1.0	< 1.0	9.6	16.3	< 1.0	34.7	28.7	38.0
MPT-413-TMW-04	8/8/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-413-TMW-06	8/8/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	1.7	9.4	22.4	22.4



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-413-TMW-05	8/8/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-413-TMW-07	8/8/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-413-TMW-08	8/8/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-413-TMW-09	8/8/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-413-TMW-10	8/8/05	Water	1	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-413-TMW-11	8/8/05	Water	1	< 5.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0
MPT-413-TMW-12	8/9/05	Water	1	< 5.0	< 1.0	1.3	1.5	6.2	2.9	< 5.0	< 5.0	< 5.0

Data Qualifier "J" sample results are estimated because of quality control criteria exceedence.

APPENDIX G
FIXED-BASE LABORATORY ANALYTICAL RESULTS

Environmental Conservation Laboratories, Inc.

4810 Executive Park Court, Suite 211

Jacksonville FL, 32216-6069

Phone: 904.296.3007 FAX: 904.296.6210



www.encolabs.com

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: B600445**

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)



www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: MPT-413-MW01S-0106

Lab ID: B600445-01

Sampled: 01/17/06 10:28

Received: 01/20/06 16:45

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	07/16/06	01/25/06 15:30	1/27/2006 04:43
EPA 8011	01/31/06	01/30/06 07:36	1/31/2006 16:02
EPA 8260B	01/31/06	01/29/06 08:50	1/30/2006 13:41
EPA 8270C	01/24/06	01/23/06 07:30	1/29/2006 23:53
FLPRO	01/24/06	01/23/06 07:59	1/23/2006 22:26

Client ID: MPT-413-MW05S-0106

Lab ID: B600445-02

Sampled: 01/17/06 12:10

Received: 01/20/06 16:45

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	07/16/06	01/25/06 15:30	1/27/2006 04:51
EPA 8011	01/31/06	01/30/06 07:36	1/31/2006 16:20
EPA 8260B	01/31/06	01/29/06 08:50	1/30/2006 14:17
EPA 8270C	01/24/06	01/23/06 07:30	1/30/2006 00:10
FLPRO	01/24/06	01/23/06 07:59	1/23/2006 23:11

Client ID: MPT-413-MW03S-0106

Lab ID: B600445-03

Sampled: 01/17/06 13:03

Received: 01/20/06 16:45

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	07/16/06	01/25/06 15:30	1/27/2006 04:59
EPA 8011	01/31/06	01/30/06 07:36	1/31/2006 16:38
EPA 8260B	01/31/06	01/29/06 08:50	1/30/2006 14:52
EPA 8270C	01/24/06	01/23/06 07:30	1/30/2006 00:28
FLPRO	01/24/06	01/23/06 07:59	1/23/2006 23:33



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SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: MPT-413-MW04S-0106

Lab ID: B600445-04

Sampled: 01/17/06 14:00

Received: 01/20/06 16:45

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	07/16/06	01/25/06 15:30	1/27/2006 05:06
EPA 8011	01/31/06	01/30/06 07:36	1/31/2006 17:14
EPA 8260B	01/31/06	01/29/06 08:50	1/30/2006 11:55
EPA 8270C	01/24/06	01/23/06 07:30	1/30/2006 00:46
FLPRO	01/24/06	01/23/06 07:59	1/23/2006 23:56

Client ID: MPT-413-MW02S-0106

Lab ID: B600445-05

Sampled: 01/17/06 14:50

Received: 01/20/06 16:45

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	07/16/06	01/25/06 15:30	1/27/2006 05:14
EPA 8011	01/31/06	01/30/06 07:36	1/31/2006 17:32
EPA 8260B	01/31/06	01/29/06 08:50	1/30/2006 12:31
EPA 8270C	01/24/06	01/23/06 07:30	1/30/2006 01:03
FLPRO	01/24/06	01/23/06 07:59	1/24/2006 00:18

Client ID: MPT-413-EB01-0106

Lab ID: B600445-06

Sampled: 01/17/06 15:15

Received: 01/20/06 16:45

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	01/31/06	01/29/06 08:50	1/30/2006 13:06



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SUMMARY TABLE - SAMPLE DETECTS ONLY

Client ID: **MPT-413-MW01S-0106**

Lab ID: **B600445-01**

No Results Detected

Client ID: **MPT-413-MW04S-0106**

Lab ID: **B600445-04**

No Results Detected

Client ID: **MPT-413-MW02S-0106**

Lab ID: **B600445-05**

No Results Detected

SUMMARY TABLE - SAMPLE DETECTS ONLY

Client ID: **MPT-413-MW05S-0106**

Lab ID: **B600445-02**

Analyte	Results/Qual	MRL	Units	Method
C8-C40	0.530	0.170	mg/L	FLPRO
1-Methylnaphthalene	0.29	0.10	ug/L	EPA 8270C
Acenaphthene	0.11	0.10	ug/L	EPA 8270C
Fluorene	0.07 I	0.10	ug/L	EPA 8270C
Naphthalene	0.09 I	0.10	ug/L	EPA 8270C

Client ID: **MPT-413-MW03S-0106**

Lab ID: **B600445-03**

Analyte	Results/Qual	MRL	Units	Method
m,p-Xylenes	1.02 I	2.00	ug/L	EPA 8260B

Client ID: **MPT-413-EB01-0106**

Lab ID: **B600445-06**

Analyte	Results/Qual	MRL	Units	Method
Chloroform	0.770 I	1.00	ug/L	EPA 8260B



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ANALYTICAL REPORT

Sample ID: MPT-413-MW01S-0106
Lab #: B600445-01
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600445
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	108-58-5/106-42-5	0.300 U	0.300	2.00	ug/L
Methylene chloride	75-09-2	2.00 U	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-413-MW01S-0106
Lab #: B600445-01
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600445
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	48.4	50.0	97 %	60-130
4-Bromofluorobenzene	460-00-4	48.4	50.0	97 %	60-130
Dibromofluoromethane	1868-53-7	45.6	50.0	91 %	66-131
Dibromofluoromethane	1868-53-7	45.6	50.0	91 %	66-131
Toluene-d8	2037-26-5	49.3	50.0	99 %	67-139
Toluene-d8	2037-26-5	49.3	50.0	99 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-413-MW01S-0106
Lab #: B600445-01
Prep. Method: EPA 3510C
Analyzed: 01/23/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6A23002

Project: CTO#386
Work Order #: B600445
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	0.0527	0.100	53 %	22-137
o-Terphenyl	84-15-1	0.0388	0.0500	78 %	33-133



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ANALYTICAL REPORT

Sample ID: MPT-413-MW01S-0106
Lab #: B600445-01
Prep. Method: EPA 3520C
Analyzed: 01/31/06 By: rw
Anal. Method: EPA 8011
Anal. Batch:
QC Batch: 6A30006

Project: CTO#386
Work Order #: B600445
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	1.11	1.00	111 %	30-170



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ANALYTICAL REPORT

Sample ID: MPT-413-MW01S-0106
Lab #: B600445-01
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 #: B600445
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	0.02 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	3.89	5.00	78 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-413-MW01S-0106
Lab #: B600443-01

Project: CTO#386
Work Order #: B600443
Matrix: Water

Metals by EPA 6000/7000 Series Methods

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



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ANALYTICAL REPORT

Sample ID: MPT-413-MW05S-0106
Lab #: B600445-02
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600445
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	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-413-MW05S-0106
Lab #: B600445-02
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600445
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results		MDL	MRL	Units
		Result	Spike Level			
Surrogate Recovery						
4-Bromofluorobenzene	460-00-4	51.7	50.0		103 %	60-130
4-Bromofluorobenzene	460-00-4	51.7	50.0		103 %	60-130
Dibromofluoromethane	1868-53-7	45.5	50.0		91 %	66-131
Dibromofluoromethane	1868-53-7	45.5	50.0		91 %	66-131
Toluene-d8	2037-26-5	49.7	50.0		99 %	67-139
Toluene-d8	2037-26-5	49.7	50.0		99 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-413-MW05S-0106
Lab #: B600445-02
Prep. Method: EPA 3510C
Analyzed: 01/23/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6A23002

Project: CTO#386
Work Order #: B600445
Matrix: Water
Unit: mg/L
Dilution Factor: 1

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
C8-C40	NA	0.530	0.094	0.170	mg/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.0453	0.100	45 %	22-137
o-Terphenyl	84-15-1	0.0378	0.0500	76 %	33-133



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ANALYTICAL REPORT

Sample ID: MPT-413-MW05S-0106
Lab #: B600445-02
Prep. Method: EPA 3520C
Analyzed: 01/31/06 By: rw
Anal. Method: EPA 8011
Anal. Batch:
QC Batch: 6A30006

Project: CTO#386
Work Order #: B600445
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



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ANALYTICAL REPORT

Sample ID: MPT-413-MW05S-0106
Lab #: B600445-02
Prep. Method: EPA 3510C_MS
Analyzed: 01/30/06 By: jj
Anal. Method: EPA 8270C
Anal. Batch:
QC Batch: 6A23001

Project: CTO#386
Work Order #: B600445
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	0.29	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	0.02 U	0.02	0.10	ug/L
Acenaphthene	83-32-9	0.11	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	0.07 I	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	0.09 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	3.67	5.00	73 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-413-MW05S-0106
Lab #: B600445-02

Project: CTO#386
Work Order #: B600445
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



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ANALYTICAL REPORT

Sample ID: MPT-413-MW03S-0106
Lab #: B600445-03
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600445
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	1.02 I	0.300	2.00	ug/L
Methylene chloride	75-09-2	2.00 U	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-413-MW03S-0106
Lab #: B600445-03
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600445
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results		MDL	MRL	Units
		Result	Spike Level			
Surrogate Recovery						
4-Bromofluorobenzene	460-00-4	51.7	50.0		103 %	60-130
4-Bromofluorobenzene	460-00-4	51.7	50.0		103 %	60-130
Dibromofluoromethane	1868-53-7	46.8	50.0		94 %	66-131
Dibromofluoromethane	1868-53-7	46.8	50.0		94 %	66-131
Toluene-d8	2037-26-5	51.4	50.0		103 %	67-139
Toluene-d8	2037-26-5	51.4	50.0		103 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-413-MW03S-0106
Lab #: B600445-03
Prep. Method: EPA 3510C
Analyzed: 01/23/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6A23002

Project: CTO#386
Work Order #: B600445
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	0.0515	0.100	52 %	22-137
o-Terphenyl	84-15-1	0.0420	0.0500	84 %	33-133



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ANALYTICAL REPORT

Sample ID: MPT-413-MW03S-0106
Lab #: B600445-03
Prep. Method: EPA 3520C
Analyzed: 01/31/06 By: rw
Anal. Method: EPA 8011
Anal. Batch:
QC Batch: 6A30006

Project: CTO#386
Work Order #: B600445
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	1.16	1.00	116 %	30-170



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ANALYTICAL REPORT

Sample ID: MPT-413-MW03S-0106
Lab #: B600445-03
Prep. Method: EPA 3510C_MS
Analyzed: 01/30/06 By: jj
Anal. Method: EPA 8270C
Anal. Batch:
QC Batch: 6A23001

Project: CTO#386
Work Order #: B600445
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	0.02 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	4.15	5.00	83 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-413-MW03S-0106
Lab #: B600445-03

Project: CTO#386
Work Order #: B600445
Matrix: Water

Metals by EPA 6000/7000 Series Methods

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



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ANALYTICAL REPORT

Sample ID: MPT-413-MW04S-0106
Lab #: B600445-04
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600445
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	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-413-MW04S-0106
Lab #: B600445-04
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600445
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results		MDL	MRL	Units
		Result	Spike Level			
Surrogate Recovery						
4-Bromofluorobenzene	460-00-4	50.9	50.0		102 %	60-130
4-Bromofluorobenzene	460-00-4	50.9	50.0		102 %	60-130
Dibromofluoromethane	1868-53-7	49.0	50.0		98 %	66-131
Dibromofluoromethane	1868-53-7	49.0	50.0		98 %	66-131
Toluene-d8	2037-26-5	49.0	50.0		98 %	67-139
Toluene-d8	2037-26-5	49.0	50.0		98 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-413-MW04S-0106
Lab #: B600445-04
Prep. Method: EPA 3510C
Analyzed: 01/23/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6A23002

Project: CTO#386
Work Order #: B600445
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	0.0444	0.100	44 %	22-137
o-Terphenyl	84-15-1	0.0405	0.0500	81 %	33-133



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ANALYTICAL REPORT

Sample ID: MPT-413-MW04S-0106
Lab #: B600445-04
Prep. Method: EPA 3520C
Analyzed: 01/31/06 By: rw
Anal. Method: EPA 8011
Anal. Batch:
QC Batch: 6A30006

Project: CTO#386
Work Order #: B600445
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	1.02	1.00	102 %	30-170



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ANALYTICAL REPORT

Sample ID: MPT-413-MW04S-0106
Lab #: B600445-04
Prep. Method: EPA 3510C_MS
Analyzed: 01/30/06 By: jj
Anal. Method: EPA 8270C
Anal. Batch:
QC Batch: 6A23001

Project: CTO#386
Work Order #: B600445
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	0.02 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	4.26	5.00	85 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-413-MW04S-0106
Lab #: B600445-04

Project: CTO#386
Work Order #: B600445
Matrix: Water

Metals by EPA 6000/7000 Series Methods

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



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ANALYTICAL REPORT

Sample ID: MPT-413-MW02S-0106
Lab #: B600443-03
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600443
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	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-413-MW02S-0106
Lab #: B600445-05
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600445
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	49.4	50.0	99 %	60-130
4-Bromofluorobenzene	460-00-4	49.4	50.0	99 %	60-130
Dibromofluoromethane	1868-53-7	46.6	50.0	93 %	66-131
Dibromofluoromethane	1868-53-7	46.6	50.0	93 %	66-131
Toluene-d8	2037-26-5	52.6	50.0	105 %	67-139
Toluene-d8	2037-26-5	52.6	50.0	105 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-413-MW02S-0106
Lab #: B600445-05
Prep. Method: EPA 3510C
Analyzed: 01/24/06 By: rw
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6A23002

Project: CTO#386
Work Order #: B600445
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	0.0441	0.100	44 %	22-137
o-Terphenyl	84-15-1	0.0380	0.0500	76 %	33-133



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ANALYTICAL REPORT

Sample ID: MPT-413-MW02S-0106
Lab #: B600445-05
Prep. Method: EPA 3520C
Analyzed: 01/31/06 By: rw
Anal. Method: EPA 8011
Anal. Batch:
QC Batch: 6A30006

Project: CTO#386
Work Order #: B600445
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



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ANALYTICAL REPORT

Sample ID: MPT-413-MW02S-0106
Lab #: B600445-05
Prep. Method: EPA 3510C_MS
Analyzed: 01/30/06 By: jj
Anal. Method: EPA 8270C
Anal. Batch:
QC Batch: 6A23001

Project: CTO#386
Work Order #: B600445
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	0.02 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	4.68	5.00	94 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-413-MW02S-0106
Lab #: B600445-05

Project: CTO#386
Work Order #: B600445
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



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ANALYTICAL REPORT

Sample ID: MPT-413-EB01-0106
Lab #: B600445-06
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600445
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	0.770 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	2.00 U	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-413-EB01-0106
Lab #: B600445 06
Prep. Method: EPA 5030B_MS
Analyzed: 01/30/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6A29004

Project: CTO#386
Work Order #: B600445
Matrix: Water
Unit: ug/L
Dilution Factor: 1

Volatile Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results		MDL	MRL	Units
		Result	Spike Level			
Surrogate Recovery						
4-Bromofluorobenzene	460-00-4	49.0	50.0		98 %	60-130
4-Bromofluorobenzene	460-00-4	49.0	50.0		98 %	60-130
Dibromofluoromethane	1868-53-7	46.6	50.0		93 %	66-131
Dibromofluoromethane	1868-53-7	46.6	50.0		93 %	66-131
Toluene-d8	2037-26-5	49.3	50.0		99 %	67-139
Toluene-d8	2037-26-5	49.3	50.0		99 %	67-139

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

REPORT # : JAX51161
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

BLDG 413

JAX51161-1 : MPT-413-SB11-02 @ 13:30 (08/12/05)
JAX51161-2 : MPT-413-SB01-02 @ 13:00 (08/12/05)
JAX51161-3 : MPT-413-TMW11-20' @ 12:15 (08/08/05)

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.

Note: Discrepancy in ID's on COC & containers. Logged in according to containers per client request.

PROJECT MANAGER

 Signatures Not Certified

Christina Tompkins

Digitally signed by Christina Tompkins
DN: cn=Christina Tompkins, ou=Enco Labs,
o=Enco
Date: 2005.08.24 12:37:16 -0400

Christina M. Tompkins

ENCO LABORATORIES
 REPORT # : JAX51161
 DATE REPORTED: August 23, 2005
 REFERENCE : CTO 386
 PROJECT NAME : BLDG 413

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RESULTS OF ANALYSIS

**EPA METHOD 8260 -
 VOLATILE ORGANICS**

MPT-413-SB11-02

Units

Methyl tert-butyl ether	1. U D1	ug/Kg
Benzene	1. U D1	ug/Kg
Toluene	2. 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	98	61-128
D8-Toluene	97	77-119
Bromofluorobenzene	96	60-130
Date Prepared	08/13/05 14:00	
Date Analyzed	08/23/05 11:45	

U = Compound was analyzed for but not detected to the level shown.
 D1 = Analyte value determined from a 1:.94 dilution.

ENCO LABORATORIES
 REPORT # : JAX51161
 DATE REPORTED: August 23, 2005
 REFERENCE : CTO 386
 PROJECT NAME : BLDG 413

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RESULTS OF ANALYSIS

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

	<u>MPT-413-SB11-02</u>	<u>Units</u>
Naphthalene	36. U	ug/Kg
2-Methylnaphthalene	36. U	ug/Kg
1-Methylnaphthalene	36. U	ug/Kg
Acenaphthylene	36. U	ug/Kg
Acenaphthene	36. U	ug/Kg
Fluorene	36. U	ug/Kg
Phenanthrene	36. U	ug/Kg
Anthracene	36. U	ug/Kg
Fluoranthene	36. U	ug/Kg
Pyrene	36. U	ug/Kg
Chrysene	36. U	ug/Kg
Benzo (a) anthracene	36. U	ug/Kg
Benzo (b) fluoranthene	36. U	ug/Kg
Benzo (k) fluoranthene	36. U	ug/Kg
Benzo (a) pyrene	36. U	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	36. U	ug/Kg

<u>Surrogate:</u>	<u>% RECOV</u>	<u>LIMITS</u>
p-Terphenyl	104	10-167
Date Prepared	08/17/05	
Date Analyzed	08/19/05 16:00	

<u>Miscellaneous</u>	<u>METHOD</u>	<u>MPT-413-SB11-02</u>	<u>Units</u>
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.

ENCO LABORATORIES
REPORT # : JAX51161
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386
PROJECT NAME : BLDG 413

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RESULTS OF ANALYSIS

EPA METHOD FLPRO -
PETROL. RESIDUAL ORG.

MPT-413-SB11-02

Units

Hydrocarbons (C8-C40)

8. U

mg/Kg

Surrogate:

% RECOV

LIMITS

o-Terphenyl

114

36-140

Nonatriacontane

108

29-145

Date Prepared

08/17/05

Date Analyzed

08/19/05 13:00

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

ENCO LABORATORIES
 REPORT # : JAX51161
 DATE REPORTED: August 23, 2005
 REFERENCE : CTO 386
 PROJECT NAME : BLDG 413

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RESULTS OF ANALYSIS

**EPA METHOD 8260 -
 VOLATILE ORGANICS**

MPT-413-SB01-02

Units

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

Surrogate:

% RECOV

LIMITS

Dibromofluoromethane	97	61-128
D8-Toluene	98	77-119
Bromofluorobenzene	97	60-130
Date Prepared	08/13/05 14:00	
Date Analyzed	08/23/05 12:21	

U = Compound was analyzed for but not detected to the level shown.
 D2 = Analyte value determined from a 1:1.04 dilution.

ENCO LABORATORIES
 REPORT # : JAX51161
 DATE REPORTED: August 23, 2005
 REFERENCE : CTO 386
 PROJECT NAME : BLDG 413

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RESULTS OF ANALYSIS

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

	<u>MPT-413-SB01-02</u>	<u>Units</u>
Naphthalene	34. U	ug/Kg
2-Methylnaphthalene	34. U	ug/Kg
1-Methylnaphthalene	34. U	ug/Kg
Acenaphthylene	34. U	ug/Kg
Acenaphthene	34. U	ug/Kg
Fluorene	34. U	ug/Kg
Phenanthrene	34. U	ug/Kg
Anthracene	34. U	ug/Kg
Fluoranthene	34. U	ug/Kg
Pyrene	34. U	ug/Kg
Chrysene	34. U	ug/Kg
Benzo(a)anthracene	34. U	ug/Kg
Benzo(b)fluoranthene	34. U	ug/Kg
Benzo(k)fluoranthene	34. U	ug/Kg
Benzo(a)pyrene	34. U	ug/Kg
Indeno(1,2,3-cd)pyrene	34. U	ug/Kg
Dibenzo(a,h)anthracene	34. U	ug/Kg
Benzo(g,h,i)perylene	34. U	ug/Kg

<u>Surrogate:</u>	<u>% RECOV</u>	<u>LIMITS</u>
p-Terphenyl	103	10-167
Date Prepared	08/17/05	
Date Analyzed	08/19/05 16:18	

<u>Miscellaneous</u>	<u>METHOD</u>	<u>MPT-413-SB01-02</u>	<u>Units</u>
Percent Solids	WETS/72	96.3	%
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 # : JAX51161
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386
PROJECT NAME : BLDG 413

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RESULTS OF ANALYSIS

EPA METHOD FLPRO -
PETROL. RESIDUAL ORG.

MPT-413-SB01-02

Units

Hydrocarbons (C8-C40)

7. U

mg/Kg

Surrogate:

% RECOV

LIMITS

o-Terphenyl

86

36-140

Nonatriacontane

82

29-145

Date Prepared

08/17/05

Date Analyzed

08/19/05 11:28

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

ENCO LABORATORIES
 REPORT # : JAX51161
 DATE REPORTED: August 23, 2005
 REFERENCE : CTO 386
 PROJECT NAME : BLDG 413

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RESULTS OF ANALYSIS

EPA METHOD 8260 -
VOLATILE ORGANICS

MPT-413-TMW11-20'

Units

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:

% RECOV

LIMITS

Dibromofluoromethane	112	67-139
D8-Toluene	98	80-115
Bromofluorobenzene	94	66-131
Date Analyzed	08/18/05 14:02	

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

ENCO LABORATORIES
 REPORT # : JAX51161
 DATE REPORTED: August 23, 2005
 REFERENCE : CTO 386
 PROJECT NAME : BLDG 413

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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

Surrogate:

	<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 # : JAX51161
 DATE REPORTED: August 23, 2005
 REFERENCE : CTO 386
 PROJECT NAME : BLDG 413

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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

Surrogate:

	<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 # : JAX51161
 DATE REPORTED: August 23, 2005
 REFERENCE : CTO 386
 PROJECT NAME : BLDG 413

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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	102	10-167
Date Prepared	08/17/05	
Date Analyzed	08/19/05 15:25	

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

ENCO LABORATORIES
REPORT # : JAX51161
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386
PROJECT NAME : BLDG 413

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RESULTS OF ANALYSIS

EPA METHOD FLPRO -
PETROL. RESIDUAL ORG.

Hydrocarbons (C8-C40)

LAB BLANK

7. U

Units

mg/Kg

Surrogate:

o-Terphenyl
Nonatriacontane
Date Prepared
Date Analyzed

% RECOV

81

82

08/17/05

08/19/05 10:43

LIMITS

36-140

29-145

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

ENCO LABORATORIES
REPORT # : JAX51161
DATE REPORTED: August 23, 2005
REFERENCE : CTO 386
PROJECT NAME : BLDG 413

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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 # : JAX51161
 DATE REPORTED: August 23, 2005
 REFERENCE : CTO 386
 PROJECT NAME : BLDG 413

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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 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	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	88/ 88/ 96	50-104	48-112	9	22
Acenaphthene	84/ 82/ 89	52-109	48-119	8	31
Benzo(a)pyrene	80/ 78/ 84	41-125	43-136	7	34
Benzo(g,h,i)perylene	108/124/132	10-168	10-168	6	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



PROJECT NO: CTO 386		FACILITY: 206 413		PROJECT MANAGER Mark Peterson			PHONE NUMBER 334-7260		LABORATORY NAME AND CONTACT: EVO												
SAMPLERS (SIGNATURE) 				FIELD OPERATIONS LEADER David Sefton			PHONE NUMBER 334-7260		ADDRESS 4810 Executive Park, Ct. Suite 211												
				CARRIER/WAYBILL NUMBER Drop off			CITY, STATE Jacksonville, FL 32216														
STANDARD TAT <input type="checkbox"/> RUSH TAT <input type="checkbox"/> <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 72 hr. <input type="checkbox"/> 7 day <input type="checkbox"/> 14 day				CONTAINER TYPE PLASTIC (P) or GLASS (G)		PRESERVATIVE USED		TYPE OF ANALYSIS 8260 & B&X 8270 SIM TRPH- FL-Pro G 6 C (Diagonal lines)													
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	
12 Aug		1330		MPT-413-SB11-02		SB-11		2		2		SO		G		5		4 1 (P)		Cool to 4°C	
12 Aug		1300		MPT-413-SB01-01		SB-01		1		1		SO		G		5		4 1 (P)			
Aug 8		1715		MPT-413 TAW-11-20' TAW01		TAW01		-		-		GW		G		3		3		See attached Contract	
1. RELINQUISHED BY				DATE		TIME		1. RECEIVED BY				DATE 8/13/05		TIME 1350							
2. RELINQUISHED BY				DATE		TIME		2. RECEIVED BY				DATE		TIME							
3. RELINQUISHED BY				DATE		TIME		3. RECEIVED BY				DATE		TIME							
COMMENTS JAX 51161 rec'd on wet ice @ 4.2°C + 3.3°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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Thursday, August 17, 2006

Tetra Tech NUS (BR006)

Attn: Mark Peterson

8640 Philips Highway Suite 16

Jacksonville, FL 32256

**RE: Project Number: 112G00103, Project Name/Desc: NS Mayport
ENCO Workorder: B606941**

Dear Mark Peterson,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, August 10, 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 'Christina M. Tompkins'.

Chris Tompkins

Project Manager

Enclosure(s)

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: MPT-413-MW065-013-20060809

Lab ID: B606941-01

Sampled: 08/09/06 10:35

Received: 08/10/06 14:16

Parameter	Hold Date/Time(s)		Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	02/05/07		08/14/06 11:56	8/14/2006 20:49
EPA 8011	09/06/06		08/16/06 10:49	8/16/2006 17:24
EPA 8260B	08/23/06		08/16/06 08:00	8/16/2006 20:22
EPA 8270C	08/16/06	09/20/06	08/11/06 12:29	8/14/2006 14:00
FLPRO	08/16/06	09/20/06	08/11/06 10:33	8/11/2006 20:08



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SAMPLE DETECTION SUMMARY

Client ID: MPT-413-MW065-013-20060809

Lab ID: B606941-01

Analyte	Results/Qual	MRL	Units	Method
1-Methylnaphthalene	1.61	0.10	ug/L	EPA 8270C
2-Methylnaphthalene	2.50	0.10	ug/L	EPA 8270C
Acenaphthene	0.13	0.10	ug/L	EPA 8270C
Ethylbenzene	0.9 I	1.0	ug/L	EPA 8260B
Fluorene	0.22	0.10	ug/L	EPA 8270C
m,p-Xylenes	2.8	2.0	ug/L	EPA 8260B
Naphthalene	1.38	0.10	ug/L	EPA 8270C
o-Xylene	0.3 I	1.0	ug/L	EPA 8260B
Phenanthrene	0.30	0.10	ug/L	EPA 8270C
Pyrene	0.12	0.10	ug/L	EPA 8270C
TPH (C8-C40)	0.446	0.170	mg/L	FLPRO



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ANALYTICAL REPORT

Sample ID: MPT-413-MW065-013-20060809
Lab #: B606941-01
Prep. Method: EPA 5030B_MS
Analyzed: 08/16/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6H16013

Project: NS Mayport
Work Order #: B606941
Matrix: Ground 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	0.3 U	0.3	1.0	ug/L
1,1,2,2-Tetrachloroethane	79-34-5	0.2 U	0.2	0.2	ug/L
1,1,2-Trichloroethane	79-00-5	0.3 U	0.3	1.0	ug/L
1,1-Dichloroethane	75-34-3	0.2 U	0.2	1.0	ug/L
1,1-Dichloroethene	75-35-4	0.2 U	0.2	1.0	ug/L
1,2-Dichlorobenzene	95-50-1	0.2 U	0.2	1.0	ug/L
1,2-Dichloroethane	107-06-2	0.1 U	0.1	1.0	ug/L
1,2-Dichloropropane	78-87-5	0.4 U	0.4	1.0	ug/L
1,3-Dichlorobenzene	541-73-1	0.2 U	0.2	1.0	ug/L
1,4-Dichlorobenzene	106-46-7	0.1 U	0.1	1.0	ug/L
2-Chloroethyl Vinyl Ether	110-75-8	0.8 U	0.8	5.0	ug/L
Benzene	71-43-2	0.2 U	0.2	1.0	ug/L
Bromodichloromethane	75-27-4	0.2 U	0.2	0.4	ug/L
Bromoform	75-25-2	0.2 U	0.2	1.0	ug/L
Bromomethane	74-83-9	0.6 U	0.6	1.0	ug/L
Carbon tetrachloride	56-23-5	0.3 U	0.3	1.0	ug/L
Chlorobenzene	108-90-7	0.2 U	0.2	1.0	ug/L
Chloroethane	75-00-3	0.3 U	0.3	1.0	ug/L
Chloroform	67-66-3	0.2 U	0.2	1.0	ug/L
Chloromethane	74-87-3	0.3 U	0.3	1.0	ug/L
cis-1,2-Dichloroethene	156-59-2	0.2 U	0.2	1.0	ug/L
cis-1,3-Dichloropropene	10061-01-5	0.1 U	0.1	0.2	ug/L
Dibromochloromethane	124-48-1	0.2 U	0.2	0.2	ug/L
Dichlorodifluoromethane	75-71-8	0.3 U	0.3	1.0	ug/L
Ethylbenzene	100-41-4	0.9 U	0.3	1.0	ug/L
m,p-Xylenes	108-38-3/106-42-3	2.8	0.3	2.0	ug/L
Methylene chloride	75-09-2	2.0 U	2.0	2.0	ug/L
Methyl-tert-Butyl Ether	1634-04-4	0.2 U	0.2	1.0	ug/L
o-Xylene	95-47-6	0.3 U	0.2	1.0	ug/L
Tetrachloroethene	127-18-4	0.3 U	0.3	1.0	ug/L
Toluene	108-88-3	0.2 U	0.2	1.0	ug/L
trans-1,2-Dichloroethene	156-60-5	0.2 U	0.2	1.0	ug/L
trans-1,3-Dichloropropene	10061-02-6	0.2 U	0.2	0.2	ug/L
Trichloroethene	79-01-6	0.3 U	0.3	1.0	ug/L
Trichlorofluoromethane	75-69-4	0.3 U	0.3	1.0	ug/L
Vinyl chloride	75-01-4	0.4 U	0.4	1.0	ug/L



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ANALYTICAL REPORT

Sample ID: MPT-413-MW065-013-20060809
Lab #: B606941-01
Prep. Method: EPA 5030B_MS
Analyzed: 08/16/06 By: ds/
Anal. Method: EPA 8260B
Anal. Batch:
QC Batch: 6H16013

Project: NS Mayport
Work Order #: B606941
Matrix: Ground Water
Unit: ug/L
Dilution Factor: 1

Volatle Organic Compounds by GCMS

Parameter	CAS Number	Analytical Results		MDL	MRL	Units
		Result	Spike Level			
Surrogate Recovery						
4-Bromofluorobenzene	460-00-4	49.7	50.0		99 %	60-130
4-Bromofluorobenzene	460-00-4	49.7	50.0		99 %	60-130
Dibromofluoromethane	1868-53-7	55.8	50.0		112 %	66-131
Dibromofluoromethane	1868-53-7	55.8	50.0		112 %	66-131
Toluene-d8	2037-26-5	51.0	50.0		102 %	67-139
Toluene-d8	2037-26-5	51.0	50.0		102 %	67-139



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ANALYTICAL REPORT

Sample ID: MPT-413-MW065-013-20060809
Lab #: B606941-01
Prep. Method: EPA 3510C_MS
Analyzed: 08/14/06 By: jj
Anal. Method: EPA 8270C
Anal. Batch:
QC Batch: 6H11002

Project: NS Mayport
Work Order #: B606941
Matrix: Ground 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	1.61	0.02	0.10	ug/L
2-Methylnaphthalene	91-57-6	2.50	0.02	0.10	ug/L
Acenaphthene	83-32-9	0.13	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	0.22	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	1.38	0.02	0.10	ug/L
Phenanthrene	85-01-8	0.30	0.02	0.10	ug/L
Pyrene	129-00-0	0.12	0.02	0.10	ug/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
p-Terphenyl	92-94-4	3.15	5.00	63 %	10-167



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ANALYTICAL REPORT

Sample ID: MPT-413-MW065-013-20060809
Lab #: B606941-01
Prep. Method: EPA 3520C
Analyzed: 08/16/06 By: rw
Anal. Method: EPA 8011
Anal. Batch:
QC Batch: 6H16001

Project: NS Mayport
Work Order #: B606941
Matrix: Ground Water
Unit: ug/L
Dilution Factor: 1

Semivolatile Organic Compounds by GC

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
1,2-Dibromo-3-chloropropane	96-12-8	0.009 U	0.009	0.020	ug/L
1,2-Dibromoethane	106-93-4	0.014 U	0.014	0.020	ug/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
1,3-Dichlorobenzene	541-73-1	1.27	1.00	127 %	30-170



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ANALYTICAL REPORT

Sample ID: MPT-413-MW065-013-20060809
Lab #: B606941-01
Prep. Method: EPA 3510C
Analyzed: 08/11/06 By: jbh
Anal. Method: FLPRO
Anal. Batch:
QC Batch: 6H11008

Project: NS Mayport
Work Order #: B606941
Matrix: Ground Water
Unit: mg/L
Dilution Factor: 1

FL Petroleum Range Organics

Parameter	CAS Number	Analytical Results	MDL	MRL	Units
TPH (C8-C40)	NA	0.446	0.094	0.170	mg/L
Surrogate Recovery		Result	Spike Level	% Recovery	% Recovery Limits
n-Nonatriacontane	7194-86-7	0.109	0.100	109 %	22-137
o-Terphenyl	84-15-1	0.0646	0.0500	129 %	33-133

ANALYTICAL REPORT

Sample ID: MPT-413-MW065-013-20060809
 Lab #: B606941-01

Project: NS Mayport
 Work Order #: B606941
 Matrix: Ground 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	2 U	2	10	ug/L	EPA 6010B	EPA 3005A	6H14008



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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 6H16013 - EPA 5030B_MS

Prepared: 08/16/2006 08:00 Analyzed: 08/16/2006 14:45

Blank (6H16013-BLK1)

Dichlorodifluoromethane	0.3 U	1.0	ug/L
Chloromethane	0.3 U	1.0	ug/L
Vinyl chloride	0.4 U	1.0	ug/L
Bromomethane	0.6 U	1.0	ug/L
Chloroethane	0.3 U	1.0	ug/L
Trichlorofluoromethane	0.3 U	1.0	ug/L
1,1-Dichloroethene	0.2 U	1.0	ug/L
Methylene chloride	2.0 U	2.0	ug/L
Methyl-tert-Butyl Ether	0.2 U	1.0	ug/L
trans-1,2-Dichloroethene	0.2 U	1.0	ug/L
1,1-Dichloroethane	0.2 U	1.0	ug/L
cis-1,2-Dichloroethene	0.2 U	1.0	ug/L
Chloroform	0.2 U	1.0	ug/L
1,1,1-Trichloroethane	0.3 U	1.0	ug/L
Carbon tetrachloride	0.3 U	1.0	ug/L
1,2-Dichloroethane	0.1 U	1.0	ug/L
Benzene	0.2 U	1.0	ug/L
Trichloroethene	0.3 U	1.0	ug/L
1,2-Dichloropropane	0.4 U	1.0	ug/L
Bromodichloromethane	0.2 U	0.4	ug/L
2-Chloroethyl Vinyl Ether	0.8 U	5.0	ug/L
cis-1,3-Dichloropropene	0.1 U	0.2	ug/L
Toluene	0.2 U	1.0	ug/L
trans-1,3-Dichloropropene	0.2 U	0.2	ug/L
1,1,2-Trichloroethane	0.3 U	1.0	ug/L
Tetrachloroethene	0.3 U	1.0	ug/L
Dibromochloromethane	0.2 U	0.2	ug/L
Chlorobenzene	0.2 U	1.0	ug/L
Ethylbenzene	0.3 U	1.0	ug/L
m,p-Xylenes	0.3 U	2.0	ug/L
o-Xylene	0.2 U	1.0	ug/L
Bromoform	0.2 U	1.0	ug/L
1,1,2,2 Tetraachloroethane	0.2 U	0.2	ug/L
1,3-Dichlorobenzene	0.2 U	1.0	ug/L
1,4-Dichlorobenzene	0.1 U	1.0	ug/L
1,2-Dichlorobenzene	0.2 U	1.0	ug/L

LCS (6H16013-BS1)

Prepared: 08/16/2006 08:00 Analyzed: 08/16/2006 15:23

1,1-Dichloroethene	16.7	1.0	ug/L	20.0	84	31-145
Benzene	17.1	1.0	ug/L	20.0	86	62-135
Trichloroethene	16.3	1.0	ug/L	20.0	82	66-136
Toluene	15.3	1.0	ug/L	20.0	76	74-126
Chlorobenzene	16.0	1.0	ug/L	20.0	80	77-124

Matrix Spike (6H16013-MS1)

Source: B607035-15

Prepared: 08/16/2006 08:00 Analyzed: 08/16/2006 15:53

1,1-Dichloroethene	17.2	1.0	ug/L	20.0	0.2 U	86	58-149
Benzene	17.1	1.0	ug/L	20.0	0.2 U	86	64-138



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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 6H16013 - EPA 5030B_MS

Matrix Spike (6H16013-MS1) Continued			Source: B607035-15	Prepared: 08/16/2006 08:00 Analyzed: 08/16/2006 15:53						
Trichloroethene	16.1	1.0	ug/L	20.0	0.3 U	80	47-150			
Toluene	15.0	1.0	ug/L	20.0	0.2 U	75	72-124			
Chlorobenzene	15.6 QM-07	1.0	ug/L	20.0	0.2 U	78	81-125			QM-07
Matrix Spike Dup (6H16013-MSD1)			Source: B607035-15	Prepared: 08/16/2006 08:00 Analyzed: 08/16/2006 16:23						
1,1-Dichloroethene	17.0	1.0	ug/L	20.0	0.2 U	85	58-149	1	26	
Benzene	17.3	1.0	ug/L	20.0	0.2 U	86	64-138	1	22	
Trichloroethene	16.8	1.0	ug/L	20.0	0.3 U	84	47-150	4	24	
Toluene	15.6	1.0	ug/L	20.0	0.2 U	78	72-124	4	24	
Chlorobenzene	15.7 QM-07	1.0	ug/L	20.0	0.2 U	78	81-125	0.6	11	QM-07

Semivolatile Organic Compounds by GCMS SIM - Quality Control

Batch 6H11002 - EPA 3510C_MS

Blank (6H11002-BLK1)			Prepared: 08/11/2006 12:29 Analyzed: 08/14/2006 16:03							
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							
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							
<i>Surrogate: p-Terphenyl</i>	3.14		ug/L	5.00		63	10-167			
LCS (6H11002-BS1)			Prepared: 08/11/2006 12:29 Analyzed: 08/14/2006 16:22							
Naphthalene	0.88	0.10	ug/L	2.00		44	33-102			
Acenaphthene	0.76 S-GC	0.10	ug/L	2.00		38	41-104			S-GC
Benzo(g,h,i)perylene	0.73	0.10	ug/L	2.00		36	10-159			
Benzo(a)pyrene	0.85	0.10	ug/L	2.00		42	38-125			
<i>Surrogate: p-Terphenyl</i>	3.16		ug/L	5.00		63	10-167			
Matrix Spike (6H11002-MS1)			Source: B606690-01	Prepared: 08/11/2006 12:29 Analyzed: 08/14/2006 16:39						
Naphthalene	1.18	0.10	ug/L	2.00	0.190	50	32-101			
Acenaphthene	1.16 S-GC	0.10	ug/L	2.00	0.340	41	43-102			S-GC
Benzo(g,h,i)perylene	0.94	0.10	ug/L	2.00	0.03 U	47	10-173			
Benzo(a)pyrene	0.95	0.10	ug/L	2.00	0.01 U	48	37-127			

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 6H11002 - EPA 3510C_MS

Matrix Spike (6H11002-MS1) Continued		Source: B606690-01		Prepared: 08/11/2006 12:29		Analyzed: 08/14/2006 16:39					
Surrogate: <i>p</i> -Terphenyl	3.34		ug/L	5.00		67	10-167				
Matrix Spike Dup (6H11002-MSD1)		Source: B606690-01		Prepared: 08/11/2006 12:29		Analyzed: 08/14/2006 16:57					
Naphthalene	1.17	0.10	ug/L	2.00	0.190	49	32-101	0.9	28		
Acenaphthene	1.15	S-GC	0.10	ug/L	2.00	0.340	40	43-102	0.9	22	S-GC
Benzo(g,h,i)perylene	0.98	0.10	ug/L	2.00	0.03 U	49	10-173	4	35		
Benzo(a)pyrene	0.94	0.10	ug/L	2.00	0.01 U	47	3/-12/	1	19		
Surrogate: <i>p</i> -Terphenyl	3.23		ug/L	5.00		65	10-167				

Semivolatile Organic Compounds by GC - Quality Control

Batch 6H16001 - EPA 3520C

Blank (6H16001-BLK1)				Prepared: 08/16/2006 10:49		Analyzed: 08/16/2006 15:55				
1,2-Dibromoethane	0.014 U	0.020	ug/L							
1,2-Dibromo-3-chloropropane	0.009 U	0.020	ug/L							
Surrogate: 1,3-Dichlorobenzene	1.26		ug/L	1.00		126	30-170			
LCS (6H16001-BS1)				Prepared: 08/16/2006 10:49		Analyzed: 08/16/2006 16:13				
1,2-Dibromoethane	0.291	0.020	ug/L	0.250		116	60-140			
1,2-Dibromo-3-chloropropane	0.343	0.020	ug/L	0.250		137	60-140			
Surrogate: 1,3-Dichlorobenzene	1.34		ug/L	1.00		134	30-170			
Matrix Spike (6H16001-MS1)		Source: B607029-01		Prepared: 08/16/2006 10:49		Analyzed: 08/16/2006 16:31				
1,2-Dibromoethane	0.297	0.020	ug/L	0.250	0.014 U	119	60-140			
1,2-Dibromo-3-chloropropane	0.344	0.020	ug/L	0.250	0.009 U	138	60-140			
Surrogate: 1,3-Dichlorobenzene	1.33		ug/L	1.00		133	30-170			
Matrix Spike Dup (6H16001-MSD1)		Source: B607029-01		Prepared: 08/16/2006 10:49		Analyzed: 08/16/2006 16:49				
1,2-Dibromoethane	0.301	0.020	ug/L	0.250	0.014 U	120	60-140	1	18	
1,2-Dibromo-3-chloropropane	0.351	0.020	ug/L	0.250	0.009 U	140	60-140	2	20	
Surrogate: 1,3-Dichlorobenzene	1.42		ug/L	1.00		142	30-170			

FL Petroleum Range Organics - Quality Control

Batch 6H11008 - EPA 3510C

Blank (6H11008-BLK1)				Prepared: 08/11/2006 10:33		Analyzed: 08/11/2006 15:52				
TPH (C8-C40)	0.094 U	0.170	mg/L							
Surrogate: <i>n</i> -Nonatriacontane	0.0968		mg/L	0.100		97	22-137			
Surrogate: <i>o</i> -Terphenyl	0.0573		mg/L	0.0500		115	33-133			
LCS (6H11008-BS1)				Prepared: 08/11/2006 10:33		Analyzed: 08/11/2006 16:14				
TPH (C8-C40)	1.72	0.170	mg/L	1.70		101	46-126			
Surrogate: <i>n</i> -Nonatriacontane	0.182		mg/L	0.200		91	22-137			
Surrogate: <i>o</i> -Terphenyl	0.104		mg/L	0.100		104	33-133			
Matrix Spike (6H11008-MS1)		Source: B606690-02		Prepared: 08/11/2006 10:33		Analyzed: 08/11/2006 16:36				
TPH (C8-C40)	5.42 D	0.340	mg/L	3.40	0.796	136	48-118			D
Surrogate: <i>n</i> -Nonatriacontane	0.271		mg/L	0.200		136	22-137			



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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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FL Petroleum Range Organics - Quality Control

Batch 6H11008 - EPA 3510C

Matrix Spike (6H11008-MS1) Continued Source: B606690-02 Prepared: 08/11/2006 10:33 Analyzed: 08/11/2006 16:36

Surrogate: o-Terphenyl 0.137 mg/L 0.100 137 33-133

Matrix Spike Dup (6H11008-MSD1) Source: B606690-02 Prepared: 08/11/2006 10:33 Analyzed: 08/11/2006 16:59

TPH (C8-C40) 4.58 D 0.340 mg/L 3.40 0.796 111 48-118 17 30 D

Surrogate: n-Nonatriacontane 0.213 mg/L 0.200 106 22-137

Surrogate: o-Terphenyl 0.109 mg/L 0.100 109 33-133

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 6H14008 - EPA 3005A

Blank (6H14008-BLK1) Prepared: 08/14/2006 11:56 Analyzed: 08/14/2006 20:01

Lead 2 I 10 ug/L

LCS (6H14008-BS1) Prepared: 08/14/2006 11:56 Analyzed: 08/14/2006 20:08

Lead 1010 10 ug/L 1000 101 82-117

Matrix Spike (6H14008-MS1) Source: B606941-01 Prepared: 08/14/2006 11:56 Analyzed: 08/14/2006 20:15

Lead 994 10 ug/L 1000 2 U 99 68-126

Matrix Spike Dup (6H14008-MSD1) Source: B606941-01 Prepared: 08/14/2006 11:56 Analyzed: 08/14/2006 20:42

Lead 984 10 ug/L 1000 2 U 98 68-126 1 19

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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
I	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
D	Data reported from a dilution

Laboratory Certification Summary

Analysis	Matrix	Cert ID	Cert Number
8011	Water	NELAC	E82277
8260B Arom	Water	NELAC	E82277
8260B Halo	Water	NELAC	E82277
8270C PAH SIM	Water	NELAC	E82277
FLPRO	Water	NELAC	E82277
Lead Total EPA 6010B	Water	NELAC	E82277

