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SITE ASSESSMENT REPORT FOR SITE 425 NS MAYPORT FL
12/1/2000
TETRA TECH NUS

Site Assessment Report
for
Building 425

at

Naval Station Mayport
Mayport, Florida

Southern Division
Naval Facilities Engineering Command
Contract Number N62467-94-D-0888
Contract Task Order 0123

December 2000

TtNUS-JAX-FY01-0022

SITE ASSESSMENT REPORT
for
BUILDING 425

NAVAL STATION MAYPORT
MAYPORT, FLORIDA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
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Naval Facilities Engineering Command
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CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0123

DECEMBER 2000

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PROFESSIONAL CERTIFICATION

Site Assessment Report
Building 425
Naval Station, Mayport, Florida

This Site Assessment Report was prepared in general accordance with FAC 62-770 under the direct supervision of the undersigned geologist using geologic and hydrogeologic principles standard to the profession at the time the report was prepared. 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.

Mark A. Peterson

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12/12/00

Date

EXECUTIVE SUMMARY

Tetra Tech NUS, Inc. (TtNUS) has completed a Site Assessment (SA) for Building 425 at the Naval Station, Mayport, Florida. Two separate releases occurred at different locations at the Site. As a result two individual investigations were conducted at each location and are referred to as Areas 1 (500 gallon fuel oil spill from a product line) and Area 2 (700 gallon fuel oil spill from a vent line). The SA was conducted in general accordance with the requirements of Chapter 62-770, Florida Administrative Code (FAC). The assessment report was submitted to the Florida Department of Environmental Protection (FDEP) for approval.

TtNUS performed the following tasks during the SA:

- Reviewed available Navy documents and identified potential sources and receptors for petroleum hydrocarbons in the vicinity, evaluated private potable wells within a 0.25-mile radius and public water supply wells within a 0.50-mile radius, located nearby surface water bodies, and determined surface hydrology and drainage.
- Conducted site survey to identify utilities and constructed a Site Plan.
- Performed direct push investigation, which included the installation of soil borings to collect soil for Flame Ionization Detector (FID) screening and groundwater samples for field screening for benzene, toluene, ethylbenzene and total xylenes (BTEX), methyl tertiary-butyl ether (MTBE) and naphthalene using a mobile laboratory.
- Collected three soil samples from selected soil borings based on soil vapor results for laboratory analysis of the Kerosene Analytical Group (KAG) parameters for soil which includes BTEX and MTBE, 1-methylnaphthalene, 2-methylnaphthalene, 16 Polynuclear Aromatic Hydrocarbons (PAHs) listed in 62-770 FAC Table A, and Total Recoverable Petroleum Hydrocarbons (TRPHs).
- Installed a total of eight shallow monitoring wells to approximately 15 feet below land surface (bls) and one vertical extent well.
- Collected groundwater samples from eight monitoring wells for laboratory analysis for KAG parameters. KAG parameters for groundwater include BTEX and MTBE, 1-methylnaphthalene, 2-methylnaphthalene, 16 PAHs, 1-2,dichloroethane and other listed Priority Pollutant Volatile Organic Halocarbons, 1,2-dibromoethane (EDB), total lead and TRPH.
- Surveyed monitoring well top of casing elevations and collected depth to groundwater measurements.
- Evaluated groundwater flow direction and gradient.

The Groundwater Cleanup Target Levels (GCTLs) used for this site are listed in Table I from Chapter 62-777, FAC. Soil Cleanup Target Levels (SCTLs) used for this site are in Table II from Chapter 62-777 FAC.

AREA 1 (500 gallon fuel oil spill from a product line)

"Excessively contaminated" soil as defined in Chapter 62-770.200 FAC was not detected in any of the borings installed during the investigation. Mobile laboratory analytical results from the DPT investigation detected the presence of hydrocarbon constituents in the groundwater above GCTLs in one boring. Free product was not detected in any of the monitoring wells. Laboratory analytical results from monitoring well samples indicated that KAG constituents did not exceed GCTLs. Other VOC constituents were detected in Area 1 monitoring wells but were below GCTL values. Based on these results, we recommend that no further action status be granted for Area 1.

AREA 2 (700 gallon fuel oil AST from a vent line)

Based on soil gas results, "excessively contaminated" soil as defined in Chapter 62-770.200 FAC was detected in three borings. Analytical results of the soil, however, did not indicate the presence of hydrocarbon concentrations above SCTLs established in Chapter 62-777, FAC (Table II). However, one sample exceeded the arsenic leachability standard for groundwater protection. Mobile laboratory analytical results from the DPT investigation detected the presence of hydrocarbon constituents in the groundwater above GCTLs in six borings. Free product was detected in the source area monitoring well. However, laboratory analytical results from remaining monitoring well samples indicate that KAG constituents did not exceed GCTLs. Based on the results of this investigation, we recommend that a remedial action plan be prepared for the site.

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ACRONYMS

AST	Above Ground Storage Tank
bls	Below Land Surface
BTEX	Benzene, Toluene, Ethylbenzene and Total Xylenes
CAR	Contamination Assessment Report
CLEAN III	Comprehensive Long-term Environmental Action Navy
CompQAP	Comprehensive Quality Assurance Plan
CTO	Contract Task Order
DPT	Direct Push Technology
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	Flame Ionization Detector
GCTLs	Groundwater Cleanup Target Levels
HSA	Hollow Stem Auger
ID	Inside Diameter
IDW	Investigative Derived Waste
KAG	Kerosene Analytical Group
MGD	Million Gallons Per Day
msl	Mean Sea Level
MTBE	Methyl Tertiary-butyl Ether
NAVY	United States Navy
NGVD	National Geodetic Vertical Datum
NS	Naval Station
ORP	Oxydation Reduction Principle
OVA	Organic Vapor Analyzer
PAH	Polynuclear Aromatic Hydrocarbons
PE	Polyethylene
PRO	Petroleum Range Organics
PVC	Polyvinyl Chloride
SA	Site Assessment
SAR	Site Assessment Report
SCTL	Soil Cleanup Target Level
SOP	Standard Operating Procedures
SOUTHNAVFACENGCOM	Southern Division Naval Facilities Engineering Command
SVOC	Semi-volatile Organics
TRPH	Total Recoverable Petroleum Hydrocarbon

ACRONYMS (Cont'd)

TtNUS	Tetra Tech NUS, Inc.
TW	Temporary Well
umhos	micro ohms per centimeter
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOA	Volatile Organic Aromatic

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

A Site Assessment (SA) was conducted by TtNUS for the US Navy (Navy) Southern Division Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) under Contract Task Order (CTO) 0123, for the Comprehensive Long-term Environmental Action Navy (CLEAN III), Contract Number N62467-94-D-0888. The SA was conducted at Building 425 (the site) located at the Naval Station (NS) Mayport, Duval County, Florida. Two separate petroleum impacted areas were identified at the site. The FDEP Facility Identification Number is 168626008.

The purpose of this SA was to determine the nature and extent of petroleum hydrocarbon impacted soil and groundwater in accordance with the requirements of Chapter 62-770, FAC. Taking the following actions at Building 425 fulfilled this objective:

- Review of all available applicable documents such as closure reports, discharge reports, maintenance records, and construction plans.
- Survey of potential sources in the vicinity of Building 425.
- Survey of potential receptors in the vicinity of Building 425, including public and private water supplies and surface water bodies.
- Completion of a surface and subsurface soil investigation, as well as an initial groundwater screening, using direct push technology (DPT).
- Mobile laboratory screening of groundwater samples for BTEX, MTBE and Naphthalene to aid in determining the optimum number and location of permanent monitoring wells.
- Installation of shallow monitoring wells and one vertical delineation monitoring well.
- Collection of soil and groundwater samples for laboratory analysis for KAG parameters.
- Determination of groundwater flow direction, hydraulic conductivity, hydraulic gradient, and transmissivity.

A SAR Summary Sheet, as required by Chapter 62-770, FAC, is included in Appendix A.

1.2 SITE DESCRIPTION AND SETTING

1.2.1 Location

NS Mayport is located in eastern Duval County, approximately 16 miles northeast of downtown Jacksonville, Florida. NS Mayport is located in Township 1 South, Range 29 east, Section 38, as shown on the Mayport, Florida United States Geological Survey (USGS) Quadrangle (7.5 Minute Series) presented in Figure 1-1.

1.2.2 Site Description

Building 425 is located within the northeastern corner of the base. The Building is the Bachelor Officers' Quarters for the base. Building 425 is the location of two separate releases involving a single 1000 gallon fuel oil AST. A release of 750 gallons of fuel oil occurred in Area 1 when a contractor severed a product line. The Area 2 release occurred when a faulty float valve in a day tank associated with a boiler malfunctioned causing the tank to overfill and fuel to travel through the vent pipe which was connected to the vent pipe to the 1000 gallon AST. The Area 1 release occurred due north of Building 425 while the Area 2 release was located in a corner of the building located on the west side of Building 425. The location of Building 425 within NS Mayport is depicted on Figure 1-2. Site Plans for Areas 1 and 2 are shown in Figures 1-3 and 1-4.

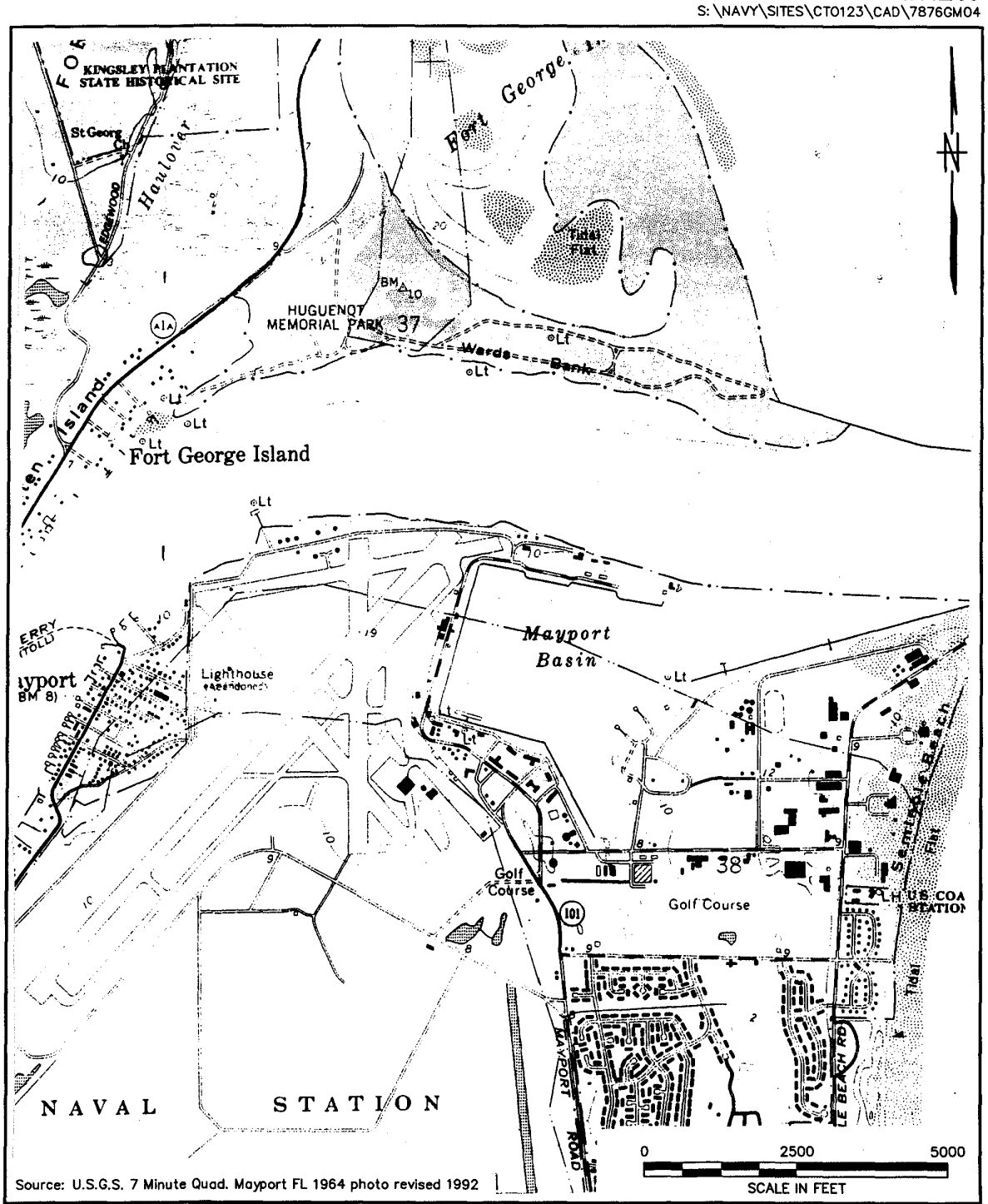
1.2.3 Topography and Drainage

The site 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. NS Mayport is located within the Silver Bluff terrace. The average land surface elevation is between 8-10 feet above mean sea level (msl).

Building 425 is located on the eastern edge of the base and bound by the Atlantic Ocean to the east and close to the mouth of the St. John's River located to the north. Site surface drainage is dictated by the Atlantic Ocean. Due to the low relief over much of the area, drainage is considered to be sluggish, and not well defined.

1.2.4 Regional Hydrogeology

Northeast Florida is underlain by two main aquifer systems: the Surficial aquifer system and the Floridan aquifer system. The Southeastern Coastal Plain aquifer system underlies the Floridan aquifer system in



Source: U.S.G.S. 7 Minute Quad. Mayport FL 1964 photo revised 1992

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COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1-1 / REV. 0

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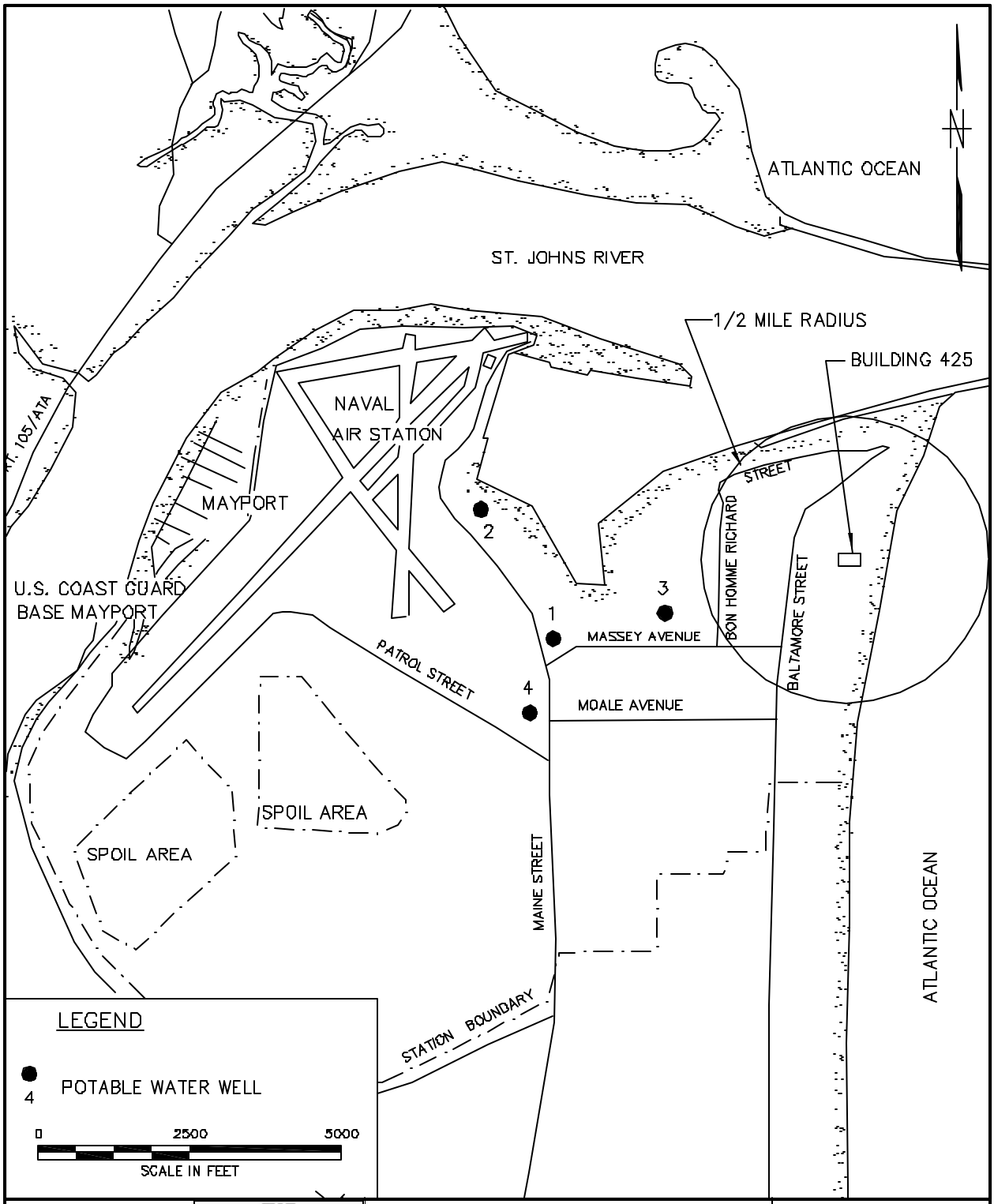

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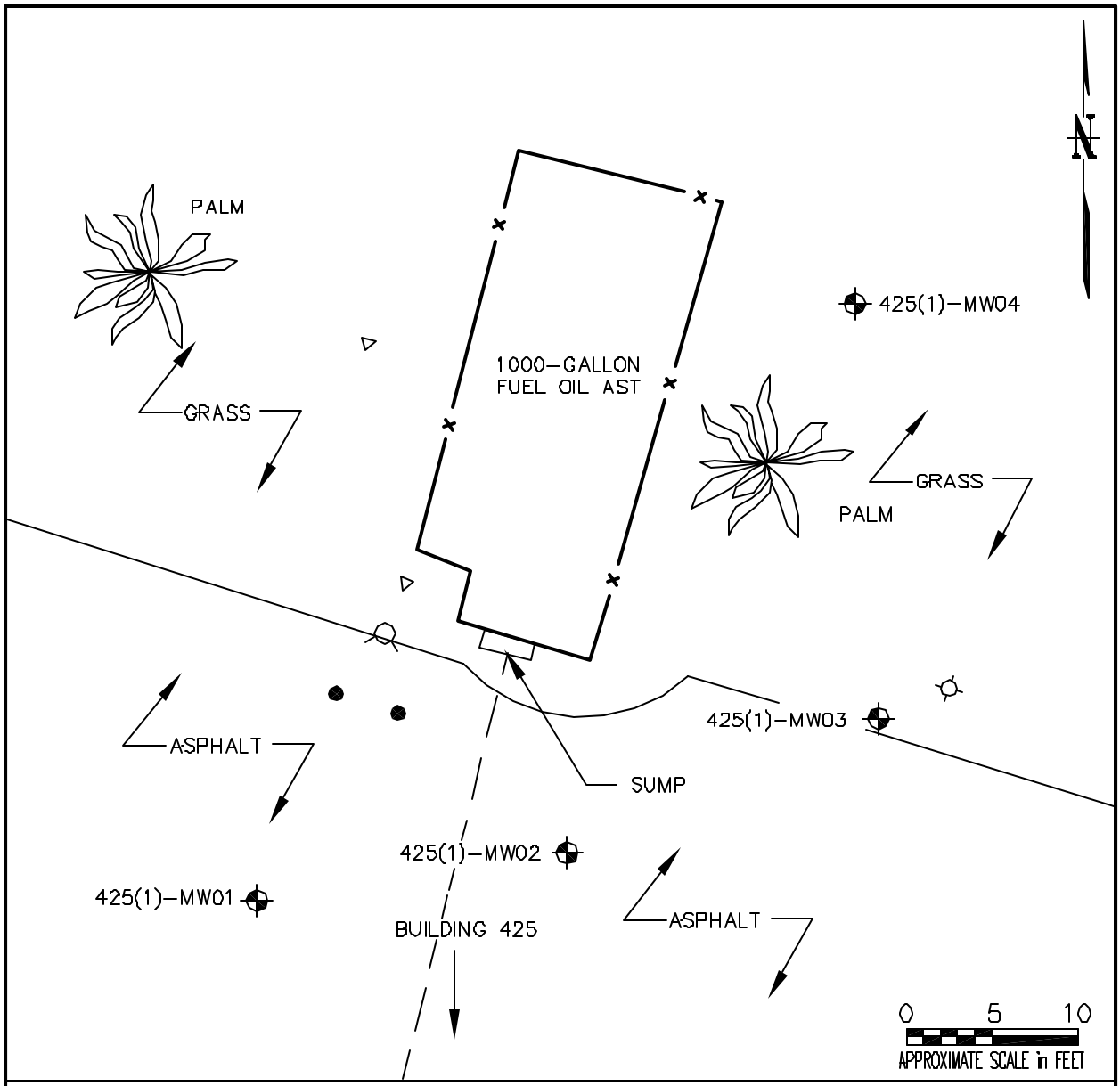

LEGEND

MONITORING WELL		FENCE	
BOLLARD		FENCE	
WATER VALVE		ELECTRIC OR COMM. BOX	
LIGHTPOLE		TREE (TYPE)	PALM
FIRE HYDRANT			

DRAWN BY CW DATE 12/1/00		AREA 1-SITE MAP BUILDING 425 U.S. NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NO. 0506
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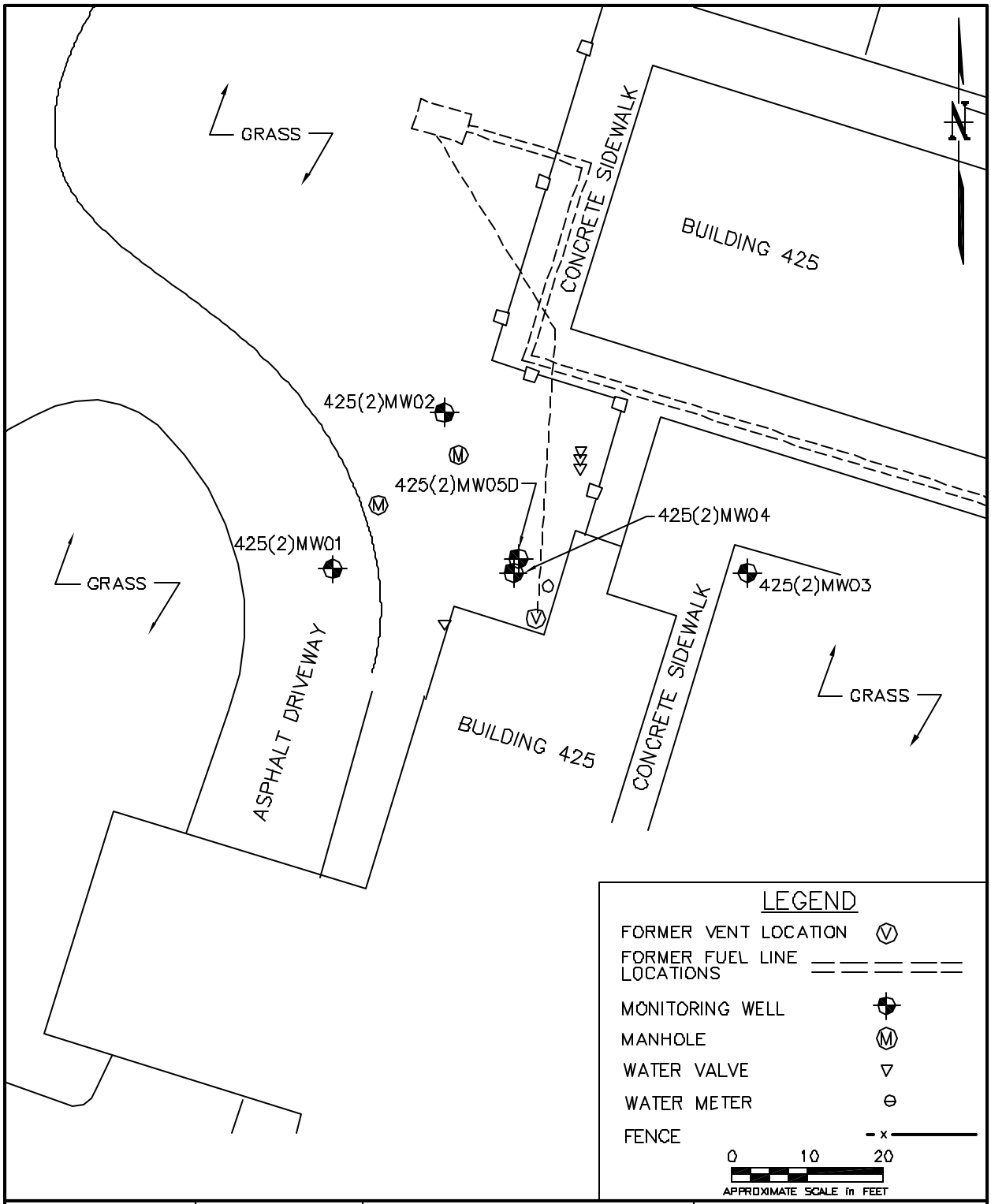

DRAWN BY CW DATE 8/23/00		AREA 2–SITE MAP BUILDING 425 JULY 2000 U.S. NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NO. 0506
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COST/SCHED–AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1–4 REV. 0

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portions of northeast Florida. The Surficial aquifer system in the vicinity of NS Mayport includes sediments of Holocene to Miocene age. These undifferentiated surfical deposits extend from land surface to the top of the Hawthorn Group about 50 feet below land surface (bls) (USGS, 1997).

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

The Floridian aquifer system is the principal source of groundwater for public drinking water in most of northern peninsular Florida. At NS Mayport, three active potable water supply wells are producing water from this aquifer system. In the area of investigation, the system is comprised of (from oldest to youngest) the Oldsmar Formation, the Avon Park Formation, and the Ocala Limestone. The Hawthorn Group, which forms the confining zone, unconformably overlies the Floridian aquifer system.

1.2.5 Land Use

The site is located along the eastern boundary of the base, adjacent to the Atlantic Ocean which lies to the east and directly south of the mouth of the St. John's River. Vegetated open areas surround the building to the west and north beyond which are other facilities of the base. A parking lot and other buildings are located to the south.

1.2.6 Potable Water Well Survey

The potable water supply information presented in this report was obtained from the Site 1330 Contamination Assessment Report (CAR) dated May 1992. The CAR was prepared by the U.S. Army Corps of Engineers for Site 1330 at NS Mayport. The base water treatment plant and the maintenance contractor, Lon Coleman Jones, were contacted to confirm the current accuracy of the water well information.

Potable water is supplied to NS Mayport by four on-base supply wells. Currently, three of the wells are active and one is inactive. The water supply is obtained from one 12-inch and two 16-inch diameter wells which draw water from the Floridan aquifer at depths ranging from approximately 420 to 1,000 feet. Well capacities range between 2.1 and 2.9 million gallons per day (MGD) with a combined total pumping capacity of 10.0 MGD. The water is treated by the on base water treatment plant prior to distribution. Information gathered during the potable well survey is summarized on Table 1-1. The locations of the potable wells are depicted on Figure 1-2. None of the wells are within a 0.50-mile radius of the site.

Table 1-1
Potable Water Well Survey Summary

Site Assessment Report for Building 425
Naval Station Mayport
Mayport, Florida

Well No.[1]	Usage	Total Depth (feet)	Casing Depth (feet)	Completion Date
1	Potable active	1001	435	10/06/61
2	Potable inactive	1000	435	04/03/58
3	Potable active	1000	433	07/20/79
4	Potable active	500	419	05/29/79

Notes:

1 = refer to Figure 1-2 for locations of potable wells.

1.3 SITE HISTORY

Building 425 is the location of a 1,000-gallon fuel oil AST. Two releases occurred at the site, which are referred to as Area 1 and Area 2. The Area 1 release consisted of a 500-gallon spill that resulted from a product line that was ruptured by a utility contractor. The release occurred approximately 50 feet north of the building. Initial remedial actions were implemented immediately and approximately 65 cubic yards of soil was removed from the source area. The area was screened with a FID to delineate the extent of petroleum impacted soils. Groundwater samples were not collected, however free product was collected at the bottom of the excavation. The second release occurred from the vent line to the AST at it's former location near the northwest corner of Building 425. A failure of a float valve in a day tank associated with a boiler caused heating oil to be pumped through a vent line and discharge along the western edge of the building close the building foundation. Approximately 60 cubic yards of hydrocarbon impacted soil was removed during the initial remedial action. However, due to the close proximity to the foundation of the building, all impacted soil was not removed. Laboratory analysis of the soil confirmed the presence of volatile organic aromatics (VOAs) above FDEP target levels.

2.0 SUBSURFACE INVESTIGATION METHODS

2.1 QUALITY ASSURANCE

The site investigation was conducted in accordance with the Standard Operating Procedures prescribed by the FDEP Quality Assurance Section Document DER-001/92, and adopted by the TtNUS Comprehensive Quality Assurance Plan (CompQAP) Number 980038.

Sample identification for the Areas 1 and 2 are indicated by the numeral 1 and 2 in parenthesis following the building identifier. A sample that begins with 425(1) would indicate it is derived from Area 1. A sample that begins with 425(2) would indicate it is derived from Area 2.

2.2 SOIL INVESTIGATON

A soil investigation at Building 425 was conducted at Areas 1 and 2 by the installation of soil borings using two advancement methods: direct push technology (DPT) and hollow stem auger (HSA). Prior to breaking ground at any soil boring location, TtNUS reviewed utility drawings provided by the NS Mayport public works department, and requested utility mark-outs from Lon Coleman Jones, the facility contractor.

Soil boring advancement equipment was decontaminated prior to and following each installation as specified in TtNUS' CompQAP. Rinse water generated during the decontamination of equipment was containerized in 55-gallon drums, sampled, and removed for later disposal.

In addition to liquid investigation derived waster (IDW), soil cuttings were also generated during soil boring installation. Soil cuttings were also placed in 55-gallon steel drums, sampled, and removed for later disposal. Transport manifests and disposal records for all IDW are provided in Appendix B. Soil boring lithologic logs are provided in Appendix C.

2.2.1 <u>Direct-Push Soil Borings</u>

TtNUS conducted a soil vapor assessment at Building 425 in Areas 1 and 2 between May 2 and 3, 2000. DPT soil borings were advanced for the purpose of collecting soil and groundwater samples. Eleven soil borings (425(1)-TW01 through 425(1)-TW11) were advanced at Area 1 surrounding the vicinity of the line break. Fourteen soil borings (425(2)-TW01 through 425(2)-TW14) were advanced at Area 2 at the location of the fuel spill from the AST. Soil samples were collected at two-foot intervals until the

watertable was encountered. Samples were collected for the purpose of organic vapor screening, and for lithologic description.

2.2.2 Hollow Stem Auger (HSA) Soil Borings

A total of nine soil borings, four at Area 1 and five at Area 2, were drilled at the site using HSA drilling techniques between May 22 and 23, 2000. HSA soil borings were advanced for the installation of groundwater monitoring wells. The samples were used to characterize the site lithology and/or provide additional assessment data on soil vapor concentrations in the area. Soil cuttings were collected from the 4.25-inch augers flights for characterization purposes.

2.3 GROUNDWATER INVESTIGATION

2.3.1 Direct-Push Well Points

During the DPT investigation, soil borings were advanced approximately five feet into the water table and groundwater samples were collected. The samples were collected from a depth of approximately 11 feet bls and analyzed by a mobile lab for BTEX, MTBE and naphthalene.

2.3.2 Monitoring Well Installation

Monitoring wells were installed in conjunction with the HSA soil boring procedures discussed in Section 2.2.2. Prior to installation of the monitoring wells, the soil and groundwater screening data obtained during the DPT investigation was evaluated to determine the optimum number and location of the wells. Monitoring wells were designed so that the screened interval intersected the surface of the groundwater. Monitoring well placements were selected to provide spatial coverage around the areas of the releases. Results of the sampling were used to determine if the groundwater in the areas of the release have been impacted by petroleum products.

The monitoring wells were installed by a truck mounted drill rig using 4.25-inch inside diameter (ID) HSA. Each well was constructed of 2-inch diameter, flush-threaded, schedule 40 polyvinyl chloride (PVC) riser and 0.010-inch slot well screen with a 6-inch silt trap and well bottom cap. The shallow wells were installed to approximately 15 feet bls with a 10 foot screen section. The annulus around each well was filled to approximately 1 foot above the screen with US Standard Sieve size 20/30 silica sand, followed by a 6-inch to 1 foot 30/65 fine sand seal. The remainder of the annulus was grouted to the surface. Each well is secured with a locking, watertight cap within a steel, 8-inch diameter steel access port. The access port is set within a 24-inch square concrete apron finished slightly above grade. Monitoring well

construction details are summarized on Table 2-1. Monitoring well completion records are provided in Appendix D.

Each monitoring well was developed using a centrifugal pump. Field measurements of pH, temperature, and specific conductance were collected from the water generated during development. All monitoring wells were developed until such field measurements became stable and the purge water clear or for a maximum of one hour. Stabilization of field measurements is based on the United States Environmental Protection Agency (USEPA) Standard Operating Procedures (SOP) (1997) which specifies the following criteria: temperature +/-0.5^{o}C, pH +/-0.1 unit, and specific conductance +/-10 micro ohms per centimeter (umhos/cm). A TtNUS geologist supervised all monitoring well development. All development water was containerized as liquid IDW for later sampling and disposal.

2.4 MEDIA SAMPLING METHODOLOGY

2.4.1 Lithologic Sampling

Representative soil samples were collected during the subsurface investigation in order to assess the shallow subsurface geologic conditions at Building 425. Soil boring logs are provided in Appendix C.

2.4.2 Soil Vapor Screening

During DPT soil boring installation, a soil vapor assessment was conducted to determine the presence of hydrocarbon concentrations in the site vicinity. The assessment consisted of both visual inspection for petroleum staining and soil vapor screening with an OVA equipped with a FID. The soil vapor analysis was performed according to the headspace method prescribed in Rule 62-770.200(8) FAC. Using this method, two 16-ounce glass soil jars were half-filled with soil sample (duplicate samples). The soil jars were then sealed with aluminum foil. The soil samples were allowed to equilibrate to ambient temperature, which was within the temperature range specified by FDEP.

The samples were screened with a Heath Porta FID II OVA equipped with a FID. Prior to each day's activities, the OVA was field calibrated with 100 parts per million (ppm) methane in air, in accordance with the manufacturer's specifications. Sample screening was performed by inserting the OVA probe through the foil sample cover and recording the highest OVA reading. Following collection of this initial OVA reading, the OVA was fitted with a granular activated carbon filter probe. The OVA was then used to test the headspace above the duplicate sample. The activated carbon absorbs petroleum hydrocarbons providing a filtered reading that represents naturally occurring organic vapors.

Table 2-1
Well Construction Details

Site Assessment Report for Building 425
Naval Station Mayport
Mayport, Florida

AREA 1

Well No.	Date Installed	Installation Method	Top of Casing Elevation (msl)	Total Well Depth (Feet)	Screened Interval (FBLS)	Well Diameter (inches)	LITHOLOGY OF SCREENED INTERVAL
425(1)-MW01	23-May-00	HSA	13.18	15.00	5-15	2.00	Medium to fine sand
425(1)-MW02	23-May-00	HSA	13.12	15.00	5-15	2.00	Medium to fine sand
425(1)-MW03	23-May-00	HSA	12.68	15.00	5-15	2.00	Medium to fine sand
425(1)-MW04	23-May-00	HSA	12.42	15.00	5-15	2.00	Medium to fine sand

AREA 2

Well No.	Date Installed	Installation Method	Top of Casing Elevation	Total Well Depth (Feet)	Screened Interval (FBLS)	Well Diameter (inches)	LITHOLOGY OF SCREENED INTERVAL
425(2)-MW01	25-May-00	HSA	13.68	15.00	5-15	2.00	Medium to fine sand
425(2)-MW02	25-May-00	HSA	13.78	15.00	5-15	2.00	Medium to fine sand
425(2)-MW03	25-May-00	HSA	13.97	15.00	5-15	2.00	Medium to fine sand
425(2)-MW04	25-May-00	HSA	13.68	15.00	5-15	2.00	Medium to fine sand
425(2)-MW5D	25-May-00	HSA	13.80	30.00	25-30	2.00	Medium to fine sand

Notes:
HSA = Hollow Stem Auger.
FBLS = feet below land surface.
msl = mean sea level.
N/A = not applicable.

Upon completion of the procedure, the carbon filtered result was subtracted from the un-filtered result, to obtain a net petroleum vapor value. In accordance with Rule 62-770.200(8), FAC, corrected headspace levels in excess of 50 ppm is defined as “excessively contaminated soil” for KAG parameters. Corrected headspace levels in excess of 10 ppm but less than 50 ppm is considered as contaminated, though not excessively contaminated.

2.4.3 Soil Analytical Sampling

Soil samples were collected for laboratory analysis from three borings with the highest OVA readings from Area 2 during the DPT investigation. The locations correspond to temporary well (TW) location 452(2)-TW02, 452(2)-TW04, and 452(2)-TW11. The samples were analyzed for Volatile Organic Aromatic (VOA) compounds by USEPA Method 8260B, Semi-Volatile Organic Compounds (SVOC) by USEPA SW-846 Method 8270C, Polynuclear Aromatic Hydrocarbons (PAH) by USEPA SW-846 Method 8310, and Total Recoverable Petroleum Hydrocarbons (TRPHs) by FDEP Florida Petroleum Range Organics (FL-PRO) method. These analytical methods include all compounds in the KAG for soils which comprises of BTEX and MTBE, 1-methylnaphthalene, 2-methylnaphthalene, sixteen PAH compounds (included in 62-770 FAC, Table A) and TRPHs. In addition, one sample was collected from Area 1 and tested for grain size and leachability.

2.4.4 Groundwater Mobile Lab Screening

During the DPT portion of the field investigation, each soil boring was advanced into the saturated zone in order to collect groundwater samples for mobile laboratory screening. The groundwater samples were collected using a detachable drive tip attached to a 24-inch long, retractable, stainless steel well screen tube. After the groundwater sampler was advanced into the water bearing zone, the probe tube was withdrawn 24 inches to allow contact with the groundwater. A length of polyethylene (PE) tubing was then inserted into the probe and connected to a peristaltic pump. Several screen volumes were removed from the probe in order to reduce turbidity levels and provide representative groundwater samples. After sufficient purging, groundwater samples were collected by the straw method for VOCs into 40-milliliter (mL) vials. These samples were immediately taken to the on-site mobile laboratory and screened for BTEX, MTBE and naphthalene. Purge water was placed in 55-gallon drums on-site for later sampling and disposal.

2.4.5 Groundwater Analytical Sampling

Groundwater samples were collected from site monitoring wells to determine if the surficial aquifer in the vicinity of the two release areas had been impacted by petroleum hydrocarbons. TtNUS personnel

collected groundwater samples from the two site area monitoring wells on June 13, 2000. Groundwater samples collected from each monitoring well were analyzed using USEPA SW-846 Method 8260B for VOA's and 1,2-dibromoethane (EDB), USEPA SW-846 Method 8270C for SVOC's, USEPA SW-846 Method 8310 for PAHs, USEPA SW-846 Method 6010B for lead (unfiltered), and FDEP method FL-PRO for TRPHs. In addition, two of the wells were sampled for anions, sulfide and methane. The analytical Methods used include all parameters in the KAG for groundwater. The parameters in the KAG are: BTEX and MTBE, 1-methylnaphthalene and 2, methylnaphthalene, sixteen PAH's (listed in 62-770 FAC Table A), 1-2-dichloroethane and listed Priority Pollutant Volatile Organic Halocarbons, EDB, total lead and TRPHs. The groundwater samples were collected using the low-flow or quiescent purging and sampling method using new Teflon tubing for each sample and a peristaltic pump. Approximately five well volumes of groundwater were removed from each well using the peristaltic pump. Temperature, pH, specific conductance, turbidity dissolved oxygen and oxidation reduction principle (ORP) measurements, and total well purge volumes were recorded at the time of the groundwater sample collection. Groundwater samples were placed on ice and shipped to an approved laboratory. Groundwater sample log sheets are provided in Appendix E.

Sampling activities were performed in general accordance with the procedures prescribed in the FDEP Quality Assurance Section's Standard Operating Procedures for Laboratory Operations and Sample Collection Activities, (DER-001/92), adopted by TtNUS' CompQAP. Sample preservation was accomplished by obtaining pre-preserved containers from an approved laboratory with an approved CompQAP (PC&B). During the groundwater sampling event, quality control samples (e.g. equipment blanks and trip blanks) were prepared and submitted to the laboratory as required by the CompQAP. Sampling activities were documented in a site-specific field logbook, and samples were transmitted under chain-of-custody protocols to the laboratory.

2.4.6 Free Product Sampling

Prior to groundwater sampling, TtNUS personnel checked each well for free product using an oil/water interface probe. Approximately 2-inches of free product was encountered during this investigation in monitoring well 425(2)-MW04 in Area 2.

2.5 HYDROLOGIC INVESTIGATION

2.5.1 Water Level Measurements

The depth to groundwater was measured in site monitoring wells on June 13, 2000. Measurements were made from the north rim of the top of well riser using an electronic water level indicator. The water level measurements were used to determine the depth to water in the surficial aquifer.

The elevation of the north rim for each top of casing was determined by a Florida registered surveyor, to the nearest 0.01-foot relative. Elevations are based on the National Geodetic Vertical Datum (NGVD) of 1929.

Groundwater elevations were determined by subtracting the measured depth to groundwater for each well from it's respective top of riser elevation.

The horizontal groundwater gradient across the site was evaluated from the average of water level measurements collected on June 13, 2000. The groundwater gradient was calculated from groundwater contours developed from groundwater elevation data.

The groundwater flow gradient was determined using the following equation:

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

where:

I = the hydraulic gradient
h_1 = the water elevation at point 1
h_2 = the water elevation at point 2
d = the distance between point 1 and point 2

Potential movement of groundwater at the site may be described in terms of transportation by natural flow in the saturated zone while assuming groundwater flow follows Darcy's Law. Darcy's Law may be expressed as :

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

where:

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

Site Specific transmissivity is calculated using the following equation:

$T=Kb_e$

Where:

T = transmissivity
K= hydraulic conductivity
b_e = affected aquifer thickness

The results of Hydrogeologic calculations are provided in section 3.1.2 of the Results Section.

2.5.2 Aquifer Characteristics

Previous aquifer test data was used to estimate the hydraulic conductivity of the surficial aquifer system at the site. Based on data accumulated from hundreds of multi-well, single well and slug tests, the arithmetic mean hydraulic conductivity for the surficial aquifer was estimated at 10ft/day. Slug test information and calculations from a USGS report depicting lateral hydraulic conductivity across NS Mayport is provided in Appendix F.

3.0 RESULTS OF INVESTIGATION

3.1 SITE-SPECIFIC HYDROGEOLOGY

3.1.1 Lithology

The subsurface at both sites consists of a mix of fill material and sand to a depth of approximately one foot bls. Beneath the fill in Area 1 is a dark brown sand, medium to coarse grained which was poorly sorted to a depth of approximately eight feet. From eight to 15 feet, the sand was light brown medium grained and well sorted.

Area 2 had a medium to fine grained-fill material sand to five feet bls. From five to 30 feet the lithology consisted of medium grained light brown well sorted sand. No confining layers were encountered at Area 2, to a depth of 30 feet. Soil boring logs are included as Appendix C.

3.1.2 Aquifer Classification

The site is underlain by the surficial aquifer which is classified as G-II by the state of Florida. Based on water level data collected from site monitoring wells on June 13, 2000, the depth to the shallow aquifer across the study area is approximately 6.45 to 9.05 feet bls. Groundwater elevations are presented in Table 3-1.

Using the groundwater flow gradient equation presented in Section 2.5.1, a hydraulic gradient of 0.01 feet/foot to the southeast was calculated for Area 1. Area 2 had a hydraulic gradient of 0.002 feet/foot to the north-northeast. Groundwater flow direction Maps for Areas 1 and 2 are presented in Figures 3-1 and 3-2 respectively. For Area 2, Figure 3-2 the contours were developed using only shallow wells, and not the deeper well 425(2)MW05D which is screened from 25-30 feet below ground surface. Additionally, the water elevation for well 425(2)MW04 was corrected to compensate for the presence of free product.

The site's location with respect to the St. Johns estuary and low groundwater gradients, may explain the change in groundwater flow direction between Area 1 and Area 2.

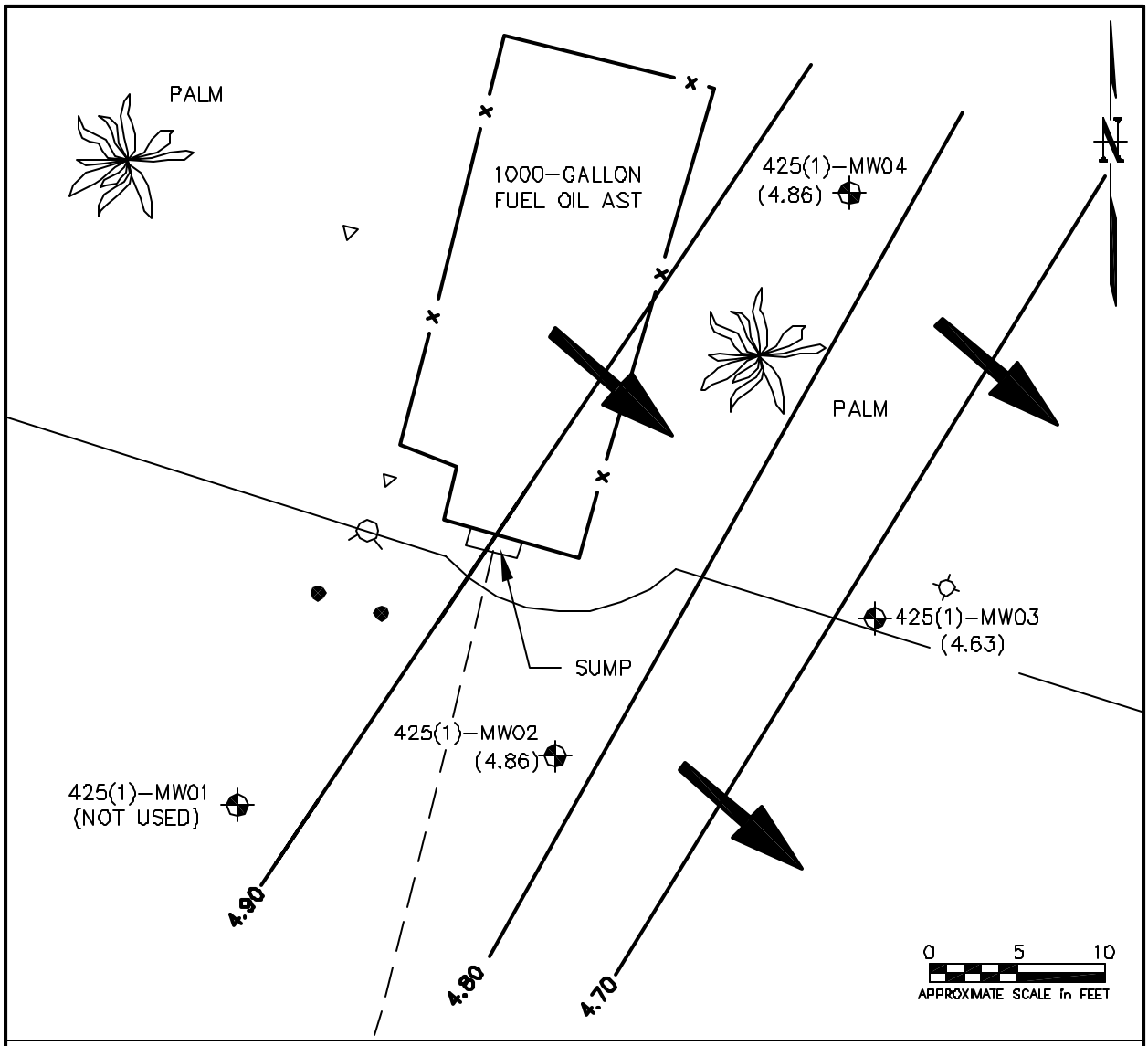
Lithologic data and available literature indicate the effective porosity of the lithology comprising the surficial aquifer is approximately 0.30 (Heath, 1994).

Table 3-1
Water Table Elevation and Monitoring Well Construction Data

Site Assessment Report for Building 425
Naval Station Mayport
Mayport, Florida

Well Number	Total Well Depth (feet, bls)	Screened Interval	Top of Riser Elevation (feet msl) *	June 2000	
				Depth to Water below Top of Riser (feet)	Water Elevation (feet msl) *
Area 1					
425(1)-MW01	15.00	5-15	12.07 *	7.32	4.75 *
425(1)-MW02	15.00	5-15	12.01	7.15	4.86
425(1)-MW03	15.00	5-15	11.57	6.94	4.63
425(1)-MW04	15.00	5-15	11.31	6.45	4.86
Area 2					
425(2)-MW01	15.00	5-15	12.57	8.77	3.80
425(2)-MW02	15.00	5-15	12.67	8.90	3.77
425(2)-MW03	15.00	5-15	12.86	9.05	3.81
425(2)-MW04	15.00	5-15	12.57	Free Product	
425(2)-MW05D	30.00	25-30	12.69	8.94	3.75

Notes:
* = stable groundwater level was not obtained.
bls = below land surface.
msl = mean sea level.

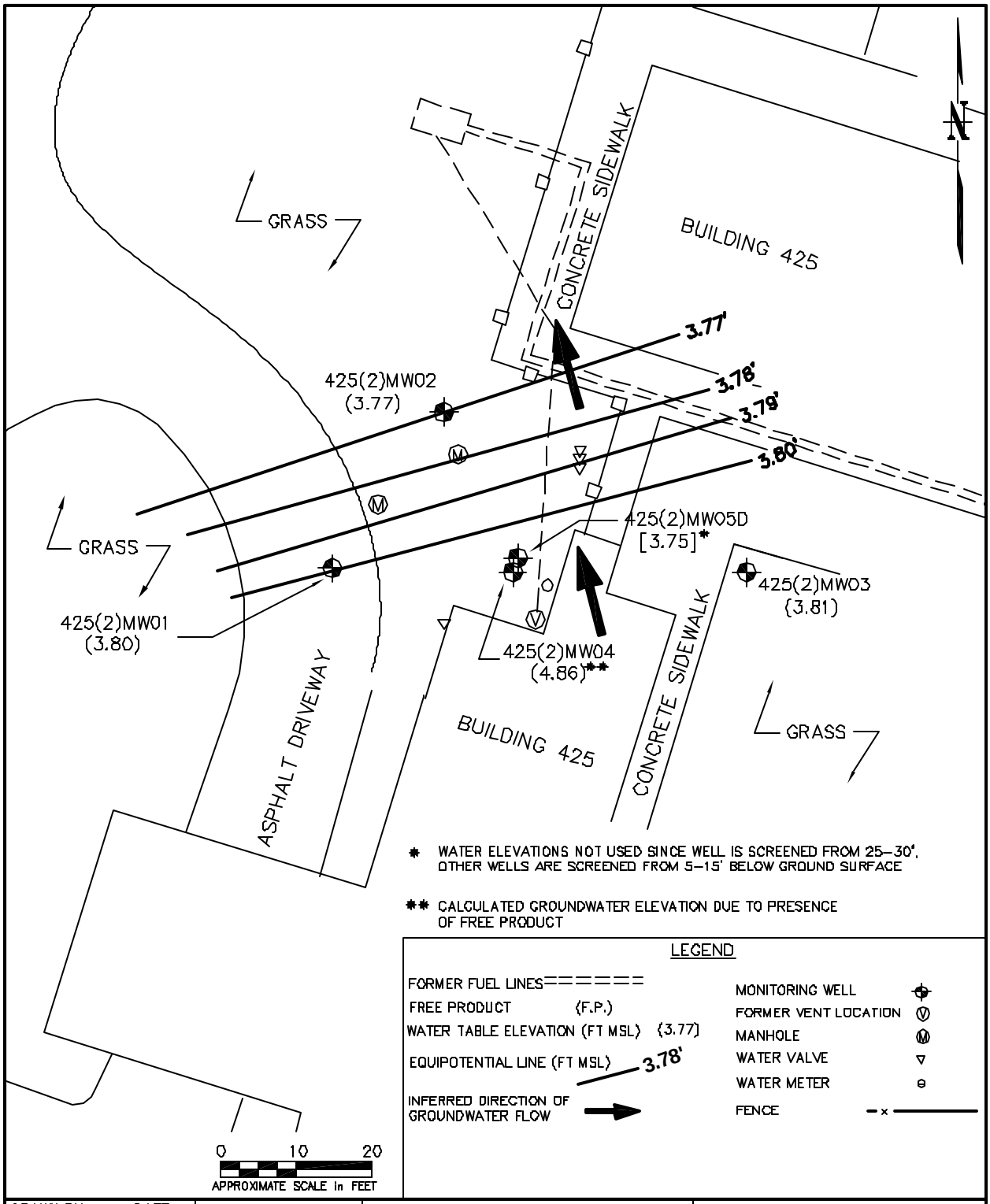


LEGEND

WATER TABLE ELEVATION (FT MSL)	(4.65)
EQUIPOTENTIAL LINE (FT MSL)	4.70
INFERRED DIRECTION OF GROUNDWATER FLOW	
MONITORING WELL	
FUEL LINE	
BOLLARD	
WATER VALVE	
FIRE HYDRANT	
LIGHTPOLE	
FENCE	— x —
TREE (TYPE)	PALM

DRAWN BY CW DATE 12/6/00		CONTRACT NO. 0506	
CHECKED BY DATE	AREA 1-GROUNDWATER CONTOUR MAP BUILDING 425 JUNE 13, 2000 U.S. NAVAL STATION MAYPORT MAYPORT, FLORIDA	APPROVED BY DATE	
COST/SCHED-AREA		APPROVED BY DATE	
SCALE AS NOTED		DRAWING NO. FIGURE 3-1	REV. 0

FORM CADD NO. SDN_AV.DWG – REV D – 1/20/98



DRAWN BY CW DATE 8/23/00	AREA 2-GROUNDWATER CONTOUR MAP BUILDING 425 JUNE 13, 2000 U.S. NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NO. 0506	
CHECKED BY DATE		APPROVED BY DATE	
COST/SCHED-AREA		APPROVED BY DATE	
SCALE AS NOTED		DRAWING NO. FIGURE 3-2	REV. 0

FORM CADD NO. SDN_AV.DWG - REV D - 1/20/98

Using a hydraulic conductivity of 4.34 feet/day, hydraulic gradients of 0.01 and 0.002 feet/foot for Areas 1 and 2, an inferred effective porosity value of 0.30, and Darcy's Equation as stated in Section 2.5.2, the groundwater seepage velocity was calculated at 0.14 feet/day or 5.11 feet/year for Area I and and 0.02 feet/day or 7.3 feet/year for Area 2.

3.2 SOIL QUALITY

3.2.1 Soil Boring Investigation

The vertical and horizontal extent of petroleum impacted soil in the vadose zone was assessed through soil head-space analysis performed during the direct-push investigation and monitoring well installation as described in Section 2.2.1 and 2.4.2 of this report. Soils exhibiting an OVA response of greater than 50 ppm are considered “excessively contaminated” as defined by Chapter 62-770.200, FAC. No readings above two ppm (background) were detected in Area 1. Readings above 50 ppm were detected in three of the borings in Area 2. Soil head-space screening results for the two areas are presented in Table 3-2. Soil boring locations and head-space readings are depicted on Figures 3-3 and 3-4.

3.2.2 Soil Analytical Sampling Results

Based on soil headspace results from both areas, soil samples were selected for confirmation laboratory analyses. Soil samples were not collected from Area 1 due to non detect or background headspace readings. Soil samples from three Area 2 borings were collected based on elevated headspace results.

The analytical data for the laboratory confirmatory soil samples collected from Area 2 indicated that no KAG parameters were present above detection limits, including the sample from 452(2)-TW04 which had an OVA result of 1000 ppm. A summary of soil sample analytical results are presented in Table 3-3. Laboratory analytical reports for these soil samples can be found in Appendix G. Since no detections were noted, a figure showing the results was not generated.

3.3 WATER QUALITY

3.3.1 Temporary Well Point Sampling

TtNUS personnel collected groundwater samples from each soil boring during the DPT investigation. Eleven (11) groundwater samples at Area 1 and fourteen samples at Area 2 were collected between May 2 and 3, 2000. The samples were analyzed for BTEX, MTBE and Naphthalene by the mobile analytical laboratory. Hydrocarbon constituents were only detected in a groundwater sample from boring

Table 3-2
Soil Head-Space Screening Summary

Site Assessment Report for Building 425
Naval Station Mayport
Mayport, Florida

AREA 1				
Sample		OVA Headspace results in ppm		
Location	Date	Unfiltered	Filtered	Total
425(1)-TW01	5/2/00	2.00	<1	2.00
425(1)-TW02	5/2/00	<1	<1	<1
425(1)-TW03	5/2/00	<1	<1	<1
425(1)-TW04	5/2/00	<1	<1	<1
425(1)-TW05	5/2/00	<1	<1	<1
425(1)-TW06	5/2/00	<1	<1	<1
425(1)-TW07	5/2/00	2.00	<1	2.00
425(1)-TW08	5/2/00	<1	<1	<1
425(1)-TW09	5/2/00	<1	<1	<1
425(1)-TW10	5/2/00	<1	<1	<1
425(1)-TW11	5/2/00	<1	0.00	<1

AREA 2				
Sample		OVA Headspace results in ppm		
Location	Date	Unfiltered	Filtered	Total
425(2)-TW01	5/3/00	<1	<1	<1
425(2)-TW02	5/3/00	<1	<1	<1
425(2)-TW03	5/3/00	<1	<1	5.00
425(2)-TW04	5/3/00	1000.00	<1	1000.00
425(2)-TW05	5/3/00	750.00	<1	750.00
425(2)-TW06	5/3/00	<1	0.00	<1
425(2)-TW07	5/3/00	7.00	<1	<1
425(2)-TW08	5/3/00	<1	<1	<1
425(2)-TW09	5/3/00	<1	<1	<1
425(2)-TW10	5/3/00	<1	<1	<1
425(2)-TW11	5/3/00	<1	1.00	<1
425(2)-TW12	5/3/00	<1	<1	<1
425(2)-TW13	5/3/00	55.00	<1	55.00
425(2)-TW14	5/3/00	<1	<1	<1

Notes:
ppm = parts per million
Analytical Results = ppm

Table 3-3
Analytical Summary of Soil Samples - Fixed Based Laboratory

Site Assessment Report for Building 425
Naval Station Mayport
Mayport, Florida

Compound	SCTLs	Leachability Standards for Groundwater	425(2)-SS-SB02-05	425(2)-SS-SB04-05	425(2)-SS-SB11-05
			5/2/00	5/2/00	5/2/00
Volatile Organic Aromatics USEPA Method 8260B (µg/kg)					
Benzene	1.1	7.0	<1.0	<1.0	<1.0
Toluene	380	500	0.64J	0.65J	1.3J
Ethylbenzene	1100	600	0.46J	<1.0	ND
Xylenes (total)	5900	200	1.7J	<1.0	1
Polynuclear Aromatic Hydrocarbons USEPA Method 8310 (µg/kg)					
1-Methylnaphthalene	68,000	2,200	<54	<55	<56
2-Methylnaphthalene	80,000	6,100	<54	<55	<56
OTHER (mg/kg)					
TRPH- FL PRO	340	340	<100	<100	<100
TOC	NA	NA	NS	NS	0
Arsenic	0.8	29.0	0.52	0.61	**1.0**
Cadmium	75.0	8.0	<0.03	<0.03	<0.03
Chromium	210.0*	38.0	1.8	1.6	2.8
Lead	400.0	**	0.85	1.1	1.4

Notes:

* value for hexavalent chromium

** leachibility values only derived on a site specific basis

< = below laboratory detection limit

Analytical Results = µg/kg

µg/kg = micrograms per kilogram

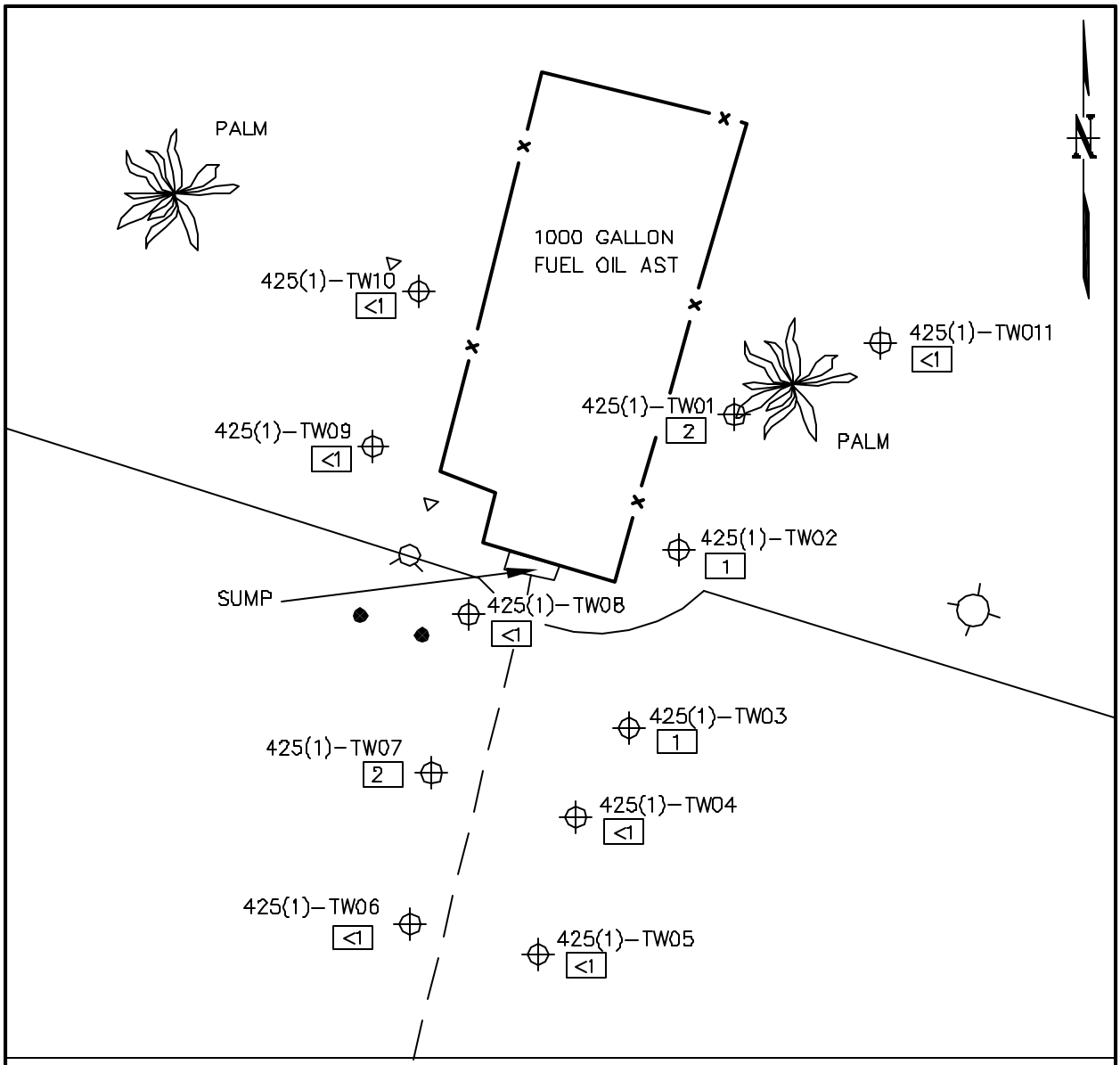
mg/kg = milligrams per kilogram

ND = not detected

NS = not sampled

J = estimated below practical quantitation limit

SCTLs = Soil Cleanup Target Levels



LEGEND

TEMPORARY WELL

SOIL HEAD-SPACE SCREENING RESULTS <1

SOIL HEAD-SPACE RESULTS REPORTED IN PARTS PER MILLION (PPM)

FENCE — x —

BOLLARD

BOLLARD

WATER VALVE

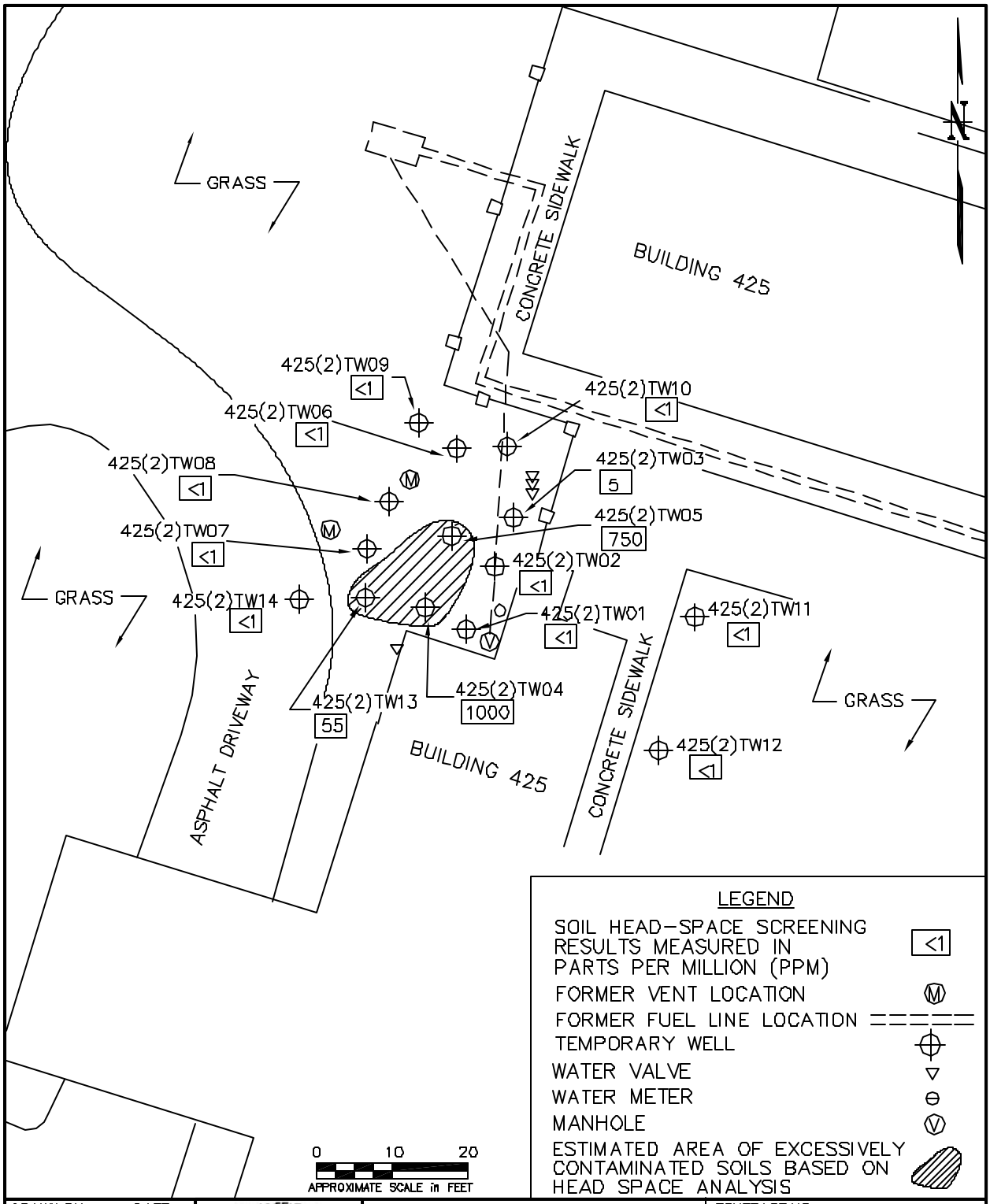
FIRE HYDRANT

LIGHTPOLE

0 5 10
APPROXIMATE SCALE in FEET

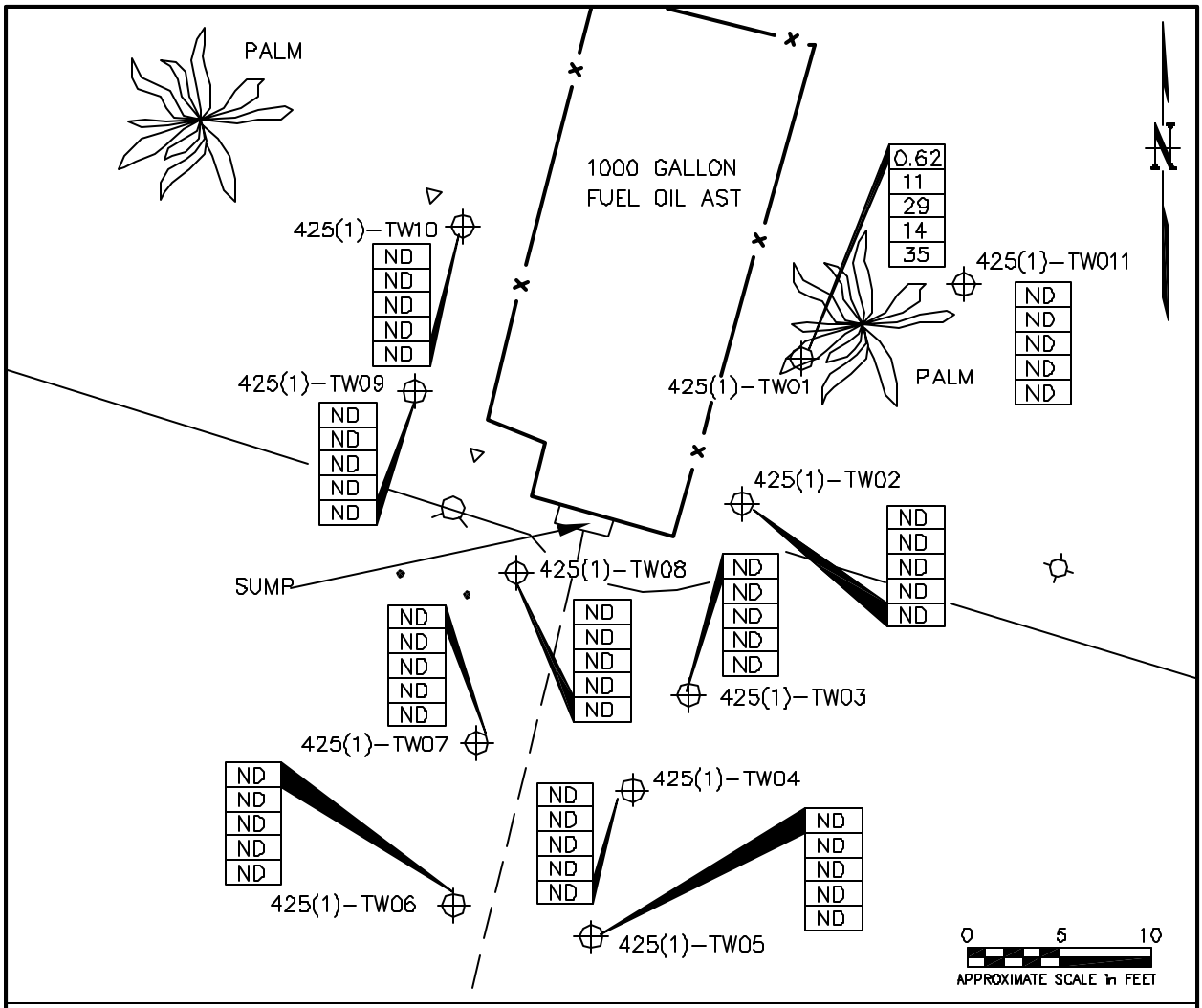
DRAWN BY CW DATE 8/23/00		AREA 1-SOIL HEAD-SPACE RESULTS BUILDING 425 U.S. NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NO. 0506
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 3-3 REV. 0

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



DRAWN BY CW DATE 8/24/00	AREA 2-SOIL HEAD-SPACE RESULTS TEMPORARY WELL LOCATION MAP BUILDING 425 JUNE 13, 2000 U.S. NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NO. 0506	
CHECKED BY DATE		APPROVED BY DATE	
COST/SCHED-AREA		APPROVED BY DATE	
SCALE AS NOTED		DRAWING NO. FIGURE 3-4	REV. 0

FORM CADD NO. SDN_AV.DWG - REV D - 1/20/98



LEGEND

BENZENE	0.62
TOLUENE	11
ETHYLBENZENE	29
XYLENE	14
NAPHTHALENE	35
NOT DETECTED	ND

CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (µg/L)

TREE (TYPE) — PALM

FUEL LINE

LIGHTPOLE

FENCE

BOLLARD

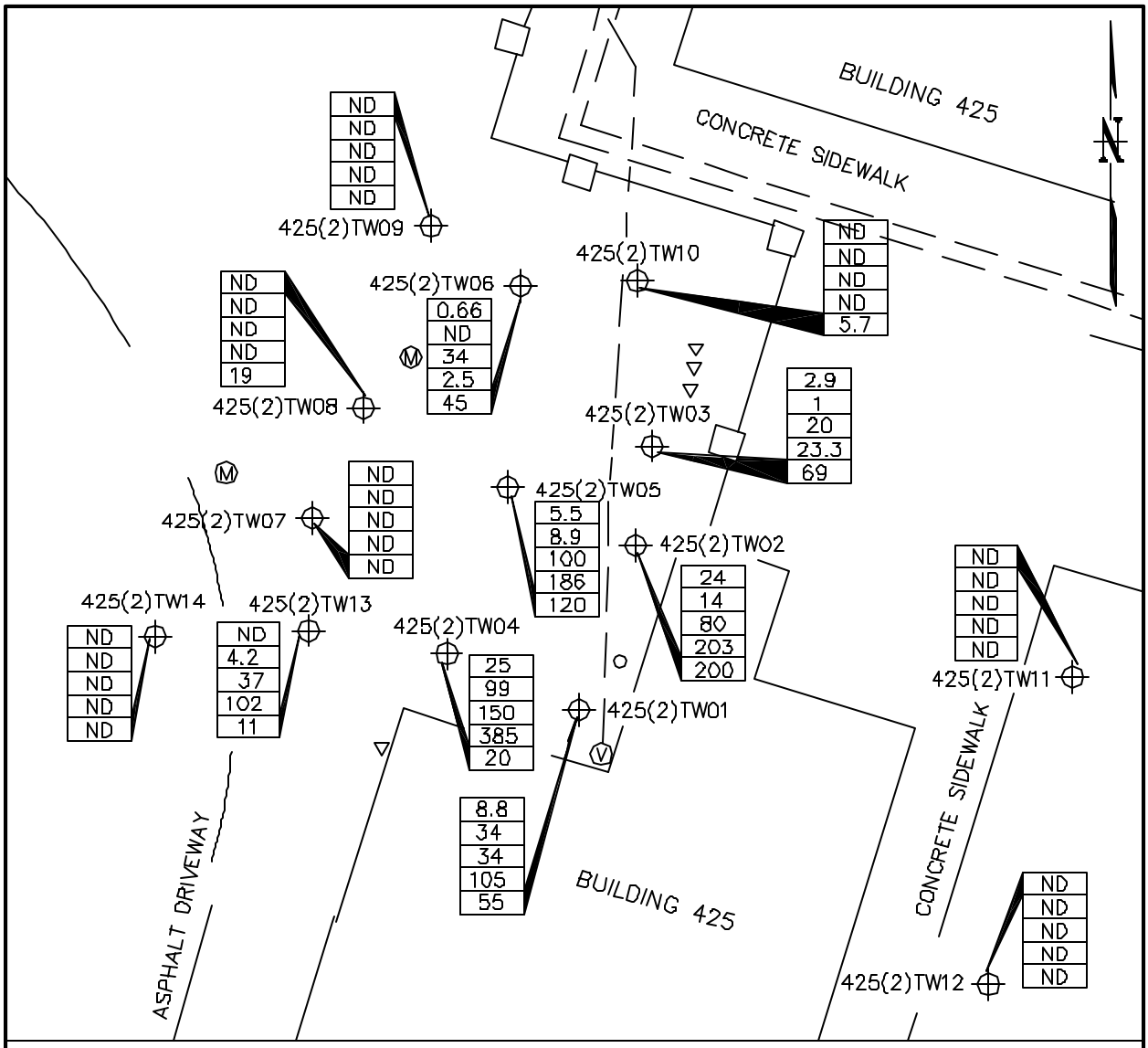
WATER VALVE

FIRE HYDRANT

TEMPORARY WELL

DRAWN BY CW DATE 12/6/00		AREA 1-TEMPORARY WELL RESULTS MOBILE LABORATORY RESULTS BUILDING 425 U.S. NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NO. 0506
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 3-5 REV. 0

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



LEGEND

BENZENE	25
TOLUENE	99
ETHYLBENZENE	150
XYLENE	385
NAPHTHALENE	20
NOT DETECTED	ND

CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (µg/L)

FORMER VENT LOCATION Ⓥ

FORMER FUEL LINE LOCATION ====

TEMPORARY WELL ⊕

WATER VALVE ▽

WATER METER ⊖

MANHOLE Ⓜ

0 5 10
APPROXIMATE SCALE in FEET

DRAWN BY CW DATE 9/7/00		TEMPORARY WELL RESULTS MOBILE LABORATORY RESULTS MAY 2, 2000 BUILDING 425-AREA 2 U.S. NAVAL STATION MAYPORT MAYPORT, FLORIDA	CONTRACT NO. 0506
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 3-6 REV. 0

FORM CADD NO. SDN_AV.DWG - REV D - 1/20/98

(425(1)-TW01) at Area 1. In this groundwater sample total xylenes and naphthalene concentrations were above the GCTL's. Benzene and MTBE were not detected in any groundwater samples collected in Area 1.

Hydrocarbon constituents were detected in nine of the groundwater samples collected from borings at Area 2. BTEX and naphthalene concentrations exceeded target levels in six (425(2)-TW01 through 425(2)-TW06) of the nine groundwater samples. Benzene and MTBE were not detected in any groundwater samples collected in Area 2. Temporary well point locations with analytical results for Areas 1 and 2 can be found on Figures 3-5 and 3-6 respectively. Tables summarizing analytical results of the two areas can be found on Tables 3-4. The mobile laboratory analytical results for groundwater are presented in Appendix H.

3.3.2 Monitoring Well Sampling

On June 13, 2000 TtNUS personnel collected groundwater samples from monitoring wells at Areas 1 and 2. One monitoring well at Area 2 (425(2)-MW04) was not sampled due to the presence of free phase hydrocarbons. Parameters in the KAG were not detected in any of the groundwater samples collected from Areas 1 and 2 above method detection limits. A few parameters not included in the KAG were reported as estimated concentrations below method detection limits. Levels for all detected constituents were below GCTLs. Monitoring well locations with analytical results can be found on Figures 3-7 and 3-8. A summary of the groundwater results is shown on Table 3-5. Laboratory analytical reports can be found in Appendix I.

Table 3-4
Groundwater Analytical Results - Mobile Laboratory for Area 1

Site Assessment Report for Building 425
Naval Station Mayport
Jacksonville, Florida

Compound	GCTLs[1]	425(1)-TW01	425(1)-TW02	425(1)-TW03	425(1)-TW04	425(1)-TW05	425(1)-TW06
		5/3/00	5/5/00	5/5/00	5/5/00	5/4/00	5/4/00
USEPA Method 8260B (µg/L)							
Benzene	1	ND	ND	ND	ND	ND	ND
Toluene	40	0.62	ND	ND	ND	ND	ND
Ethylbenzene	30	11	ND	ND	ND	ND	ND
Xylenes (total)	20	43	ND	ND	ND	ND	ND
MTBE	50	ND	ND	ND	ND	ND	ND
Naphthalene	20	**35**	ND	ND	ND	ND	ND

Compound	GCTLs[1]	425(1)-TW07	425(1)-TW08	425(1)-TW09	425(1)-TW10	425(1)-TW11
		5/3/00	5/5/00	5/5/00	5/5/00	5/4/00
USEPA Method 8260B (µg/L)						
Benzene	1	ND	ND	ND	ND	ND
Toluene	40	ND	ND	ND	ND	ND
Ethylbenzene	30	ND	ND	ND	ND	ND
Xylenes (total)	20	ND	ND	ND	ND	ND
MTBE	50	ND	ND	ND	ND	ND
Naphthalene	20	ND	ND	ND	ND	ND

Notes:
[1]Groundwater Clean-up Target Levels [FAC 62-777]
ND = non detect
USEPA = United States Environmental Protection Agency
µg/L = micrograms per liter

Table 3-4 (continued)
Groundwater Analytical Results - Mobile Laboratory for Area 2

Site Assessment Report for Building 425
Naval Station Mayport
Jacksonville, Florida

Compound	GCTLs[1]	425(2)-TW01	425(2)-TW02	425(2)-TW03	425(2)-TW04	425(2)-TW05	425(2)-TW06	425(2)-TW07
		5/3/00	5/5/00	5/5/00	5/5/00	5/4/00	5/4/00	5/3/00
USEPA Method 8260B (µg/L)								
Benzene	1	**8.8**	**24**	**2.9**	**25**	**5.5**	0.66	ND
Toluene	40	34	14	1	**99**	8.9	ND	ND
Ethylbenzene	30	34	**80**	20	**150**	**100**	**34**	ND
Xylenes (total)	20	**105**	**203**	**25.3**	**385**	**186**	2.5	ND
MTBE	50	ND	ND	ND	ND	ND	ND	ND
Naphthalene	20	**55**	**200**	**69**	**20**	**120**	**45**	ND

Compound	GCTLs[1]	425(2)-TW08	425(2)-TW09	425(2)-TW10	425(2)-TW11	425(2)-GW-TW-12	425(2)-TW13	425(2)-TW14
		5/5/00	5/5/00	5/5/00	5/4/00	5/4/00	5/3/00	5/3/00
USEPA Method 8260B (µg/L)								
Benzene	1	ND	ND	ND	ND	ND	ND	ND
Toluene	40	ND	ND	ND	ND	ND	4.2	ND
Ethylbenzene	30	ND	ND	ND	ND	ND	37	ND
Xylenes (total)	20	ND	ND	ND	ND	ND	102	ND
MTBE	50	ND	ND	ND	ND	ND	ND	ND
Naphthalene	20	19	ND	5.7	ND	ND	11	ND

Notes:
[1]Groundwater Clean-up Target Levels [FAC 62-777]
ND = non detect
USEPA = United States Environmental Protection Agency
µg/L = micrograms per liter

Table 3-5
Groundwater Analytical Results - Fixed Based Laboratory

Site Assessment Report for Building 425 Area I
Naval Station Mayport
Jacksonville, Florida

Compound	GCTLs1	425(1)-MW-01	425(1)-MW-02	425(1)-MW-03	425(1)-MW-04
		6/13/00	6/13/00	6/13/00	6/13/00
Detected Volatile Organic Aromatics (USEPA Method 8260B)(µg/L)					
Acetone	**700**	1.7	1.2J	1.4J	1.9J
1,2 Dichloroethene (total)	**63**	0.14J	<1	<1	ND
Ethylbenzene	**30**	<1	<1	<1	0.13J
Chloroform	**3**	<1	<1	0.33J	1.3J
Methylene Chloride	**3**	<1	<1	<1	0.16J
Trichlorofluoromethane	**3**	<1	<1	0.35J	ND
Detected Semivolatile Organic Compounds(µg/L)					
Bis(2-ethylhexyl)phthalate	**210**	4.9J	3.5J	<10	2.2J
Phenol	**280**	1.8J	2.3J	2.1J	1.3J
Polynuclear Aromatic Hydrocarbons(µg/L)					
Phenanthrene	**210**	0.12J	<1	<1	<1
Naphthalene	**20**	<1	<1	<1	<1
1- Methylnaphthalene	**20**	<1	<1	<1	<1
2- Methylnaphthalene	**20**	<1	<1	<1	<1
Inorganics (µg/L)					
Lead	**15**	<1.7	<1.7	<1.7	<1.7
Total Recoverable Petroleum Hydrocarbons(µg/L)					
TRPH - FL Pro	**5000**	<100	<100	<100	<100
See notes at end of table.					

Table 3-5 (Continued)
Groundwater Results - Fixed Based Laboratory

Site Assessment Report for Building 425 Area 2
Naval Station Mayport
Jacksonville, Florida

Compound	GCTLs	425(2)-MW-01	425(2)-MW-02	425(2)-MW-03	425(2)-MW-04	425(2)-MW-05D
		6/13/00	6/13/00	6/13/00	6/13/00	6/13/00
Detected Volatile Organic Aromatics (USEPA Method 8260B)(µg/L)						
Acetone	**700**	1.3J	1.6J	1.2J	NS	1.3J
Carbon Disulfide	**63**	<1	<1	<1	NS	0.37J
Semivolatile Organic Compounds (µg/L)						
Bis(2-Ethylhexyl)phthalate	**210**	<10	3.1J	<10	NS	2.9J
Polynuclear Aromatic Hydrocarbons(µg/L)						
Fluorene	**280**	0.666J	<1	<1	NS	<1
Phenanthrene	**20**	0.13J	<1	0.11J	NS	<1
1- Methylnaphthalene	**20**	<1	<1	<1	NS	<1
2- Methylnaphthalene	**20**	<1	<1	<1	NS	<1
Inorganics (µg/L)						
Lead	**15**	<1.7	<1.7	<1.7	<1.7	<1.7
Total Recoverable Petroleum Hydrocarbons(µg/L)						
TRPH - FL Pro	**5000**	<100	<100	<100	NS	<100
Natural Attenuation Parameters (mg/kg)						
Nitrate/Nitrite		NS	NS	1.9	NS	NS
Sulfate		NS	NS	87	NS	NS
Sulfide		NS	NS	<1	NS	NS
Methane		NS	NS	<1	NS	NS

Notes:
J = Estimated
ND= Non Detect
NS= Not Sampled
µg/L= micrograms per kilogram
mg/kg= milligrams per kilogram
GCTLs = Groundwater Clean-up Target Levels [FAC 62-777]

4.0 DISCUSSION

4.1 AREA 1

The petroleum release at Area 1 resulted from a ruptured line of an AST caused by a utility contractor. The release occurred approximately 50 feet north of the Building 425 and approximately 500 gallons of heating oil was reportedly released. Initial remedial actions were implemented immediately and 65 cubic yards was removed from the source area. An OVA was used to delineate the extent of the excavation. Soil and groundwater samples were not collected, however free product was collected from the bottom of the excavation. The second release was the result of a failed float valve that caused heating oil to reverse flow and discharge along the edge of the building. Initial remedial actions were implemented for both occurrences and petroleum impacted soils were excavated from both areas. Laboratory samples collected confirmed the presence of VOA's above FDEP target levels.

In accordance with FDEP requirements, a Site Assessment was initiated in accordance with Chapter 62-770 FAC. The assessment included a DPT investigation of the soil and groundwater conditions, followed by the installation of permanent monitoring wells. During the site assessment, "Excessively contaminated" soil, as defined by Chapter 62-770.200 FAC, was not detected within the vadose zone. The mobile laboratory results from the DPT investigation detected the presence of BTEX and naphthalene in the groundwater from one boring. A total of four shallow wells were installed and sampled. The sample results indicated that none of the wells sampled had hydrocarbon constituents above GCTLs.

4.2 AREA 2

The release at Area 2 occurred due to the failure of a float valve. An Initial Remedial Action was implemented and approximately 60 cubic yards of hydrocarbon impacted soil was removed. However, due to the proximity to the foundation of the building, all impacted soil was not removed. Laboratory analysis of a soil sample confirmed the presence of VOAs above target levels.

In accordance with FDEP requirements, a Site Assessment was initiated in accordance with Chapter 62-770 FAC. The assessment included a DPT investigation of the soil and groundwater conditions, followed by the installation of permanent monitoring wells. During the site assessment, soil vapor results indicated "excessively contaminated" soil, as defined by Chapter 62-770.200 FAC, was detected within the vadose zone. However, soil analytical results indicated no KAG paramenters exceeded SCTLs. The mobile laboratory results from the DPT investigation detected the presence of BTEX and naphthalene in the groundwater from six borings. A total of four shallow wells and one vertical extent well was installed and sampled. Free product was encountered in the source monitoring well during the groundwater

sampling event. The extent of free product appears to be limited as none of the surrounding DPT borings or monitoring wells had any detectable levels of free product. Analytical results of monitoring well samples did not indicate the presence of hydrocarbon constituents above GCTLs.

5.0 CONCLUSIONS AND RECOMMENDATION

The results of the site assessment performed by TtNUS at Building 425 are summarized as follows:

5.1 SITE CHARACTERISTICS

- The site is underlain by a surficial aquifer comprised of fill material and sand. No confining layers were encountered within the upper 30 feet of the surficial aquifer.
- The surficial aquifer qualifies as a G-II aquifer.
- The direction of groundwater flow is to the southeast at Area 1 and north-northeast at Area 2. The surficial aquifer flows at a calculated velocity of 0.14 and 0.02 feet/day for Areas 1 and 2 respectively. The discrepancy in groundwater flow directions may be explained by the flat gradient and tidal influences of the nearby St. Johns estuary.
- No private potable wells were found within a 0.25-mile radius of the site. No municipal wells were found within a 0.5-mile radius of the site.

5.2 AREA 1

- Free product was not found at the site during the course of this assessment.
- “Excessively contaminated” soil as defined in Chapter 62-770.200 was not detected at the site during the investigation.
- The DPT investigation revealed the presence of hydrocarbon contaminants in the groundwater in one boring. The concentration of naphthalene in 425(1)-TW01 at 35µg/L exceeded GCTL standard for naphthalene at 20 µg/L.
- Dissolved hydrocarbon constituents of the KAG referenced in Chapter 62-777, FAC, Table I, were not detected in the groundwater samples collected from Site monitoring wells.

The results of the site assessment at Area 1 did not reveal the presence of free product in any of the installed borings. The presence of “excessively contaminated” soil was not detected during the investigation. Monitoring well groundwater samples did not exceed target cleanup levels in the KAG referenced in the Chapter 62-777, FAC Table I, however, one groundwater sample obtained from a DPT sample location contained naphthalene in excess of the GCTL value. In addition, other VOC constituents were also reported in Area 1 monitoring wells at levels below GCTLs. Based on these results, we recommend that no Further Action Status be granted for Area 1.

5.3 AREA 2

- Free product was detected in a source area monitoring well 425(2)MW04 during the course of the assessment.
- The location of the release and the presence of free product in a well adjacent to the building suggests that impacted soil and/or free product may be located in close proximity beneath the building.
- “Excessively contaminated” soil as defined by soil gas results was detected in three borings at the site during the investigation.
- Analytical results collected from the same borings that provided elevated headspace results, however, were below the direct exposure residential cleanup target levels referenced in 62-777, FAC, Table II.
- DPT investigation results indicated the presence of petroleum hydrocarbon constituents above GCTLs in six borings at the site.
- Dissolved hydrocarbon constituents of the KAG were not detected above GCTLs in groundwater samples collected from Area 2 monitoring wells.

Based on the results of this investigation which indicates the presence of free phase hydrocarbons, TtNUS recommends that a Remedial Action Plan be prepared for Area 2 in accordance with Chapter 62-770.700 FAC.

REFERENCES

Driscoll, F.G., 1986. Groundwater and Wells, 2nd Edition. Johnson Filtration Systems, Inc., St. Paul, Minnesota.

FDEP, 1990. *No Further Action and Monitoring Only Guidelines for Petroleum Contaminated Sites*. Guidance document issued by Bureau of Waste Cleanup, Technical Review Section.

Leve, G.W., 1966. "Groundwater in Duval and Nassau Counties, Florida." Florida Bureau of Geology Report of Investigations No. 43.

Scott, T.M., J.M. Lloyd, and Gary Maddox, 1991. "Florida Groundwater Quality Monitoring Program - Hydrogeological Framework": Florida Geological Survey, Special Publication Number 32.

Spechler, R.M., 1994. "Saltwater Intrusion and Quality of Water in the Floridan Aquifer System, Northeastern Florida." U.S. Geological Survey Water-Resources Investigations Report 92-4174, p 76.

USGS, 1982. Ankona, FLA. Quadrangle, 1982. 7.5 Minute Series, Topographic Quadrangle Maps of Florida: scale 1:24,000.

USGS, 1997. "Ground-Water Flow in the Surficial Aquifer System and Potential Movement of Contaminants from Selected Waste-Disposal Sites at Naval Station Mayport, Florida." Water-Resources Investigations Report 97-4262.

APPENDIX A

CAR SUMMARY SHEET

CONTAMINATION ASSESSMENT REPORT SUMMARY SHEET

Facility Name: Building 425, Naval Station Mayport Reimbursement Site: ☐

Location: Mayport, Florida State Contract Site: ☐

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

Date Reviewed: _____ Local Government: _____

(1) Source of Spill: Area 1 – break in fuel line; Area 2 – malfunction float valve Date of Spill: Unknown

(2) Type of Product:

Gasoline Group	Gallons Lost	Kerosene Group	Gallons Lost
☐ Leaded		☐ Kerosene	
☐ Unleaded Regular		☐ Diesel	
☐ Unleaded Premium		☐ JP-4 Jet Fuel	
☐ Gasohol		☑ Heating Fuel	500 gallons-Area 1 700 gallons-Area 2
☐ Undetermined		☐ Unknown	

(3) Description of IRA: Soil removed from area of line break.

☐ Free product Removal: _____ (gals)
☑ Soil Removal: 125 (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: <1 benzene: <1 EDB: < 0.020
lead: _____ MTBE: <5.0 other: TRPH & PAHs

(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: 7 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: 6/13/00 Date of last soil sampling: 5/24/00

(10) QAPP approved? (yes/no) Date: 8/24/98

(11) Direction (e.g. NNW) of surficial groundwater flow: Area 1-SE Area 2-NNE (Fig. 3-1 on page)

(12) Average depth to groundwater: 7.5 (ft)

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

(14) Estimated rate of groundwater flow: 0.02 (ft/day)

(15) Hydraulic gradient across site: 1) 0.01; 2) 0.002 (ft/ft)

(16) Aquifer characteristics:

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

(17) Other remarks: None

APPENDIX B

IDW MANIFESTS

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. FLCESQG06730 | Manifest Doc. No. 1680 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address UNITED STATES NAVY
Naval Station Mayport
Jacksonville, FL 32228

4. Generator's Phone (904)-270-6730

5. Transporter 1 Company Name: CHEMICAL CONSERVATION CORP.
6. US EPA ID Number: FLD980559728
A. Transporter's Phone: 407-859-4441

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL CONSERVATION CORP.
10100 Rocket Boulevard
Orlando, FL 32824
10. US EPA ID Number: FLD980559728
C. Facility's Phone: 407-859-4441

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Non Regulated Material (Soil cuttings)	01	DM	0000	G
b. Non Regulated Material (~~Soil cuttings~~) PURGE WATER	016	DM	0000	G
c. Non Regulated Material (PPE)	001	DM	0000	G
d.				

D. Additional Descriptions for Materials Listed Above
(a) UNIF6261 (OCB0006022)(NHAZS)
(b) UNIF6261 (OCB0006022)(NHAZS) UNIF 6263
(c) UNIF6262 (OCB0006022)(NHAZS)(IDW-Decon Refuse)
(d)

E. Handling Codes for Wastes Listed Above
M141

15. Special Handling Instructions and Additional Information
EMERGENCY RESPONSE: Chem-Trec 1-800-424-9300
EMERGENCY CONTACT: 904 270.6730

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
JAN B BOVIER	Jan B Bovier	01	28	00

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

Printed by J.J. Keller & Associates, Inc.
Neenah, WI 54957-0950

COPY

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. FLCESQG0673	Manifest Doc. No. 010700	2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address: UNITED STATES NAVY
Naval Station Mayport
Jacksonville, FL 32228

4. Generator's Phone (904 - 270 - 6730

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
CHEMICAL CONSERVATION CORP.	FLD980559728	407-859-4441
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
9. Designated Facility Name and Site Address	10. US EPA ID Number	C. Facility's Phone
CHEMICAL CONSERVATION CORP. 10100 Rocket Boulevard Orlando, FL 32824	FLD980559728	407-859-4441

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Non Regulated Material (Purge water)	1	DM	0000 85	G
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
(a) UNIF6263 (PF-011)(NHAZL)
(b)
(c)
(d)

E. Handling Codes for Wastes Listed Above
M71-71

15. Special Handling Instructions and Additional Information
EMERGENCY RESPONSE: Chem-Trec 1-800-424-9300
EMERGENCY CONTACT:
904 - 270 - 6730

TRANSPORTER

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
Thomas Thompson		7	11	00

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Kenneth McAlmont		7	11	00

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR'S COPY

G01-3

Order # 070871 DISPATCH ORDER - CHEM CON FL. 11-03-2000

Generator :FLCESQG06730
UNITED STATES NAVY 904-270-6730
Naval Station Mayport Jan Bouter
52
Jacksonville, FL 32228

Comment :Tetra Tech NUS ,INc.

Directions :
:

DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
T Analysis Wste Quantity Unit Notes
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
P UNIF6263 0000 1.00 DM CALL DAY B-4 ALLAN PATE 904-281-0400
Description Non Regulated Material
(Purge water)

Add 1/Spc. (PF-011)(NHAZL) FLD980559728
D 1.00 OVERPACK

Driver _____ Tme 1____:___ Tme 0____:___

Customer _____ DATE: 11-7-00

PERSON CONTACTED DATE / TIME CALLED

_____ _____

_____ _____

COMMENTS

_____

_____

_____

_____

- JT Butler - 5(Johns Bluff LEFT
- Athr. Blue Right 1st Ext.
- LEFT North
- Fire Station LEFT

APPENDIX C

SOIL BORING LOGS

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NS MAYPORT
PROJECT NUMBER:
DRILLING COMPANY: U.S. Drilling
DRILLING RIG:

BORING No.: 425-MW-1
DATE: 5/22/00
GEOLOGIST: GB + AP
DRILLER: U.S. Drilling

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, dark brown medium to coarse grained, poorly sorted			5ppm			
	5						↓			0	0ppm		
							↓						
							sand, light brown medium grained angular to subangular - well sorted						
	10									0	0ppm		
							↓						
	15												

* When rock coring, enter rock brokeness.

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

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No ___ Well I.D. #: ___

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NS Mayport
PROJECT NUMBER:
DRILLING COMPANY: U.S. Drilling
DRILLING RIG:

BORING No.: 425-MW-2
DATE: 5/22/00
GEOLOGIST:
DRILLER:

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand + gravel.						
							fill material			10 ppm			
							sand, dark brown						
							med. to coarse						
	5						grained, angular			5 ppm			
							well sorted						
							↓						
	10									0 ppm			
							sand, light brown						
							medium grained						
							well sorted						
							↓						
	16												

* When rock coring, enter rock brokeness.

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

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No ___ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NS MAYPORT
PROJECT NUMBER:
DRILLING COMPANY: US Drilling
DRILLING RIG:

BORING No.: 425-MW-3
DATE: 5/22/00
GEOLOGIST: GB + AP
DRILLER:

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, coarse to medium grained, poorly sorted,			0ppm			
	5						↓			0ppm			
	10						sand, light brown med to fine grained angular, well sorted			1ppm			
	15						↓						

* When rock coring, enter rock brokeness.

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

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No ___ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NS MAYPORT
PROJECT NUMBER:
DRILLING COMPANY: U.S. DRILLING
DRILLING RIG:

BORING No.: 425-MW4
DATE: 5/22/98
GEOLOGIST: GB + AP
DRILLER:

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, coarse, to medium grained dark brown, sub-angular to rounded - well sorted			100ppm			
		5								50ppm			
		10								10ppm			
							sand, light brown med. grained, well sorted						
		15											

* When rock coring, enter rock brokeness.

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

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No ___ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NS MAYPORT
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG:

BORING No.: 425-MW5D
DATE: 5/22/00
GEOLOGIST:
DRILLER:

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							sand, coarse to			750 ppm			
							medium grained						
							dark brown,						
							poorly sorted						
		5								100 ppm			
		10					sand, light brown			10 ppm			
							med. to fine grained						
							angular, well						
							sorted						
		15											
		20					sand, fine						
							grained, dark						
							brown, angular						
							well sorted						
		25											

* When rock coring, enter rock brokeness.

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

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No ___ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NS MAYPORT
PROJECT NUMBER:
DRILLING COMPANY: NS DRILLING
DRILLING RIG:

BORING No.: 425-MW-5D (cont'd)
DATE: 5/22/00
GEOLOGIST: GB + AP
DRILLER:

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		30											

* When rock coring, enter rock brokeness.

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

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ✓ No ___ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NS MAYPORT
PROJECT NUMBER:
DRILLING COMPANY: US DRILLING
DRILLING RIG:

BORING No.: 4251 - MW1
DATE: 5/23/00
GEOLOGIST: GB + AP
DRILLER:

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							asphalt + fill material						
							sand, dark brown			2 ppm			
							to brown, medium						
							to coarse grained						
		5					poorly sorted			0 ppm			
							↓						
							sand, light						
		10					brown, medium			0 ppm			
							grained, angular						
							to sub angular						
							well sorted						
							↓						
		15											

* When rock coring, enter rock brokeness.

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

Drilling Area Background (ppm): 0 ppm

Remarks:

Converted to Well: Yes ✓ No ___ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NS MAYPORT
PROJECT NUMBER:
DRILLING COMPANY: US Drilling
DRILLING RIG:

BORING No.: 4251-MW-2
DATE: 5/22
GEOLOGIST: GB+AP
DRILLER: Mark Jones

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
							Asphalt + ground						
							sand, medium			10 ppm			
							to coarse grained						
							dark brown,						
		5					well sorted			5 ppm			
							↓						
		10					sand, brown,						
							fine to medium						
							grained, angular						
							well sorted						
							↓						
		13											

* When rock coring, enter rock brokeness.

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

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No ___ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NS MAYPORT
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG:

BORING No.: 4251-MW-3
DATE: 5/22/00
GEOLOGIST: GB + AP
DRILLER: Mark Jones.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							Sand, light brown, fine grained			5ppm			
							sand, brown to dark brown						
		5					med. grained well sorted			0ppm			
							↓						
		10					↓						
							sand, dark brown to brown, med to fine grained well sorted						
		15					↓						

* When rock coring, enter rock brokeness.

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

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ✓ No ___ Well I.D. #:

Tetra Tech NUS, Inc.

BORING LOG

Page ___ of ___

PROJECT NAME: NS MAYPORT
PROJECT NUMBER:
DRILLING COMPANY: U.S Drilling
DRILLING RIG:

BORING No.: 4251-MW-4
DATE: 5/23/00
GEOLOGIST: CG + AP
DRILLER:

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							fine surface sand						
							sand, brown to			0ppm			
							dark brown,						
							med to coarse						
		5					grained, poorly			1ppm			
							sorted						
							↓						
		10											
							sand, light brown						
							med. to fine grained						
							angular, well						
							sorted						
		15					↓						

* When rock coring, enter rock brokeness.

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

Remarks:

Drilling Area Background (ppm): 0

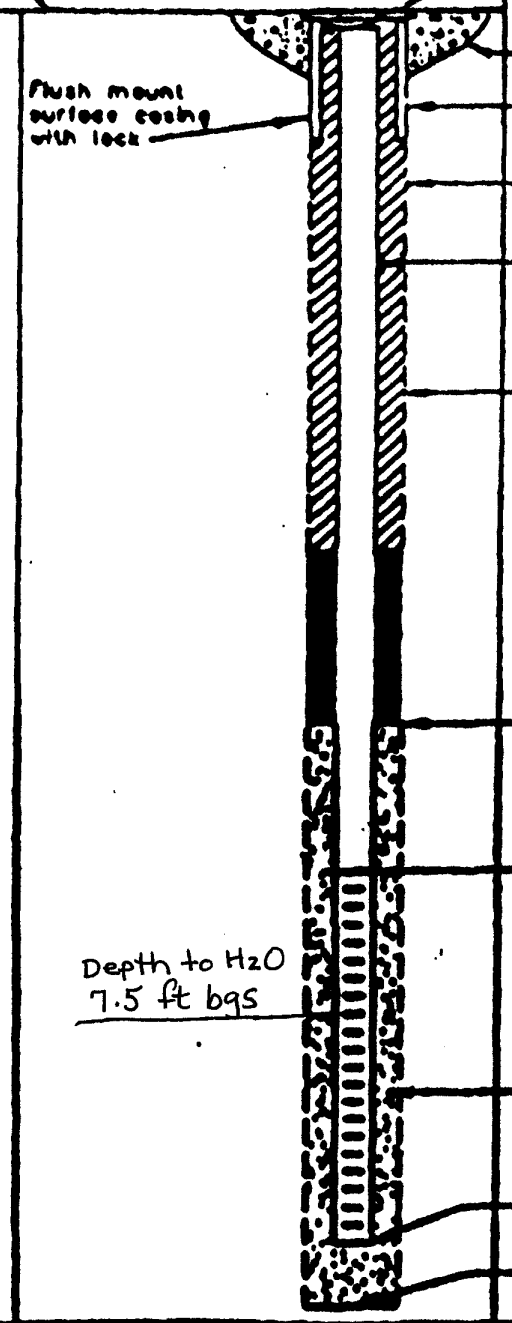
Converted to Well: Yes ✓ No ___ Well I.D. #:

APPENDIX D

WELL COMPLETION LOGS

MONITORING WELL SHEET

PROJECT: NS Mayport	LOCATION: Bldg 425-1	DRILLER: US Drilling	
PROJECT NO.: 0502	BORING: 425I-MW-01	DRILLING METHOD: HSA	
ELEVATION: N/A	DATE: 5/23/00	DEVELOPMENT METHOD:	
FIELD GEOLOGIST: GB, AP			



ELEVATION TOP OF RISER: N/A

TYPE OF SURFACE SEAL: Grout Cement

TYPE OF PROTECTIVE CASING: 8" Manhole

I.D. OF PROTECTIVE CASING: 8"

DIAMETER OF HOLE: 10"

TYPE OF RISER PIPE: Sch 40 PVC

RISER PIPE I.D.: 2"

TYPE OF BACKFILL/SEAL: 30/65 fine sand seal

DEPTH/ELEVATION TOP OF SAND: 3 ft

DEPTH/ELEVATION TOP OF SCREEN: 5 ft

TYPE OF SCREEN: Sch 40 PVC

SLOT SIZE x LENGTH: 0.01 x 10 ft

TYPE OF SAND PACK: 20/30 sand

DIAMETER OF HOLE IN BEDROCK: N/A

DEPTH/ELEVATION BOTTOM OF SCREEN: 15 ft

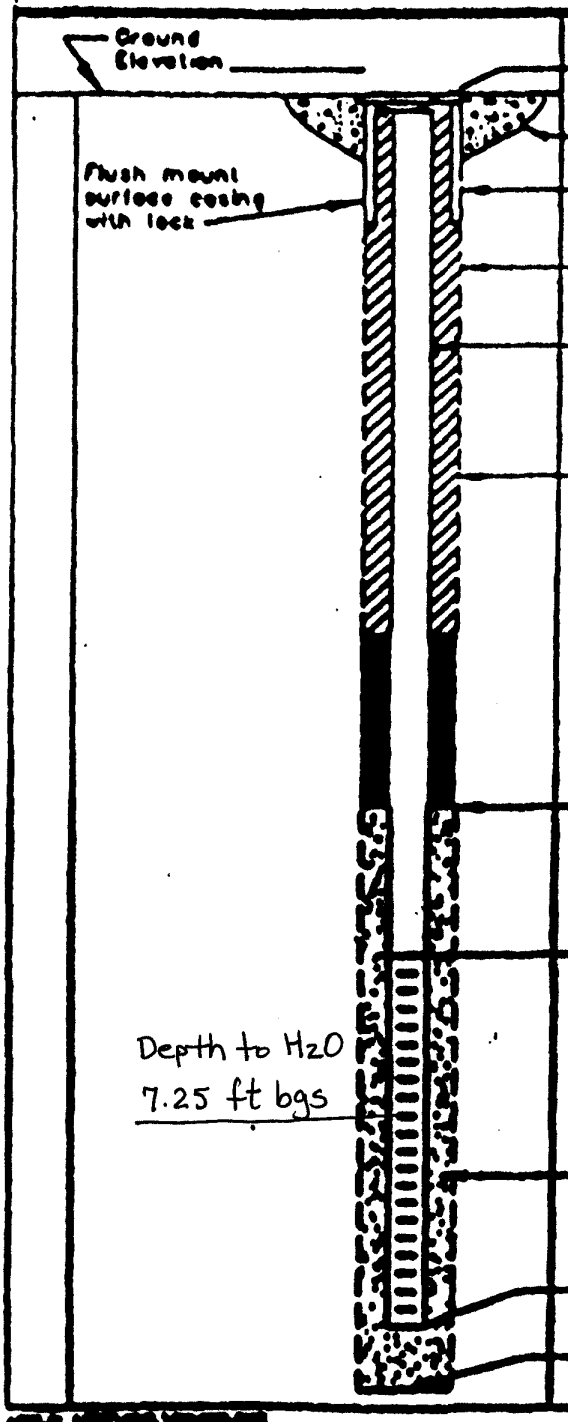
DEPTH/ELEVATION BOTTOM OF SAND:

DEPTH/ELEVATION BOTTOM OF HOLE: 15 ft

BACKFILL MATERIAL BELOW SAND: NA

MONITORING WELL SHEET

PROJECT: NS Mayport	LOCATION: Bldg 425-1	DRILLER: US Drilling	
PROJECT NO.: 0506	BORING: 4251-MW02	DRILLING METHOD: HSA	
ELEVATION: N/A	DATE: 5/23/00	DEVELOPMENT METHOD:	
FIELD GEOLOGIST: GB			



ELEVATION TOP OF RISER: N/A

TYPE OF SURFACE SEAL: Grout Cement

TYPE OF PROTECTIVE CASING: 8" manhole

I.D. OF PROTECTIVE CASING: 8"

DIAMETER OF HOLE: 10"

TYPE OF RISER PIPE: Sch. 40 PVC

RISER PIPE I.D.: 2"

TYPE OF BACKFILL/SEAL: 30/65 fine sand seal.

DEPTH/ELEVATION TOP OF SAND: 3 ft

DEPTH/ELEVATION TOP OF SCREEN: 5 ft

TYPE OF SCREEN: Sch. 40 PVC

SLOT SIZE x LENGTH: 0.01 x 10 ft

TYPE OF SAND PACK: 20/30 sand.

DIAMETER OF HOLE IN BEDROCK: N/A

DEPTH/ELEVATION BOTTOM OF SCREEN: 15 ft

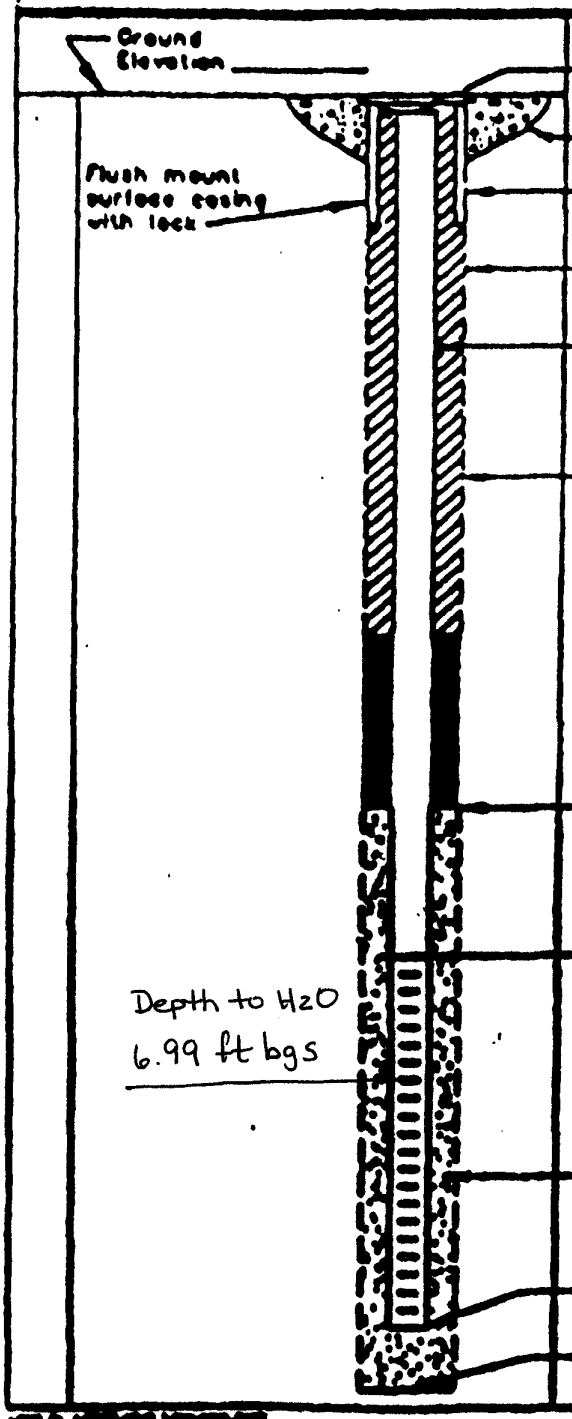
DEPTH/ELEVATION BOTTOM OF SAND:

DEPTH/ELEVATION BOTTOM OF HOLE: 15.5 ft

BACKFILL MATERIAL BELOW SAND: N/A

MONITORING WELL SHEET

PROJECT: NS Mayport	LOCATION: Building 4251	DRILLER: U.S. Drilling
PROJECT NO.: 050[illegible]	BORING: 4251-MW-3	DRILLING METHOD: HSA
ELEVATION: N/A	DATE: 5/23/00	DEVELOPMENT METHOD:
FIELD GEOLOGIST: GB		



ELEVATION TOP OF RISER: N/A.

TYPE OF SURFACE SEAL: Grout Cement

TYPE OF PROTECTIVE CASING: 8" manhole

I.D. OF PROTECTIVE CASING: 8"

DIAMETER OF HOLE: 10"

TYPE OF RISER PIPE: Sch. 40 PVC

RISER PIPE I.D.: 2"

TYPE OF BACKFILL/SEAL: 30/65 fine sand seal

DEPTH/ELEVATION TOP OF SAND: 3'

DEPTH/ELEVATION TOP OF SCREEN: 5'

TYPE OF SCREEN: Sch. 40 PVC

SLOT SIZE x LENGTH: 0.01 X 10'

TYPE OF SAND PACK: 20/30 sand

DIAMETER OF HOLE IN BEDROCK: N/A

DEPTH/ELEVATION BOTTOM OF SCREEN: 15 ft

DEPTH/ELEVATION BOTTOM OF SAND: NA

DEPTH/ELEVATION BOTTOM OF HOLE: 15.5 ft

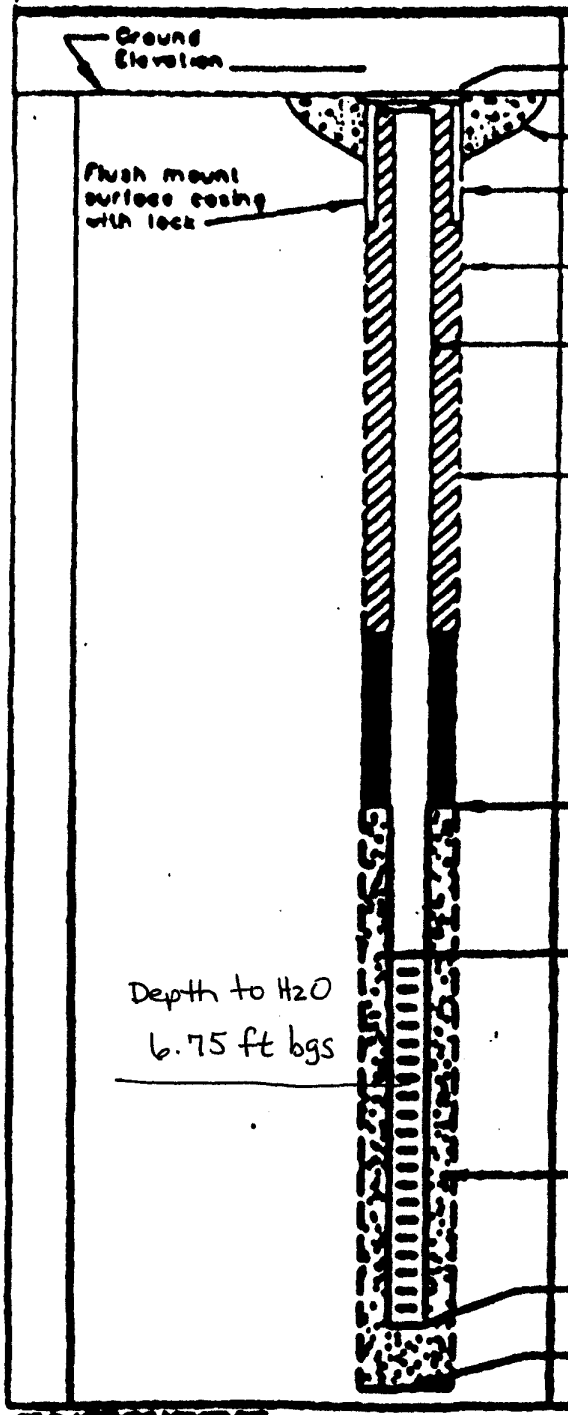
BACKFILL MATERIAL BELOW SAND:

MONITORING WELL SHEET

PROJECT: NS Mayport
PROJECT NO.: 0586
ELEVATION:
FIELD GEOLOGIST: GB + AP

LOCATION: Bldg 425
BORING: 425-MW-4
DATE: 5/23/00

DRILLER: U.S. Drilling
DRILLING METHOD: HSA
DEVELOPMENT METHOD:



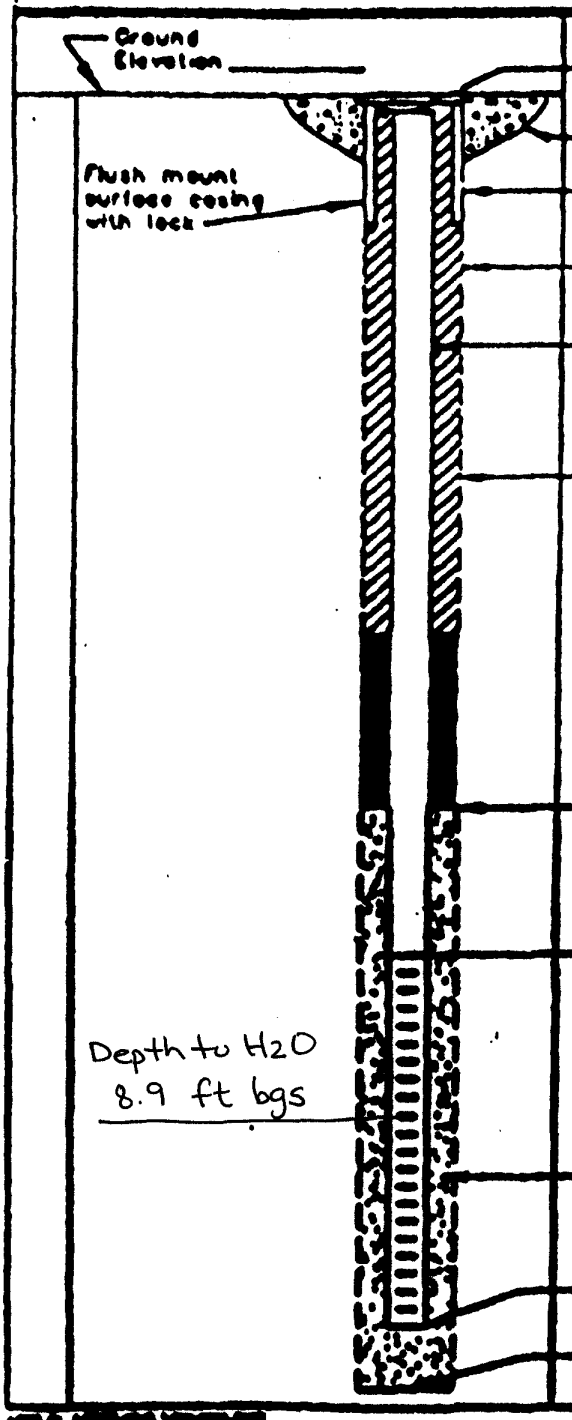
ELEVATION TOP OF RISER: N/A
TYPE OF SURFACE SEAL: Grout/cement
TYPE OF PROTECTIVE CASING: 8" Manhole
I.D. OF PROTECTIVE CASING: 8"
DIAMETER OF HOLE: 10"
TYPE OF RISER PIPE: Sch. 40 PVC.
RISER PIPE I.D.: 2"
TYPE OF BACKFILL/SEAL: 30/65 fine sand seal
DEPTH/ELEVATION TOP OF SAND: 3'
DEPTH/ELEVATION TOP OF SCREEN: 5'
TYPE OF SCREEN: Sch. 40 PVC
SLOT SIZE x LENGTH: 0.01 x 10'
TYPE OF SAND PACK: 20/30 sand pack
DIAMETER OF HOLE IN BEDROCK: N/A
DEPTH/ELEVATION BOTTOM OF SCREEN: 15 ft
DEPTH/ELEVATION BOTTOM OF SAND:
DEPTH/ELEVATION BOTTOM OF HOLE: 15.5 ft
BACKFILL MATERIAL BELOW SAND:

MONITORING WELL SHEET

PROJECT: NS Mayport
PROJECT NO.: 0506
ELEVATION: N/A
FIELD GEOLOGIST: GB+AP

LOCATION: Bldg 425-2
BORING: 4252-MW-01
DATE: 5/22/00

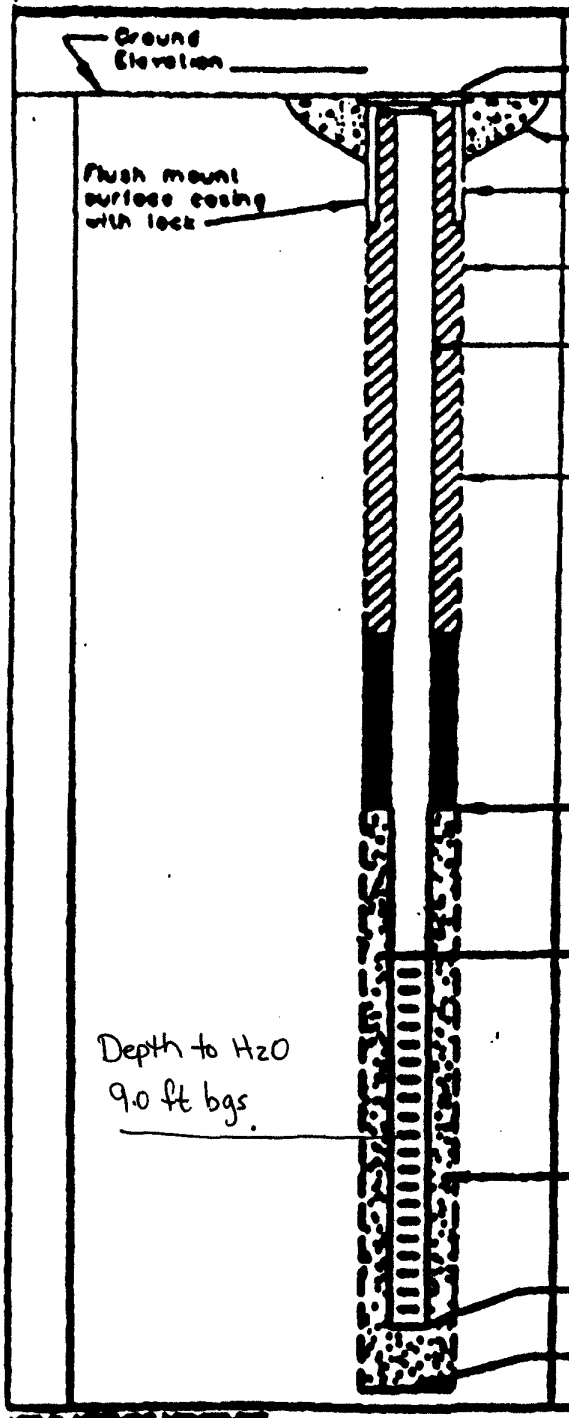
DRILLER: U.S. Drilling
DRILLING METHOD: HSA
DEVELOPMENT METHOD:



ELEVATION TOP OF RISER: N/A
TYPE OF SURFACE SEAL: Grout/Cement
TYPE OF PROTECTIVE CASING: 8" manhole
I.D. OF PROTECTIVE CASING: 8"
DIAMETER OF HOLE: 10"
TYPE OF RISER PIPE: Sch. 40 PVC
RISER PIPE I.D.: 2"
TYPE OF BACKFILL/SEAL: 30/65 fine sand
Seal
DEPTH/ELEVATION TOP OF SAND: 3'
DEPTH/ELEVATION TOP OF SCREEN: 5'
TYPE OF SCREEN: Sch. 40 PVC
SLOT SIZE x LENGTH: 0.01 x 10'
TYPE OF SAND PACK: 20/30 sand pack
DIAMETER OF HOLE IN BEDROCK: N/A
DEPTH/ELEVATION BOTTOM OF SCREEN: 15'
DEPTH/ELEVATION BOTTOM OF SAND:
DEPTH/ELEVATION BOTTOM OF HOLE: 15.5'
BACKFILL MATERIAL BELOW SAND:

MONITORING WELL SHEET

PROJECT: NS Mayport	LOCATION: Bldg 425-2	DRILLER: U.S. Drilling	
PROJECT NO.: 0508	BORING: 4252-MW-2	DRILLING METHOD: HSA	
ELEVATION: NA	DATE: 5/22/00	DEVELOPMENT METHOD:	
FIELD GEOLOGIST: GB			



ELEVATION TOP OF RISER: N/A

TYPE OF SURFACE SEAL: Grout/cement

TYPE OF PROTECTIVE CASING: 8" manhole

I.D. OF PROTECTIVE CASING: 8"

DIAMETER OF HOLE: 10"

TYPE OF RISER PIPE: Sch. 40 PVC

RISER PIPE I.D.: 2"

TYPE OF BACKFILL/SEAL: 30/65 fine sand Seal

DEPTH/ELEVATION TOP OF SAND: 3'

DEPTH/ELEVATION TOP OF SCREEN: 5'

TYPE OF SCREEN: Sch. 40 PVC

SLOT SIZE x LENGTH: 0.01x10'

TYPE OF SAND PACK: 20/30 Sand

DIAMETER OF HOLE IN BEDROCK: N/A

DEPTH/ELEVATION BOTTOM OF SCREEN: 15 ft

DEPTH/ELEVATION BOTTOM OF SAND: N/A

DEPTH/ELEVATION BOTTOM OF HOLE: 15.5

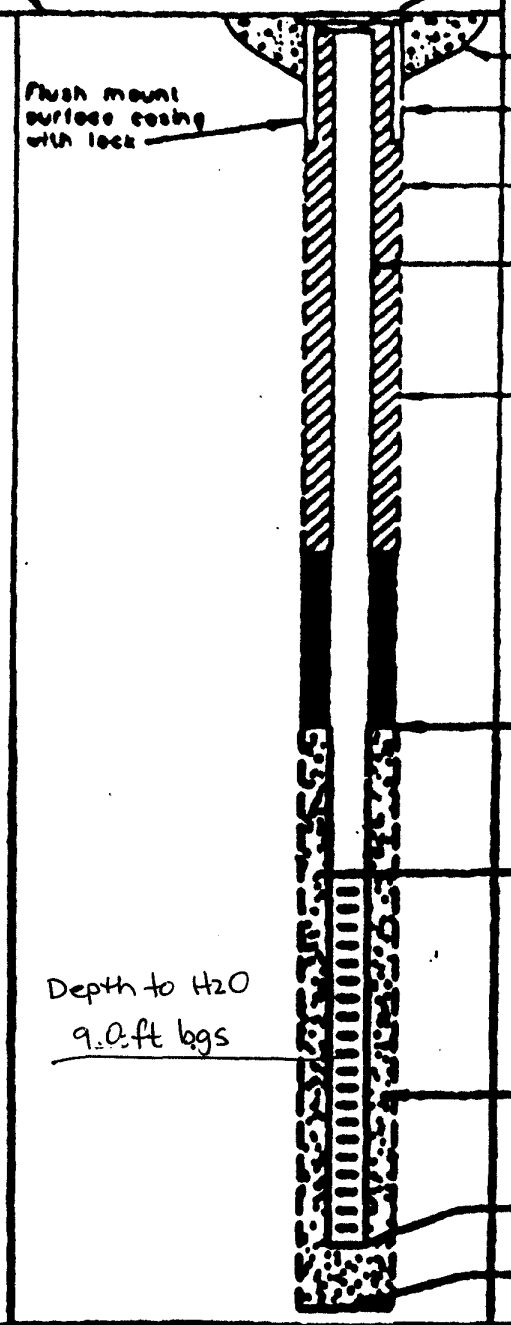
BACKFILL MATERIAL BELOW SAND: N/A

MONITORING WELL SHEET

PROJECT: NS Mayport
PROJECT NO.: 0508
ELEVATION: N/A
FIELD GEOLOGIST: GB + AP

LOCATION: Bldg 425-2
BORING: H252-MW-3
DATE: 5/22/02

DRILLER: U.S. Drilling
DRILLING METHOD: HSA
DEVELOPMENT METHOD:



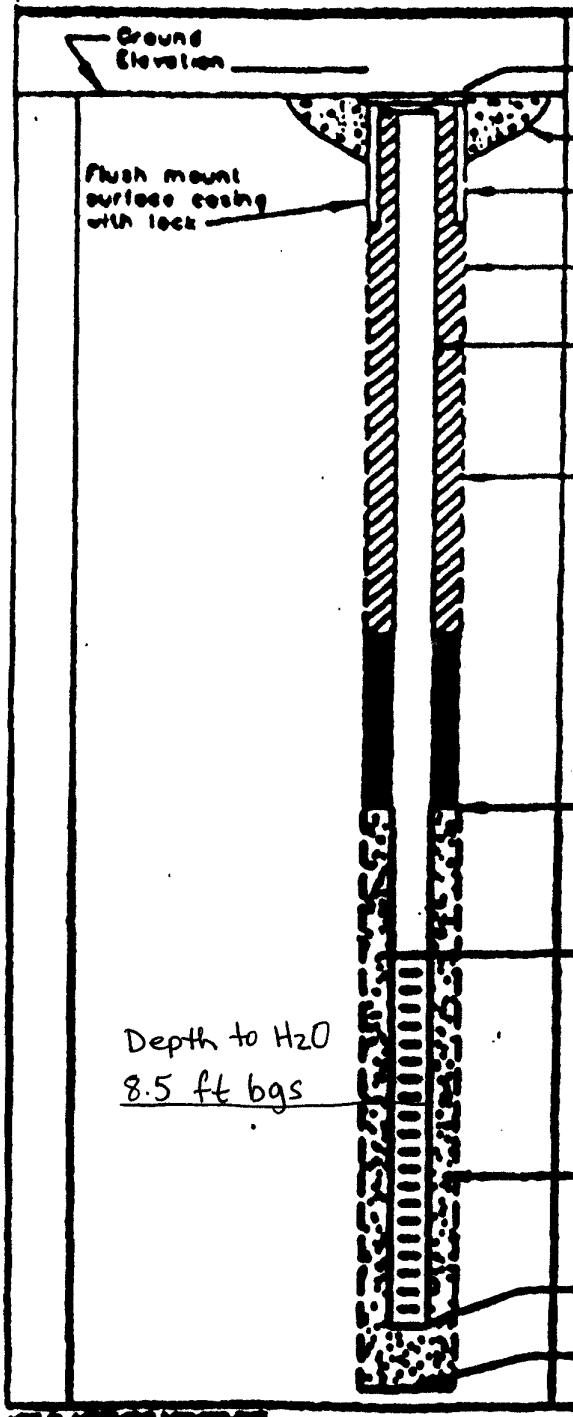
ELEVATION TOP OF RISER: N/A
TYPE OF SURFACE SEAL: Grout/cement
TYPE OF PROTECTIVE CASING: 8" manhole
I.D. OF PROTECTIVE CASING: 8"
DIAMETER OF HOLE: 10"
TYPE OF RISER PIPE: Sch. 40 PVC
RISER PIPE I.D.: 2"
TYPE OF BACKFILL/SEAL: 30/65 fine sand seal
DEPTH/ELEVATION TOP OF SAND: 3'
DEPTH/ELEVATION TOP OF SCREEN: 5'
TYPE OF SCREEN: Sch. 40 PVC
SLOT SIZE x LENGTH: 0.01 x 10'
TYPE OF SAND PACK: 20/30 sand
DIAMETER OF HOLE IN BEDROCK: N/A
DEPTH/ELEVATION BOTTOM OF SCREEN: 15'
DEPTH/ELEVATION BOTTOM OF SAND:
DEPTH/ELEVATION BOTTOM OF HOLE: 15.5'
BACKFILL MATERIAL BELOW SAND: N/A

MONITORING WELL SHEET

PROJECT: NS Mayport
PROJECT NO.: 0506
ELEVATION: N/A
FIELD GEOLOGIST: GR

LOCATION: Bldg 4252
BORING: 4252-MW-4
DATE: 5/22/00

DRILLER: HS Drilling
DRILLING METHOD: HSA
DEVELOPMENT METHOD:



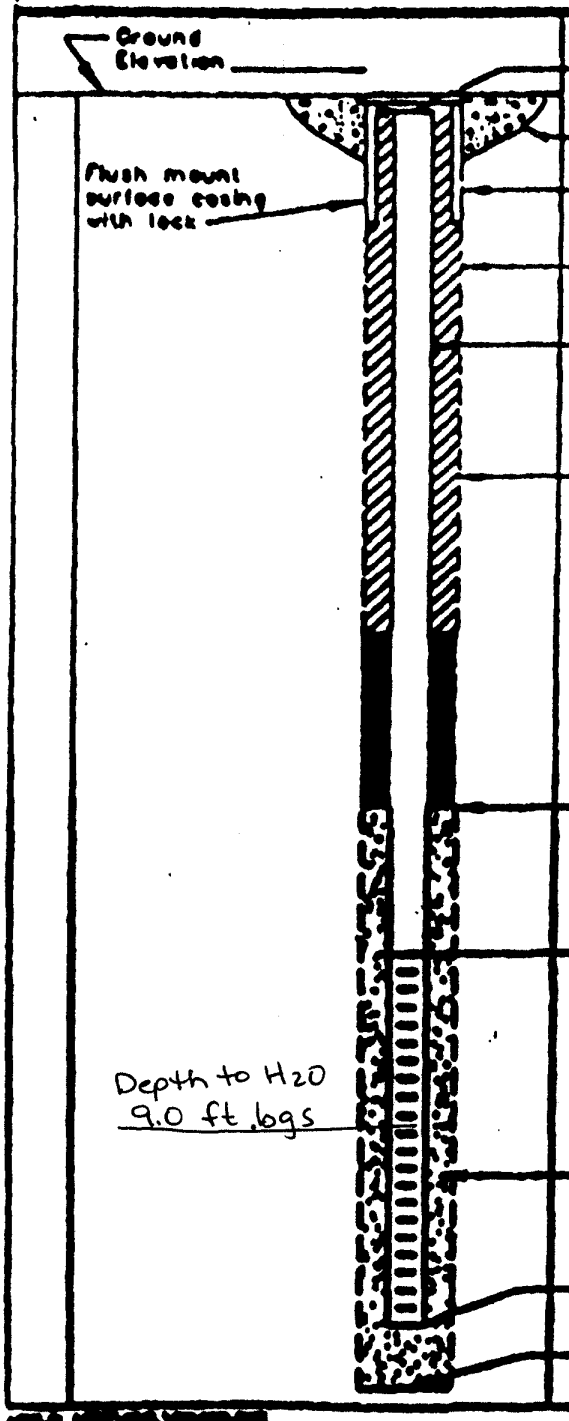
ELEVATION TOP OF RISER: N/A
TYPE OF SURFACE SEAL: Grout/Cement
TYPE OF PROTECTIVE CASING: 8" manhole
I.D. OF PROTECTIVE CASING: 8"
DIAMETER OF HOLE: 10"
TYPE OF RISER PIPE: Sch. 40 PVC
RISER PIPE I.D.: 2"
TYPE OF BACKFILL/SEAL: 30/65 fine sand seal
DEPTH/ELEVATION TOP OF SAND: 3'
DEPTH/ELEVATION TOP OF SCREEN: 5'
TYPE OF SCREEN: Sch. 40 PVC
SLOT SIZE x LENGTH: 0.01 x 10'
TYPE OF SAND PACK: 20/30 Sand
DIAMETER OF HOLE IN BEDROCK: N/A
DEPTH/ELEVATION BOTTOM OF SCREEN: 15 ft
DEPTH/ELEVATION BOTTOM OF SAND: NA
DEPTH/ELEVATION BOTTOM OF HOLE: 15.5 ft
BACKFILL MATERIAL BELOW SAND: N.A.

MONITORING WELL SHEET

PROJECT: NS Mayport
PROJECT NO.: 05016
ELEVATION: NA
FIELD GEOLOGIST: GB

LOCATION: 425-2
BORING: MW5D-
DATE: 5/22/05

DRILLER: US Drilling
DRILLING METHOD: HSA
DEVELOPMENT METHOD:



ELEVATION TOP OF RISER: N/A
TYPE OF SURFACE SEAL: Grout / Cement
TYPE OF PROTECTIVE CASING: 8" Manhole
I.D. OF PROTECTIVE CASING: 8"
DIAMETER OF HOLE: 10"
TYPE OF RISER PIPE: Sch. 40 PVC
RISER PIPE I.D.: 2"
TYPE OF BACKFILL/SEAL: 30/65 fine sand Seal
DEPTH/ELEVATION TOP OF SAND: 23'
DEPTH/ELEVATION TOP OF SCREEN: 25'
TYPE OF SCREEN: Sch. 40 PVC
SLOT SIZE x LENGTH: 0.01 X 5'
TYPE OF SAND PACK: 20/30 sand
DIAMETER OF HOLE IN BEDROCK: N/A
DEPTH/ELEVATION BOTTOM OF SCREEN: 30 ft
DEPTH/ELEVATION BOTTOM OF SAND: N/A
DEPTH/ELEVATION BOTTOM OF HOLE: 30.5 ft
BACKFILL MATERIAL BELOW SAND: N/A

APPENDIX E

GROUNDWATER SAMPLE LOG SHEETS

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MAYPORT
PROJECT NUMBER: N0506

WELL ID.: 425-MW1
DATE: 6-13-00

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1405	—	—	—	—	—	—	—	—	
14:10	8.12		7.22	0.619	46.1	3.03	25.7	-16	slightly turbid
14:15	8.82		7.21	0.618	31.9	0.64	25.7	-16	Clear
14:20	8.84		7.21	0.618	41.2	0.68	25.6	-16	clear
14:25	8.79		7.20	0.617	36.6	0.67	25.6	-15	clear
14:30	8.34		7.20	0.616	41.4	0.68	25.6	-15	clear
14:35	8.30		7.21	0.619	10.2	0.89	25.7	-14	clear
14:40	8.29		7.20	0.618	11.8	0.80	25.7	-9	clear
14:45	8.34		7.19	0.619	7.3	0.79	25.7	-9	Clear
14:50	8.34		7.19	0.619	36.9	0.77	25.8	-10	clear
14:52									end purge

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NAS MAYPORT
Project No.: N0506

[ ] Domestic Well Data
[X] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 425-GW-MW2-001
Sample Location: 425-MW2
Sampled By:
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 6-13-00 / Time: 1555	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	~~Other~~ ORP
Method: Low Flow Peristaltic	Clear	7.10	0.653	25.7	-1.8	1.09	—	129

PURGE DATA

Date: 6-13-00	Time	pH	S.C.	Temp (°C)	Turbidity	DO	Salinity	ORP
Method: Low Flow Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter: 2"								
Well Casing Material: PVC								
Total Well Depth (TD): 15.0								
Static Water Level (WL): 8.26								
One Casing Volume(gal/L):								
Start Purge (hrs): 1515								
End Purge (hrs): 1550								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
SVOCs			YES
TRPH			YES
PAH			YES
Pb	HNO3		YES
VOC's	HCL		YES
EDB	HCl		

OBSERVATIONS / NOTES

Circle if Applicable:

Signature(s):

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NAS MAYPORT
PROJECT NUMBER: N0506
WELL ID.: 425-MW2
DATE: 6-13-00

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
15:15	8.26	—	—	—	—	—	—	—	
15:20	8.25	—	7.09	0.667	5.0	1.71	25.9	215	Clear
15:25	8.28	—	7.09	0.664	2.1	1.49	25.8	191	Clear
15:30	8.27	—	7.10	0.659	1.6	1.27	25.8	169	Clear
15:35	8.27	—	7.11	0.656	-1.5	1.18	25.8	156	Clear
15:40	8.28	—	7.10	0.654	-1.6	1.10	25.8	147	Clear
1545	8.28	—	7.10	0.653	-2.4	1.10	25.7	136	Clear
1550	8.28	—	7.10	0.653	-1.8	1.09	25.7	129	Clear
END PURGE									

Page___ of ___

Tetra Tech NUS, Inc. **GROUNDWATER SAMPLE LOG SHEET**

Project Site Name: Mayport
Project No.: N05506

[ ] Domestic Well Data
[X] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 425-GW-MW03-001
Sample Location: 425-MW-3
Sampled By: AP/ER
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 6/13/00 Time: 1385	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Other ORP(mV)
Method: Low Flow Peristaltic		6.97	0.743	24.8	-10	1.21		107

PURGE DATA

Date: 6/13/00	Time	pH	S.C.	Temp (°C)	Turbidity	DO	Salinity	ORP
Method: Low Flow Peristaltic								
Monitor Reading (ppm): 0								
Well Casing Diameter: 2"								
Well Casing Material: PVC								
Total Well Depth (TD): 15								
Static Water Level (WL): 9.05								
One Casing Volume(gal/L):								
Start Purge (hrs): 1248								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
SVOCs			
TRPH			
PAH			
Pb	HNO_3		
VOC's	HCl		
EDB	HCl		
Methane	HCL		
Anions	—		
Sulfide	NaOH/ZnAcetate		

OBSERVATIONS / NOTES

14
~~15~~.00
9.05
5.95

1.0g = 1 vol
3.0g = 3 vol

Circle if Applicable:

Signature(s):

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MAYPORT
PROJECT NUMBER: N0506

WELL ID.: 425-MW03
DATE: 6/13/00

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1248	9.05	—	—	—	—	—	—	—	
1250	9.07	—	6.91	0.737	-10	4.53	25.2	168	clear
1255	9.08	—	6.93	0.749	-10	1.04	24.9	132	clear
1300	9.08	—	6.95	0.749	-10	0.91	24.9	120	clear
1305	9.07	—	6.97	0.744	-10	1.02	24.9	108	clear
1310	9.07		6.97	0.743	-10	1.21	24.8	107	clear
1313	—								end purge
1315									sample time

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NAS MAYPORT
Project No.: N0506

[ ] Domestic Well Data
[X] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 425-GW-MW1-001
Sample Location: 425-MW1
Sampled By: AP/ER
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 6-13-00 / Time: 14:52	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Other ORP (mV)
Method: Low Flow Peristaltic		7.19	0.619	25.8	36.9	0.77		-10

PURGE DATA

Date: 6-13-00	Time	pH	S.C.	Temp (°C)	Turbidity	DO	Salinity	ORP
Method: Low Flow Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter: 2"								
Well Casing Material: PVC								
Total Well Depth (TD): 15.0								
Static Water Level (WL): 8.31								
One Casing Volume(gal/L):								
Start Purge (hrs): 14:05								
End Purge (hrs): 14:52								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
SVOCs			
TRPH			
PAH			
Pb			
VOC's			
EDB			

OBSERVATIONS / NOTES

Circle if Applicable:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: MAYPORT
Project No.: N0506

[] Domestic Well Data
[] Monitoring Well Data
[X] Other Well Type:
[] QA Sample Type:

Sample ID No.: 425-GW-MW5D-001
Sample Location: 425-MW5D
Sampled By: AP/ER
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Sal.	Other
Date: 6-13-00	Visual	Standard	mS/cm	°C	NTU	mg/l	%	NA
Time: 12:15								
Method: Peristaltic pump	Clear	7.31	0.413	24.1	2.8	0.70		-197 ORP (mV)

PURGE DATA:

Date: 6-13-00	TIME	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	Volume
Method: Peristaltic pump								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): 30.0								
Static Water Level (WL): 8.94								
One Casing Volume (gal/L): 4.0								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
SVOCs			
TRPH			
PAH			
Pb	HNO_3		
VOCs	HCl		
EDB	HCl		

OBSERVATIONS / NOTES:

Stick up of riser above ground level (AGL): _____ ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MAYPORT
PROJECT NUMBER: N0506

WELL ID.: 425-MW5D
DATE: 6-13-00

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
11:00	—	—	—	—	—	—	—	—	
11:05	8.96	~~7.67~~	7.31	0.434	89.4	1.08	24.3	-167	
11:10	8.94		7.32	0.431	57.6	0.77	24.1	-184	
11:15	8.94		7.33	0.423	27.4	0.64	24.1	-196	
11:20	8.95		7.34	0.419	18.6	0.60	24.0	-197	
11:25	8.95		7.34	0.417	15.3	0.58	24.0	-197	
11:30	8.94		7.35	0.416	14.0	0.57	24.0	-197	
11:35	8.94		7.35	0.415	7.9	0.52	24.0	-201	
11:40	8.95		7.36	0.415	11.0	0.48	24.0	-202	
11:50	8.97		7.38	0.417	7.8	2.08	24.0	-181	
11:55	8.95		7.36	0.414	7.4	0.81	24.0	-196	
12:00	8.95		7.38	0.413	2.9	2.41	24.0	-179	
12:05	8.95		7.37	0.413	2.7	0.72	24.1	-196	
12:10	8.95		7.37	0.413	2.8	0.70	24.1	-197	Clear
12:12									end purge
12:15									sample time

Page___ of ___

Tetra Tech NUS, Inc. **GROUNDWATER SAMPLE LOG SHEET**

Project Site Name: MAYPORT
Project No.: N0506

[ ] Domestic Well Data
[X] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: 425-GW-MW1-001
Sample Location: 425-MW1
Sampled By: AP/ER
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 6-13-00 / Time: 10:20	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Other ORP (mV)
Method: Low Flow Peristaltic	Clear	7.01	0.661	0.9	3.02	24.6		220

PURGE DATA

Date: 6-13-00	Time	pH	S.C.	Temp (°C)	Turbidity	DO	Salinity	ORP
Method: Low Flow Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter: 2"	2"							
Well Casing Material: PVC								
Total Well Depth (TD): 15.0								
Static Water Level (WL): 8.77								
One Casing Volume (gal/L): 1.0								
Start Purge (hrs): 0940								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
SVOCs			
TRPH			
PAH			
Pb	HNO_3		
VOC's	HCl		
EDB	HCl		

OBSERVATIONS / NOTES

Circle if Applicable:

Signature(s):

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MAYPORT
PROJECT NUMBER: N0508

WELL ID.: 425-MW-1
DATE: 6/13/00

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
09:40	—	—	—	—	—	—	—	—	
09:45	8.78		7.00	0.636	-0.4	6.21	24.4	293	Clear
09:50	8.68		7.03	0.651	-3.2	2.81	24.7	260	Clear
09:55	8.78		7.03	0.654	-2.9	2.94	24.7	248	Clear
10:00	8.75		7.01	0.652	-1.0	2.98	24.9	237	Clear
10:05	8.75		7.02	0.649	0.4	3.03	24.8	231	Clear
10:10	8.78		7.07	0.654	-7.7	2.99	24.8	224	Clear
10:15	8.77		7.04	0.660	2.5	3.01	24.7	220	Clear
10:17			7.01	0.661	0.9	3.02	24.6	220	Clear - Sample
10:20									

Groundwater Purging and Sampling Log

Date _____

Tetra Tech NUS

Page 1 of ___

Project Site Name: NTC Orlando
Project No.: 7457/

Sample Location: 425-2 MW-2

[ ] Domestic Well Data

[X] Monitoring Well Data

[ ] Other Well Type: _____

Flow-Thru Cell
Make\Model: HORIBA U-22
Serial Nos.: _____

Sample ID No.: _____

Sampled By: _____

C-O-C No.: _____

PURGING DATA

Casing Size (in.)	Gals. per ft. of Water / Liters	Time Hr:Min	pH pH units	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/L	ORP mV	DTW ft BTOC	Flow Rate ml/min
0.5	0.01 / 0.038		6.6	74	24.3	10	1.0	138		
1	0.041 / 0.155		6.5	71	24.7	2	1.9	105		
2	0.163 / 0.617		6.5	71	25.0	-10	0.9	111		
4	0.653 / 2.47		6.5	71	24.9	-15	0.7	108		
6	1.469 / 5.56		6.5	71	24.8	-10	0.6	100		
8	2.611 / 9.88		6.5	72	24.5	0	0.5	86		
10	4.08 / 15.44		6.5	71	24.5	0	0.5	86		
	[1 gal. = 3.785 L]									

PID Reading (ppm):

Well Casing Diameter:

Total Well Depth:

Static Water Level: 8.87

Tube Intake Depth:

Start Purge (hr):

End Purge (hr):

Total Purge Time (min):

Total Vol. Purged:

WATER QUALITY SAMPLE PARAMETERS

	Color Description	pH pH units	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/L	ORP mV	DTW ft BTOC	Flow Rate ml/min
Date: 6/13									
Time: 12:00									

ANALYSES INFORMATION

Analysis		Preservative	Container Requirements			Collected
TCL VOCs	8260B	HCl	3	40 ml	glass vials	
SVOCs/PAHs	8270C/8310	None	2	1-liter	amber glass	
Pesticides	8081A	None	1	1-liter	amber glass	
Herbicides	8151	None	1	1-liter	amber glass	
X-tra Organic	8XXX	None	1 or 2	1-liter	amber glass	
TAL Metals	6000/7000	HNO_3	1	1-liter	HDPE	
Antimony	6010B	HNO_3	1	0.5-liter	HDPE	

ADDITIONAL INFORMATION

Comments:

Method:
[ ] Peristaltic Pump
[ ] Centrifugal Pump
[ ] Bladder Pump
[ ] Tube Evacuation
[ ] Vacuum Jug Assembly
[ ] Bailer

Tubing Type:
[ ] Polyethylene
[ ] Teflon
[ ] Teflon-lined Polyethylene

QA/QC SAMPLES

MS/MSD:

Duplicate ID No.:

Signature(s):

Groundwater Purging and Sampling Log

Date _____

Tetra Tech NUS

Project Site Name: NTC Orlando
Project No.: 7457/

Sample Location: MW-3 4251

[ ] Domestic Well Data

Flow-Thru Cell
Make\Model: HORIBA U-22

Sample ID No.: _____

[X] Monitoring Well Data

Sampled By: _____

Serial Nos.: _____

[ ] Other Well Type: _____

C-O-C No.: _____

PURGING DATA

Casing Size (in.)	Gals. / Liters per ft. of Water	Time Hr:Min	pH pH units	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/L	ORP mV	DTW ft BTOC	Flow Rate ml/min
0.5	0.01 / 0.038	15:10	7.0	62	25.3	7	4.7	214	7.79	
1	0.041 / 0.155	15:15	6.7	61	25.4	1	3.8	207	7.82	
2	0.163 / 0.617	15:25	6.7	61	25.4	1	3.6	202	7.82	
4	0.653 / 2.47	15:35	6.8	61	25.7	-2	3.3	195	7.82	
6	1.469 / 5.56	15:45	6.8	61	25.7	-2	3.3	195	7.82	
8	2.611 / 9.88	15:55	6.7	61	25.7	-2	3.3	195	7.82	
10	4.08 / 15.44									
	[1 gal. = 3.785 L]									

PID Reading (ppm):

Well Casing Diameter: 2"

Total Well Depth: 15.8 ft

Static Water Level: 7.79

Tube Intake Depth:

Start Purge (hr):

End Purge (hr):

Total Purge Time (min):

Total Vol. Purged:

WATER QUALITY SAMPLE PARAMETERS

	Color Description	pH pH units	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/L	ORP mV	DTW ft BTOC	Flow Rate ml/min
Date: 6/13									
Time: 16:00	clear	6.7	61	25.7	-2	3.3	195		

ANALYSES INFORMATION

Analysis		Preservative	Container Requirements			Collected
TCL VOCs	8260B	HCl	3	40 ml	glass vials	
SVOCs/PAHs	8270C/8310	None	2	1-liter	amber glass	
Pesticides	8081A	None	1	1-liter	amber glass	
Herbicides	8151	None	1	1-liter	amber glass	
X-tra Organic	8XXX	None	1 or 2	1-liter	amber glass	
TAL Metals	6000/7000	HNO_3	1	1-liter	HDPE	
Antimony	6010B	HNO_3	1	0.5-liter	HDPE	

ADDITIONAL INFORMATION

Comments:

Method:
[ ] Peristaltic Pump
[ ] Centrifugal Pump
[ ] Bladder Pump
[ ] Tube Evacuation
[ ] Vacuum Jug Assembly
[ ] Bailer

Tubing Type:
[ ] Polyethylene
[ ] Teflon
[ ] Teflon-lined Polyethylene

QA/QC SAMPLES

MS/MSD:

Duplicate ID No.:

Signature(s):

Groundwater Purging and Sampling Log

Date _____ **Tetra Tech NUS** Page _1_ of ___

Project Site Name: NTC Orlando
Project No.: 7457/

Sample Location: MW-4 (425I, 425)

[ ] Domestic Well Data
[X] Monitoring Well Data
[ ] Other Well Type:_____

Flow-Thru Cell
Make\Model: HORIBA U-22
Serial Nos.:_____

Sample ID No.:_____
Sampled By:_____
C-O-C No.:_____

PURGING DATA

Casing Size (in.)	Gals. / Liters per ft. of Water	Time Hr:Min	pH pH units	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/L	ORP mV	DTW ft BTOC	Flow Rate ml/min
0.5	0.01 / 0.038	11:05	7.0	65	24.8	-10	2.0	48		
1	0.041 / 0.155	11:10	6.6	65	24.9	-10	1.5	55		
2	0.163 / 0.617	11:20	6.6	65	24.9	-10	1.4	54		
4	0.653 / 2.47	11:40	6.6	65	24.8	-10	1.2	42		
6	1.469 / 5.56	11:50	6.7	65	24.7	5	1.2	38		
8	2.611 / 9.88	12:00	6.9	65	24.9	4	1.1	22		
10	4.08 / 15.44									
	[1 gal. = 3.785 L]									

PID Reading (ppm):

Well Casing Diameter:
Total Well Depth: 15 ft.
Static Water Level: 7.56
Tube Intake Depth:

Start Purge (hr):
End Purge (hr):
Total Purge Time (min):
Total Vol. Purged:

WATER QUALITY SAMPLE PARAMETERS

	Color Description	pH pH units	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/L	ORP mV	DTW ft BTOC	Flow Rate ml/min
Date: 6/13/00									
Time: 12:00		6.9	65	24.9	4	1.1	22		

ANALYSES INFORMATION

Analysis		Preservative	Container Requirements			Collected
TCL VOCs	8260B	HCl	3	40 ml	glass vials	
SVOCs/PAHs	8270C/8310	None	2	1-liter	amber glass	
Pesticides	8081A	None	1	1-liter	amber glass	
Herbicides	8151	None	1	1-liter	amber glass	
X-tra Organic	8XXX	None	1 or 2	1-liter	amber glass	
TAL Metals	6000/7000	HNO_3	1	1-liter	HDPE	
Antimony	6010B	HNO_3	1	0.5-liter	HDPE	

ADDITIONAL INFORMATION

Comments:

Method:
[ ] Peristaltic Pump
[ ] Centrifugal Pump
[ ] Bladder Pump
[ ] Tube Evacuation
[ ] Vacuum Jug Assembly
[ ] Bailer

Tubing Type:
[ ] Polyethylene
[ ] Teflon
[ ] Teflon-lined Polyethylene

QA/QC SAMPLES

MS/MSD:

Duplicate ID No.:

Signature(s):

APPENDIX F

U.S. GEOLOGICAL SURVEY REPORT 97-4262

Ground-Water Flow in the Surficial Aquifer System and Potential Movement of Contaminants from Selected Waste-Disposal Sites at Naval Station Mayport, Florida

U.S. Geological Survey
Water-Resources Investigations Report 97-4262

Prepared in cooperation with the
Southern Division, Naval Facilities Engineering Command, U.S. Navy

$$\nabla \cdot (Kb\nabla h) + q + (P - Q_S) - ET = S\frac{\partial h}{\partial t} \quad , \quad (4)$$

where

∇ is del, the vector differential operator;
K is hydraulic conductivity, in feet per day;
b is thickness, in feet;
h is hydraulic head, in feet;
q is a source or sink, in feet per day;
Q_S is precipitation minus surface runoff, in feet per day;
ET is evapotranspiration, in feet per day;
S is storage coefficient in confined aquifers and the specific yield in unconfined aquifers, dimensionless; and
t is time, in days.

Description of the Ground-Water Flow Model

To implement a finite-difference model, the study area was discretized into a rectangular grid of cells by row and column. The active model grid covered an area of about 4.4 mi^2 and was divided into 107 rows of 152 columns (fig. 12). Uniform, square cells that measured 100 ft on a side were used throughout the simulated area. Of the 32,528 model cells, 8,126 cells were inactive beyond the study area and in areas covered by the St. Johns River, the turning basin, and the Atlantic Ocean.

The grid was oriented along a north-south axis for convenience. Neither a majority of known stresses or boundary conditions were aligned along any particular axis. No measurements of anisotropy were available and a lateral anisotropy ratio of 1:1 was used for simulation. Values of aquifer and confining-unit hydraulic properties were assigned to the center of each cell, defined as a node, by interpolation from observed point values.

The model was vertically discretized into two layers to simulate the S-zone and I-zone of the surficial aquifer system (fig. 9). Vertical impedance to flow within the surficial aquifer system was simulated by assigning leakance values at each cell between model layers. The leakance is the average vertical hydraulic conductivity of the aquifer or confining unit material between nodes divided by the vertical distance between corresponding nodes in adjacent model layers and is in units of feet per day per foot (d^{-1}). Leakage between the S-zone and the I-zone primarily is controlled by the thickness of the marsh-muck confining unit in areas where the confining unit is more than 1 ft thick. Vertical movement of water was assumed to be controlled by the vertical hydraulic conductivity of the aquifer where the confining unit is 1 ft thick or less.

Hydraulic Characteristics

Multi-well aquifer tests, single-well aquifer tests, and slug tests were conducted at NAVSTA Mayport to estimate the hydraulic properties of the surficial aquifer system. The lateral hydraulic conductivities estimated by these tests were the final values used in the ground-water flow model. Because there is no pumpage from the surficial aquifer and the surface-water features are tidally influenced, ground-water discharge could not be independently quantified and the lateral hydraulic conductivity distribution could not be reasonably estimated by model calibration.

An aquifer test consists of applying a known stress to an aquifer; measuring the change in water level, drawdown or recovery, due to that stress; and inferring the hydraulic properties of the aquifer. For the multi-well and the single-well aquifer tests, the aquifer was stressed by pumping at a constant, known rate. The principal difference between the multi-well tests and the single-well tests is the measurement of drawdowns in observation wells in addition to the pumped well. For slug tests, the aquifer was stressed by removing a known volume from a well and measuring the water level recovery.

Lateral hydraulic conductivity estimates from multi-well tests are considered most representative of aquifer hydraulic characteristics because the amount of water exchanged and, therefore, the volume of aquifer affected usually are greater than during slug tests or single-well tests. The median volumes removed during the multi-well, single-well, and slug tests at NAVSTA Mayport were about 900, 40, and 0.4 gallons (gal), respectively. Hydraulic conductivity estimates generally are averaged over a greater volume of aquifer by the inclusion of drawdown measurements from several observation wells. An increased number of observation well locations also increases the uniqueness of hydraulic conductivity estimates, even when fitting the test data to more complex models that account for unconfined conditions and vertical flow within the aquifer.

In addition to multi-well aquifer tests, single-well tests and slug tests were used to estimate lateral hydraulic conductivities. Although the multi-well aquifer tests provide the most representative estimates

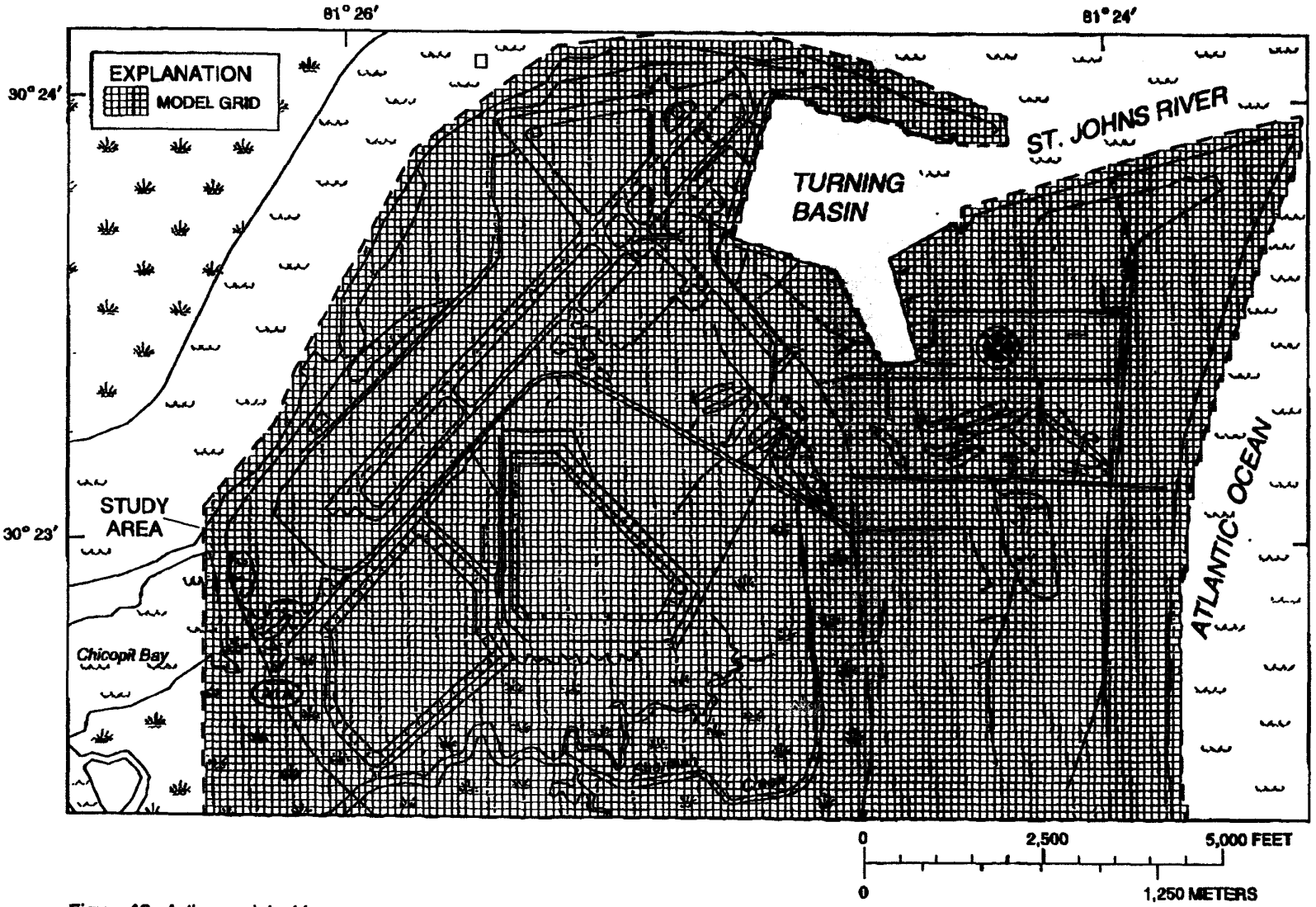


Figure 12. Active model grid.

of lateral hydraulic conductivity estimates, the single-well tests and slug tests can be executed in less time and at a lower cost than the multi-well aquifer tests. About 15 to 20 single-well tests were conducted and analyzed in the same amount of time it took to conduct one multi-well aquifer test at NAVSTA Mayport. Although greater uncertainty is associated with estimates based on data collected during single-well tests and slug tests, the improved efficiencies associated with these tests facilitate an increase in spatial coverage and provide a better description of the spatial variability of the lateral hydraulic conductivity.

Lateral hydraulic conductivities were estimated from the multi-well aquifer tests by fitting a model to the measured drawdowns. The appropriate flow model was dictated by the geology and ground-water flow conditions at the site and the configuration of the pumped well and observation wells. The drawdown response in a single, confined aquifer can be described by the analytical Theis (1935) model. The Theis model was used to analyze the drawdown in well 8-3 which was affected by a nearby sump screened across both the S-zone and the I-zone (table 2). Most of the other multi-well aquifer tests were better described by the numerical model VS2DT (Lappala and others, 1987; Healy, 1990) that accounts for an unconfined aquifer and vertical flow within the aquifer. Six of the multi-well aquifer tests were analyzed by fitting results computed with a variably saturated, radially symmetric, numerical model, VS2DT, to the measured drawdowns (Halford, 1997). Aquifer tests conducted at wells B-1S and B-1I were analyzed with a three-dimensional MODFLOW model to account for the asymmetric effects of Lake Wonder Wood and a nearby drainage canal.

Where the marsh-muck confining unit was about 1 ft thick or less at the test site, the aquifer-test model (either VS2DT or MODFLOW) spanned both the S-zone and the I-zone of the surficial aquifer system. The entire vertical section was simulated for these tests to avoid prescribing boundary conditions within the section. Where the marsh-muck confining unit was more than 1 ft thick, vertical leakage across the confining unit was generally ignored.

Lateral hydraulic conductivity estimates were constrained in all aquifer test analyses by assuming that one value could characterize the entire thickness of either the S-zone or the I-zone at the test site.

Table 2. Lateral and vertical hydraulic conductivity estimates determined from multi-well aquifer tests

[Well locations are shown in figure 3; ft/d, feet per day; gpm, gallons per minute; ft, feet; <, less than; --, not applicable]

Well identifier[a]	Lateral hydraulic conductivity (K_{XY}), ft/d			Vertical hydraulic conductivity (K_Z), ft/d	Vertical anisotropy (K_Z/K_{XY})	Flow rate, gpm	Test duration hour:minute	Maximum drawdown, ft	Initial wetted screen, ft	Aquifer thickness, ft	Marsh-muck confining unit thickness, ft
	Multi-well	Single well[b]	Slug test[c]								
2-17S	8	15	11	8	1	4.6	6:45	4.0	9	18	4
2-38S	80	135	65	12 < 0.002[f]	0.15	5.0	2:15	3.5	10	6	10
8-3S[d]	15	--	--	--	.13	1.0	6:00	--	25	40	0
13-5S	13	33	--	13	1	1.9	7:15	4.0	9	7	1
20-2S	27	35	27	10	0.38	1.7	5:30	2.4	8	8	4
B-1S[e]	30	41	--	--	--	5.4	6:00	3.0	9	24	2
BE-7S	32	58	--	3	.09	4.5	3:10	2.3	8	49	0
B-1I[e]	70	--	--	< 1[f]	--	5.4	6:00	1.2	5	18	2
F-80I[g]	34	48	--	2	.07	20	5:00	12.2	10	49	0

[a] Suffix denotes zone tested.

[b] All single-well tests were analyzed with no more than the first hour of drawdown data.

[c] Lateral hydraulic conductivity estimates from slug tests were reported in U.S. Department of the Navy (1995).

[d] Aquifer was stressed by a 4-ft diameter sump with 25 ft of screen. The drawdown response was simulated with the Theis (1935) solution. Vertical anisotropy was determined by a nearby test in the unsaturated zone. An unspecified air flow rate was induced near the water table (about 7 ft below land surface) and six drawdowns were measured at 10, 20, and 30 ft from the pumped well and 2 and 4 ft below land surface. The maximum drawdown was equivalent to 0.58 ft of water and the compressibility effects of air could be ignored.

[e] Observed drawdowns were fitted to a three-dimensional model that accounted for the effects of Lake Wonder Wood and a nearby canal. The model was simulated with the MODFLOW code.

[f] Maximum vertical hydraulic conductivity of the marsh-muck confining unit at test sites. Based on both the S-zone and I-zone tests.

[g] Aquifer test was performed in 1979 and originally reported by Franks (1980).

Estimates of vertical hydraulic conductivity across the marsh-muck confining unit or within the S-zone were similarly constrained. Preliminary results of aquifer tests in vertically adjacent zones were applied iteratively until "best fit" results were achieved for tests in both zones (table 2).

The single-well aquifer tests were analyzed with the Cooper-Jacob (1946) approximation of the Theis solution. The Cooper-Jacob model of aquifer response can be described by a straight line on a plot of drawdown as a function of the logarithm of time. Lateral hydraulic conductivity (K) values are estimated from flow rate and drawdown measurements by:

$$K = \frac{2.3 Q_{Pump}}{4\pi b s_{\log cycle}}, \qquad (5)$$

where

Q_{Pump} is the rate the well is pumped, in cubic feet per day;

b is the thickness of the aquifer, in feet; and

$s_{\log cycle}$ is the measured rate of drawdown increase, in feet per log-cycle.

For all of the aquifer tests conducted at NAVSTA Mayport, the drawdowns observed in the pumped wells increased semi-logarithmically after the initial well-bore effects dissipated. Using equation 5, a lateral hydraulic conductivity estimate was determined at most of the single-well aquifer test sites (table 3). The limited drawdown data could have been fitted to more sophisticated models but no more than one hydraulic characteristic could have been reasonably estimated.

Although the Cooper-Jacob method provides a simple method of analysis, many of the inherent assumptions of the method are not met or are only partially satisfied at NAVSTA Mayport because a leaky confining unit is present and the surficial aquifer system is unconfined. The combined result of neglecting these factors was that lateral hydraulic conductivity estimates based on single-well tests, K_{single}, were consistently greater than corresponding estimates based on multi-well tests, K_{multi} (table 2).

Table 3. Lateral hydraulic conductivity estimates determined from single-well aquifer tests

[Well locations are shown in figure 3; gpm, gallons per minute; ft, feet; --, not applicable]

Well identifier[a]	Lateral hydraulic conductivity, ft/d			Flow rate, gpm	Test duration hour:minute	Maximum drawdown, ft	Initial wetted screen, ft	Aquifer thickness, ft	Marsh-muck confining unit thickness, ft
	Corrected single-well[b]	Single well	Slug test[c]						
2-32S	58	98	--	1.9	0:09	1.0	7	6	7
2-34S	28	48	--	2.1	0:08	2.4	6	6	14
2-35S	9	15	--	1.2	2:45	6.2	7	7	5
2-36S	15	25	54	3.5	0:06	4.9	9	8	10
2-37S	1	2	--	1.8	0:04	3.0	10	13	10
8-5S	2	4	1.2	0.7	0:06	3.6	9	7	1
15-P2	5	9	5.5	2.0	0:07	2.3	10	50	0
16-4S	34	58	--	1.8	0:16	0.8	4	10	1
23-3S	6	11	2	1.8	0:18	5.1	8	9	5
23-5S[d]	7	12	9	2.0	0:15	.8	8	21	11
23-7S	8	14	1.5	.9	0:16	3.0	8	6	4
CU-4S	5	8	--	1.8	0:14	1.0	6	49	0
1-1I	9	16	--	4.6	0:11	5.0	5	41	2
2-11I	55	92	--	4.6	0:13	2.4	5	44	6
2-12I	47	79	45	5.0	0:15	2.4	5	42	5
2-17I	72	120	93	4.3	2:35	4.6	5	25	4
2-18I	13	22	29	4.8	5:00	2.2	5	58	1
2-23I	49	83	--	4.5	0:21	2.4	5	48	6
2-32I	14	25	--	4.8	0:07	1.0	5	40	7
2-34I[e]	--	--	--	.6	0:07	26.0	5	45	14
2-35I	10	18	--	4.8	6:15	4.0	5	21	5
2-36I	70	117	46	4.8	0:13	2.0	5	13	10
2-37I	3	5	--	1.8	0:12	2.6	5	28	10
2-38I	.6	11	1.4	2.4	2:00	19.0	5	46	10
8-5I	14	24	--	4.6	0:11	3.3	5	40	1
16-1I	56	95	--	4.5	0:15	1.9	5	42	0
23-5I	1.1	2	1.3	1.6	0:18	7.8	5	17	11
CU-8I	15	26	--	4.0	0:17	2.9	5	49	0

[a] Suffix denotes zone tested.

[b] The single-well lateral hydraulic conductivity estimates were corrected by equation 6.

[c] Lateral hydraulic conductivity estimates from slug tests were reported in U.S. Department of the Navy (1995).

[d] Pumped for 15 minutes but only the first minute was analyzed due to proximity of St. Johns River.

[e] Specific capacity was less than 0.02 gallon per minute per foot.

A log-log graph of K_{multi} versus K_{single} suggests a linear relation exists between the logarithms of the two variables (fig. 13), which can be described by:

$$K_{Multi} = 0.53 K_{Single}^{1.03} . \qquad (6)$$

Equation 6 adequately corrects the initial estimates from single-well aquifer tests, as indicated by the regression coefficient ($r^2 = 0.89$), and is considered to provide the best estimate of lateral hydraulic conductivity at NAVSTA Mayport. The corrected values of lateral hydraulic conductivity from the single-well tests were used in the calibrated model (table 3).

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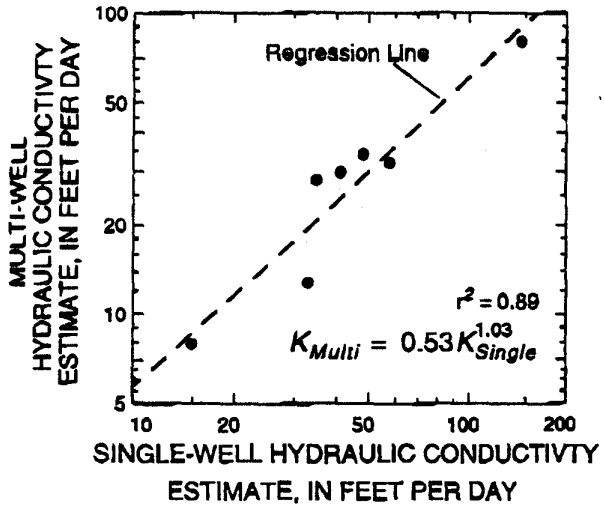

Figure 13. Relation between lateral hydraulic conductivity values estimated by single-well tests and multi-well tests.

Additional lateral hydraulic conductivity estimates at NAVSTA Mayport were determined from slug tests (U.S. Department of the Navy, 1995), 59 in the S-zone and 5 in the I-zone (table 4). The slug tests were analyzed by the Bouwer and Rice (1976) method which empirically corrects for the effects of partially penetrating wells in an unconfined aquifer.

Table 4. Lateral hydraulic conductivity estimates determined from slug tests

[Lateral hydraulic conductivity in feet per day; all other values in feet; <, less than; well locations are shown in figure 3]

Well identifier[a]	Lateral hydraulic conductivity[b]	Initial wetted screen	Aquifer thickness	Marsh-muck confining unit thickness
1-P1	20	5	18	3
1-P2	25	5	15	1
1-P3	18	8	14	7
2-18S	5	10	8	1
2-22S	7	10	6	3
2-25S	3	10	18	5
2-26S	10	10	18	5
2-31S	29	10	9	11
2-33S	34	10	9	5
2-P11	8	4	7	2
2-P2	8	5	11	3
2-P4	13	5	10	4
2-P5	6	5	6	2
2-P6	6	5	2	3
2-P8	5	5	5	5

[a] Suffix denotes zone tested.

[b] Lateral hydraulic conductivity estimates were reported in U.S. Department of the Navy (1995).

Table 4. Lateral hydraulic conductivity estimates determined from slug tests--(Continued)

[Lateral hydraulic conductivity in feet per day; all other values in feet; <, less than; well locations are shown in figure 3]

Well identifier[a]	Lateral hydraulic conductivity[b]	Initial wetted screen	Aquifer thickness	Marsh-muck confining unit thickness
2-P9	18	5	9	1
8-4S	7	6	43	0
8-6S	2	7	44	0
8-7S	2	7	44	0
8-8S	1.0	6	8	<1
8-P2	7	5	44	0
8-P3	0.8	5	45	<1
8-P4	10	7	10	3
13-8S	45	10	7	5
13-P1	18	5	8	5
13-P4	16	5	61	0
13-P5	1.3	5	4	3
14-3S	13	9	47	0
14-4S	10	9	47	0
14-5S	11	8	47	0
14-6S	11	9	47	0
14-7S	8	9	47	0
14-8S	11	8	47	0
14-9S	8	9	47	0
14-10S	18	9	47	0
14-11S	21	9	48	0
14-12S	14	6	48	0
14-13S	9	9	47	0
14-14S	13	9	47	0
14-P1	12	5	47	0
14-P2	22	5	46	0
15-1S	3	9	9	1
15-P3	6	10	9	3
16-2S	5	7	43	0
17-P2	23	5	51	0
18-1S	14	8	48	0
18-2S	9	8	47	0
18-3S	17	8	47	0
23-1S	2	9	8	3
23-2S	1.0	10	8	4
23-4S	5	9	15	8
23-6S	3	7	12	5
24-1S	2	10	8	3
44-1S	5	7	14	3
44-2S	1.0	6	12	3
44-3S	5	7	17	7
45-2S	8	8	19	9
56-1S	36	10	5	3
CU-5S	6	6	47	0
2-15I	12	10	50	5
2-25I	50	5	46	5
2-31I	9	5	23	11
2-33I	7	5	49	5
15-5I	15	5	55	0

[a] Suffix denotes zone tested.

[b] Lateral hydraulic conductivity estimates were reported in U.S. Department of the Navy (1995).

Lateral hydraulic conductivity estimates based on slug test results are reported to be within 25 percent of actual value (Bouwer and Rice, 1976) under ideal conditions, but the discrepancy is expected to be greater in practice.

Lateral hydraulic conductivity values were estimated using results from pumping tests and slug tests at 15 wells. Values based on the pumping tests and slug tests ranged from 0.4 to 80 feet per day (ft/d) and from 1.2 to 93 ft/d, respectively. The geometric averages of the two sets of estimates are the same (10 ft/d) but the median discrepancy between any two estimates was about 50 percent of the greater estimate. The maximum discrepancies between values at a single site resulted from tests at wells 23-7S and 2-36S. The slug test underestimated the single-well test results at 23-7S by a factor of 4 (1.5 ft/d compared to 7 ft/d), and overestimated the single-well test results at 2-36S by a factor of 4 (54 ft/d compared to 13 ft/d).

The areal distribution of lateral hydraulic conductivity in the S-zone (layer 1) and the I-zone (layer 2) were estimated by kriging the log of the test estimates of hydraulic conductivity. Ordinary kriging was used to interpolate and extrapolate from the test site locations (point values) to the model nodes because it provides the best linear, unbiased estimate (Isaaks and Srivastava, 1989). Ordinary kriging can be used because no spatial trends exist in the log-hydraulic conductivity values of either the S-zone or the I-zone.

Spatial interpolation by kriging is based on the internal structure of the data set (autocorrelation). This structure, if present, is examined by plotting the squared difference in measured values, γ_{ij}, against the distance between locations i and j. A scatter plot of γ_{ij} as a function of distance will show a general increase in γ_{ij} as pairs become further apart. An overall structure, however, is hard to determine because of the variability which exists at any given point (Isaaks and Srivastava, 1989).

An underlying internal structure is made more apparent by averaging γ_{ij} over intervals (lags) to obtain:

$$\gamma(h) = \frac{1}{2N(h)} \sum_{(i,j)|h_{ij}=h} (Y_i - Y_j)^2 \quad , \qquad (7)$$

where

- h is the average distance between log-hydraulic conductivity values in an interval;
- $N(h)$ is the number of pairs in an interval; and
- Y is a measured log-hydraulic conductivity value.

A plot of $\gamma(h)$ versus h produces an empirical variogram (fig. 14). Variograms of log-hydraulic conductivity differences showed little uncertainty (nugget effect) associated with the measured values relative to the variance of Y in either the S-zone or the I-zone (fig. 14). For about the first 1,000 to 1,500 ft, $\gamma(h)$ increased rapidly with distance. Beyond about 4,000 ft, $\gamma(h)$ remained near the variance of Y in both the S-zone and the I-zone which was 0.25 and 0.62 log (ft/d)^2, respectively (fig. 14). The variability in γ_{ij} as a function of data pair orientation was not considered because the available data were insufficient to define anisotropic variograms.

Exponential variograms (fig. 14) provide the functional form of the relation between $\gamma(h)$ and distance. The empirical variograms of Y in the S-zone and the I-zone were approximated by:

$$\bar{\gamma}_{ij} = \sigma^2\left(1 - \exp\frac{-3h}{a}\right) \quad , \qquad (8)$$

where

- σ^2 is the variance of log-hydraulic conductivity, in log (ft/d)^2, and
- a is the range, in feet.

Range is the primary variogram parameter that affects kriging estimates. As range increases, more measured values influence the estimate. Both the S-zone and the I-zone exponential variograms were defined by a range of 3,000 ft.

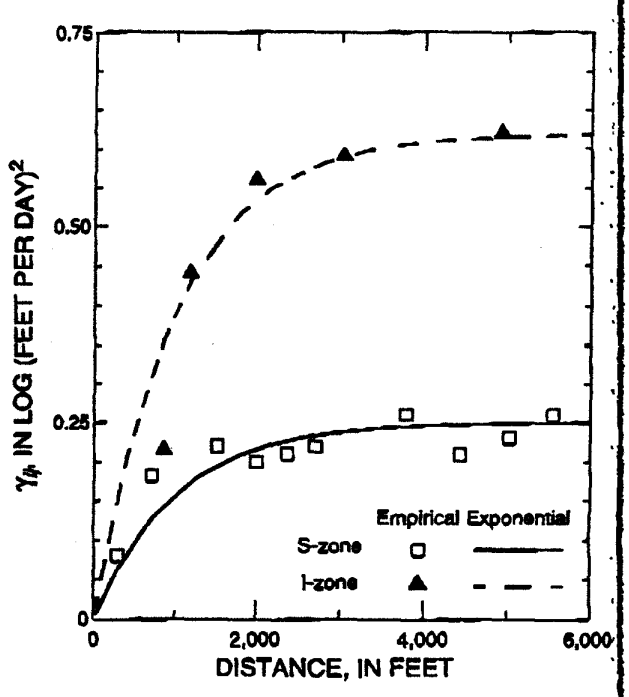

Figure 14. Empirical and exponential variograms of log hydraulic conductivity in the S-zone (layer 1) and the I-zone (layer 2).

Kriging estimates for each model node were generated from a weighted linear combination of the point estimates of log-hydraulic conductivity. The weights were determined by solving the kriging system of equations that minimizes the estimation error, subject to the constraints of unbiasedness (Isaaks and Srivastava, 1989). When solving the kriging system of equations, the exponential variogram placed more emphasis on measurements (point values) that were closer to a node location.

The hydraulic conductivity distribution of the S-zone (layer 1) was kriged from 79 measurements (7 multi-well aquifer tests, 13 single-well tests, and 59 slug tests) and the S-zone exponential variogram (fig. 14). Many measurements were along the runways and north of the golf course (fig. 15). A few measurements were near the dredge material holding areas; no measurements were available south of Lake Wonder Wood. Three principal areas of relatively low hydraulic conductivity in the S-zone were identified near SWMU-6/7, between the hangars and the eastern dredge material holding area, and north of the baseball fields (fig. 15).

The hydraulic conductivity distribution of the I-zone (layer 2) was kriged from 23 point estimates from 2 multi-well aquifer tests, 15 single-well tests, 5 slug tests, and a specific capacity test. The specific capacity test was less than 0.02 gallons per minute per foot (gal/min)/ft at well 2-34I and a hydraulic conductivity of 0.1 ft/d was assigned to this site. The I-zone exponential variogram (fig. 14) described the spatial structure of the lateral hydraulic conductivity measurements. Most of the measurements were near the runways and around the eastern dredge material holding area (fig. 16). There were no measurements beneath the golf course areas, along the Atlantic Ocean, or south of Lake Wonder Wood. Two areas of relatively low hydraulic conductivity in the I-zone were identified near the center of the runways and near Foxtrot pier (fig. 16).

The transmissivity (T) distribution of the I-zone (layer 2) was used in place of the hydraulic conductivity distribution in the flow model because the thickness of the I-zone is not a function of the water table. The transmissivity distribution of the I-zone was calculated by multiplying the lateral hydraulic conductivity distribution (fig. 16) by the corresponding thickness for layer 2 (fig. 8).

The initial areal distribution of leakance between layers 1 and 2 was defined by the presence or absence of the marsh-muck confining unit. Where the marsh-muck confining unit was 1 ft thick or greater (fig. 6), the marsh-muck confining unit was assumed to control the vertical movement of water. The initial leakance estimate for these areas was calculated by dividing the preliminary estimate of vertical hydraulic conductivity of the confining unit (0.001 ft/d) by the thickness of the marsh-muck confining unit (fig. 6). The vertical hydraulic conductivity of the aquifer was assumed to control the vertical movement of water where the marsh-muck confining unit was less than 1 ft thick (fig. 6). The initial leakance estimate for areas where the marsh-muck confining unit was thin or missing was calculated by multiplying the lateral hydraulic conductivity of the S-zone (fig. 15) by the vertical anisotropy determined from multi-well test results (table 2) and dividing it by the average internode distance between layers 1 and 2 (30 ft). A vertical anisotropy of $K_Z/K_{XY} = 0.1$ was applied consistently and is the rounded average of the non-unity values listed in table 2.

Different vertical leakances were assigned beneath Sherman Creek and Lake Wonder Wood. Sherman Creek is about 10 ft deep at SR A1A and was dredged between 1969 and 1972 from south of the dredge material holding areas to the canal along Patrol Road (fig. 1). Because the marsh-muck confining unit was assumed to be breached along the length of Sherman Creek, the leakance beneath the creek was arbitrarily set 1,000 times greater than the leakance of the surrounding marsh-muck confining unit in order to simulate the breach. Lake Wonder Wood, created between 1960 and 1965, was dredged to about 20 ft below sea level, and is well connected with the I-zone. Leakance below the lake was estimated during model calibration.

Tidal Effects and Surface-Water Features

The dominant surface-water features surrounding NAVSTA Mayport are the St. Johns River and the Atlantic Ocean along the northern and eastern edges, respectively (fig. 1). Both features are deep, tidally-influenced, saltwater bodies that communicate directly with the S-zone and the I-zone of the surficial aquifer system. The typical tidal range is about 6 ft but can be as much as 10 ft (U.S. Department of the Navy, 1995). The average stage of the St. Johns River and the Atlantic Ocean near NAVSTA Mayport is about 1 ft above sea level.

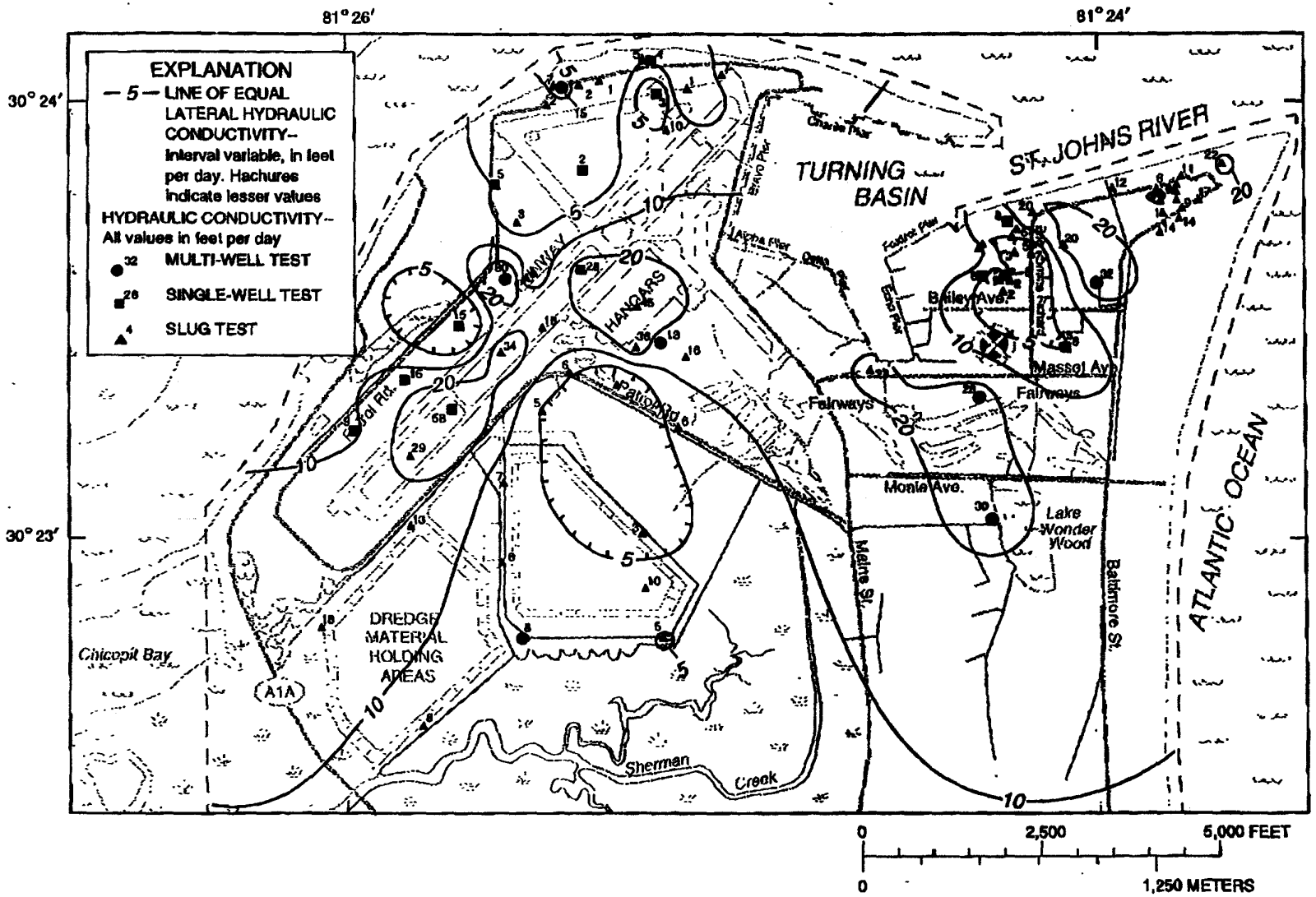

Figure 15. Lateral hydraulic conductivity of the S-zone (layer 1).

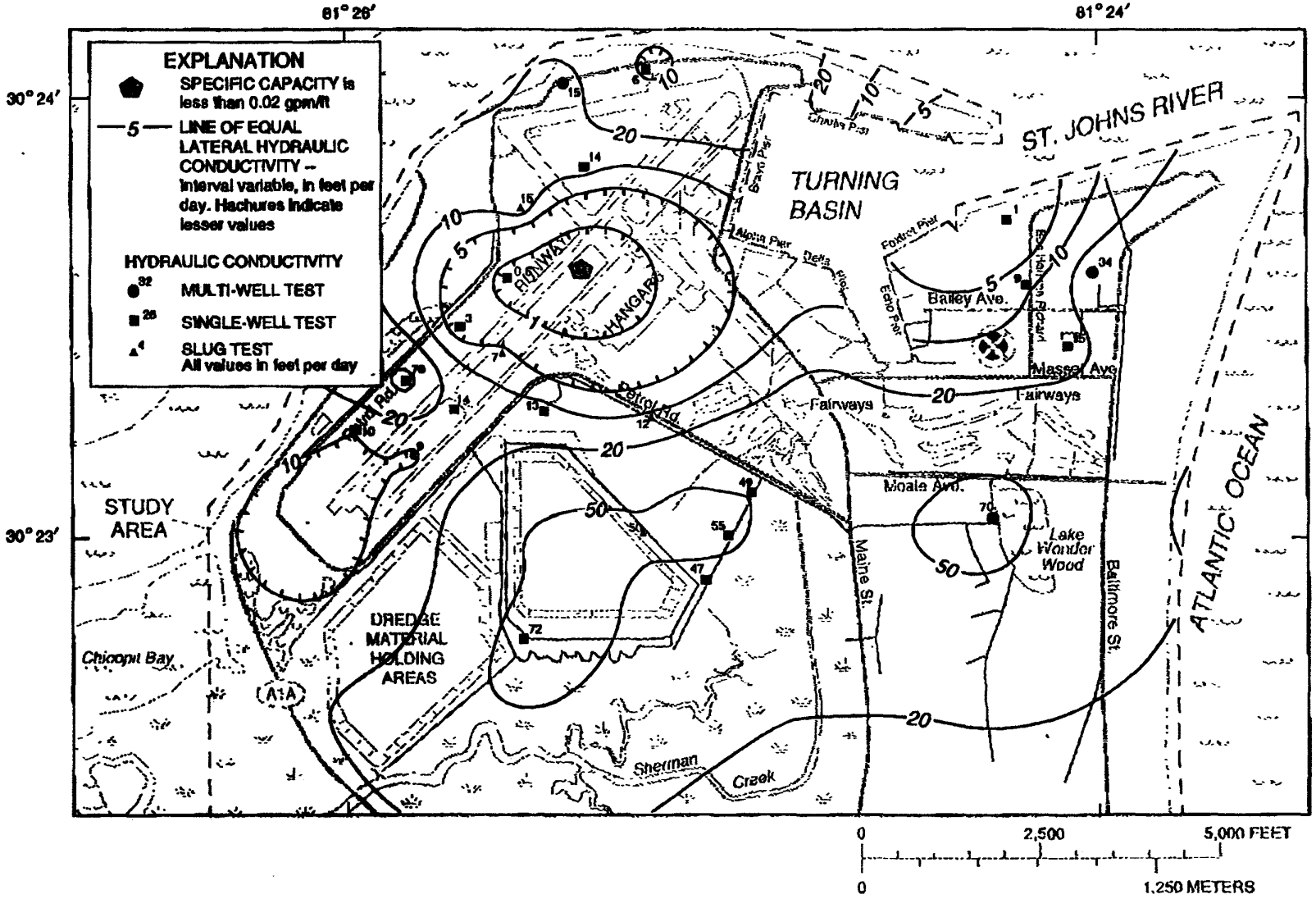

Figure 16. Lateral hydraulic conductivity of the I-zone (layer 2).

Chicopit Bay, Sherman Creek, and the unnamed canals that drain Lake Wonder Wood and the golf course area along Patrol Road also are tidally-influenced. The tidal range varies from about 6 ft at Sherman Creek and SR A1A to about 2 ft at the far reaches of the unnamed canals that drain Lake Wonder Wood and the golf course area along Patrol Road. The average stage of these features is also about 1 ft above sea level.

Measurable tidal effects propagate throughout most of the surficial aquifer system (fig. 17). Within 200 ft of the St. Johns River, vertical tidal displacements of 0.5 ft or more were observed in the S-zone near SWMU-6/7 and in the I-zone east of the turning basin. Tidal displacements decreased away from the shoreline but were still measurable in wells 8-5S and 8-5I by the runways and near the F-80 aquifer test site (fig. 17). East of the dredge material holding area and west of Lake Wonder Wood, ground-water displacements of more than 0.1 ft were responses to tidal fluctuations in the adjacent canals, not in the St. Johns River or the Atlantic Ocean (fig. 17).

The tidal displacement data can be used to independently evaluate the lateral hydraulic conductivity of the surficial aquifer system. If the tidal displacements do not significantly change the saturated thickness, then an analytical solution that describes the displacements in a one-dimensional, confined aquifer due to tidal forcing (Cooper and others, 1964) can be described by:

$$\Delta h_{Tide} = \frac{h_0}{2} e^{-x\sqrt{\frac{\pi S}{t_0 Kb}}} \sin\left(2\pi\frac{t}{t_0} - x\sqrt{\frac{\pi S}{t_0 Kb}}\right) , \quad (9)$$

where

h_0 is the amplitude of the tidal signal, in feet;
x is the distance from the tidal signal, in feet;
t_0 is the period of the tidal cycle, in days (about 0.52 day or 12.5 hours); and
t is the elapsed time since the beginning of a tidal cycle.

Equation 9 shows that the amplitude of water-level displacement in a given well is a function of the distance from the tidal signal and of the aquifer diffusivity, Kb/S.

Hydraulic characteristic estimates imposed by equation 9 tend to be qualitative because the appropriate specific yield or storage coefficient is unknown and can vary over three orders of magnitude or more. Specific yield estimates from multi-well aquifer tests of the S-zone ranged from 0.04 to 0.12 at clean sites and was about 0.004 near SWMU-6/7, where free product occurs at the water table. Storage coefficient estimates from multi-well tests of the I-zone ranged from 3×10^{-4} to 6×10^{-4}. Quantitative analysis is further complicated by the vertical transmission of the tidal signal between the I-zone and S-zone which causes diffusivity estimates from equation 9 to reflect a composite storage coefficient for both zones.

Relative differences between lateral and vertical hydraulic conductivity can be inferred between sites if the spatial variability of specific yield and storage coefficient are assumed to be minimal. Average diffusivities in the areas near wells 8-5S, 8-5I, and the F-80 aquifer test site (fig. 17) are about 500,000 feet squared per day (ft^2/d) based on an attenuation of the tidal amplitude to about 0.01 of the source and distances of between 1,000 and 1,500 ft (table 5). The differences in tidal displacements in the S-zone and I-zone at these three sites suggest that the vertical hydraulic conductivity near wells 8-5S and 8-5I is much less than near the F-80 aquifer-test site (fig. 17). The diffusivity of the area between the southwestern end of the runway and the St. Johns River is about 100,000 ft^2/d which suggests the transmissivity of the surficial aquifer system in this area should be about five times less than near well 8-5I or the F-80 aquifer-test site.

Vertical ground-water displacements were greater in the S-zone than in the I-zone east of the dredge material holding area and west of Lake Wonder Wood because the tidal signal originated in the adjacent canals (fig. 17). The vertical displacement in the I-zone at these sites probably was the result of the loading effect of the canals on the marsh-muck confining unit. The similar range of displacement in the S-zone and I-zone east of the dredge material holding area suggests that the leakance between the two zones is less in this area than west of Lake Wonder Wood.

Tidal fluctuation affects ground-water movement but does not affect the average ground-water flow rate or direction. Tidal fluctuation increases the potential for dispersion when the maximum tidally driven component of flow is greater than the topographically driven component of lateral ground-water flow. In areas near the shoreline, flow paths and dispersion are increased because shallow flow paths can be reversed and deeper flow paths along the freshwater/saltwater interface oscillate. Away from the shoreline and canals, the maximum

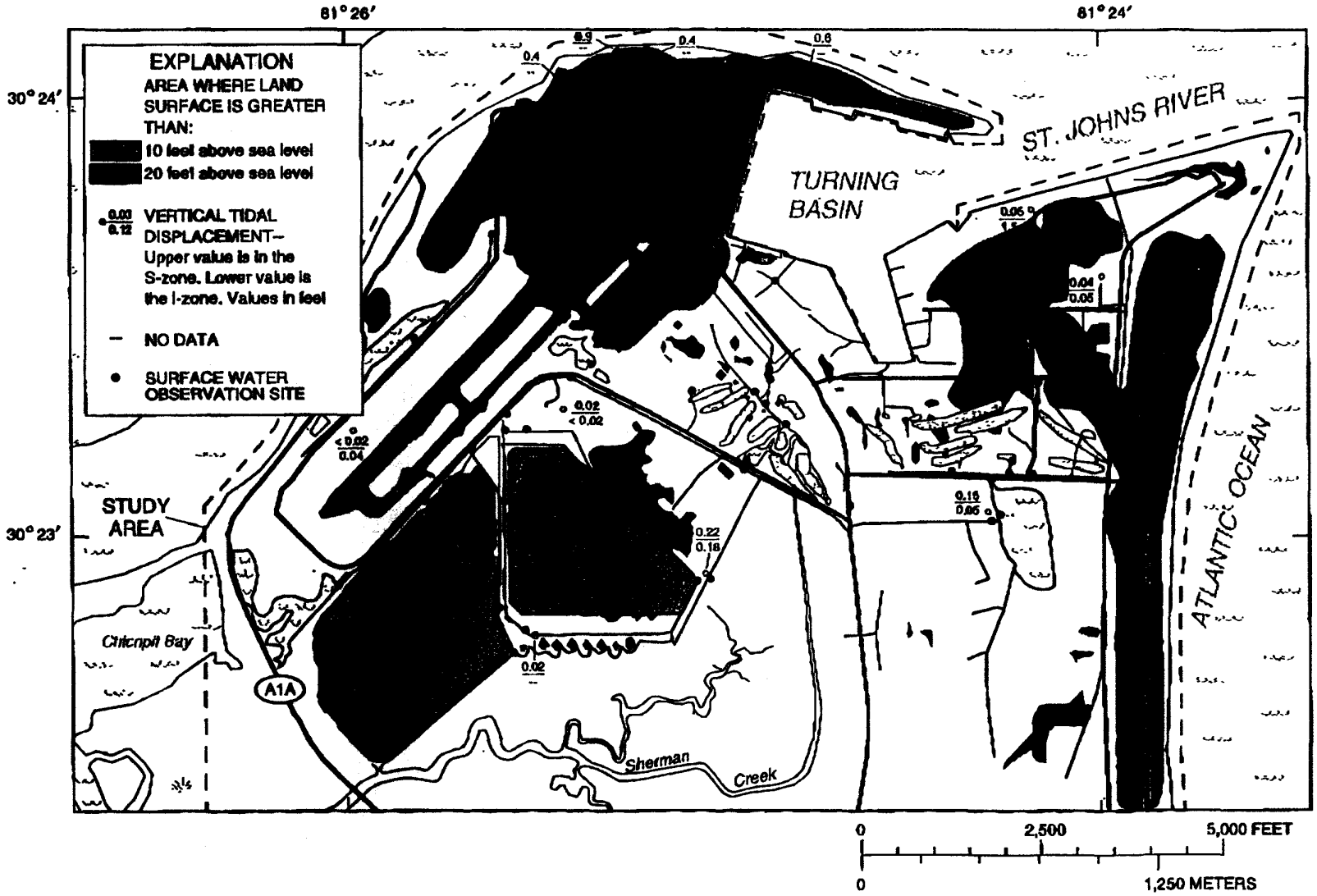

Figure 17. Generalized land surface altitudes in the study area, surface-water observation sites, and vertical tidal displacement measurement sites.

APPENDIX G

LABORATORY ANALYTICAL REPORTS FOR SOIL

Tetra Tech NUS, Inc.

Internal Correspondence

TO: Mr. Rick Ofsanko

DATE: July 10, 2000

FROM: William Howard Engle

CC: File

SUBJECT: Inorganic Data Validation – Select Metals, TCLP Metals, and TOC
CTO123 – NS Mayport
SDG MP007

SAMPLES: 8/Soils

4252-SS-SB02-05*	436-SS-SB04-05*
4252-SS-SB04-05*	436-SS-SB09-05*
4252-SS-SB11-05*	358-SS-SB05-04*
436-SS-SB01-05*	358-SS-SB04-04*

OVERVIEW

The sample set for CTO123, SDG MP007; Naval Station Mayport, Jacksonville, Florida consists of eight (8) soil environmental samples. The samples designated with a * were analyzed for arsenic, cadmium, chromium, and lead using SW-846 6010B. Samples 358-SS-SB03-04 and 436-SS-SB01-05 were analyzed for TCLP metals using SW-846 6010B and 7470A. Samples 358-SS-SB04-04, 425-SS-SB11-05 and 436-SS-SB01-05 were analyzed for TOC using ASTM D 2874-84.

The samples were collected by Tetra Tech NUS on May 2-4, 2000 and analyzed by STL-No. Canton (formerly Quanterra) Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 6010B, 7470A, 1311, ASTM D2974-84, and ASTM D422-63 analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

- * Data Completeness
- * Holding Times
- * Initial/continuing calibrations
- Laboratory method/field quality control blank results

The symbol (*) indicates that all quality control criteria were met for this parameter. Supporting documentation is presented in Appendix C. Qualified analytical results are presented in Appendix A. The original laboratory data is contained in Appendix B.

Metals and Mercury Fraction

Laboratory Blank Analysis

Affected samples: select metals

Analyte	Maximum Concentration (ug/L)	Action Level (ug/L)
chromium	0.083 (1)	0.415

(1) Contamination in the preparation blank.

An action level of 5x the maximum concentration has been used to evaluate the sample for contamination in continuing calibration blank and preparation blank. Dilution factors and sample aliquots were taken into consideration when evaluating for blank contamination. No validation action was required for chromium as the results were either greater than the blank action level.

All other quality control criteria were met.

TCLP Fraction

Laboratory Blank Analysis

Affected samples: TCLP metals

Analyte	Maximum Concentration (ug/L)	Action Level (ug/L)
barium	1.3 (1)	6.5

(1) Contamination in the preparation blank.

An action level of 5x the maximum concentration has been used to evaluate the sample for contamination in continuing calibration blank and preparation blank. Dilution factors and sample aliquots were taken into consideration when evaluating for blank contamination. No validation action was required for barium as the results were either greater than the blank action level or were nondetected

All other quality control criteria were met.

Total Organic Carbon Fraction

All quality control criteria were met for this parameter.

Notes

The incorrect sample ID was recorded on the Form 1s for sample 425s-SS-SB02-05. The ID was corrected by a data reviewer.

Requested hydrometer analyses could not be conducted due to quality of sample. See memo from laboratory in Appendix C.

Executive Summary

Laboratory performance:	Several analytes were detected in the laboratory blanks. No action was taken
Other factors affecting data quality:	None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Inorganic Data Validation (February, 1994), and the NFESC guidelines "Navy IRCQM" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

William Howard Engle

Project Chemist
Tetra Tech NUS, Inc.

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech NUS, Inc.

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B – Results as reported by the laboratory
3. Appendix C – Supporting Documentation

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	4252-SS-SB02-05	4252-SS-SB04-05	4252-SS-SB11-05	436-SS-SB01-05
SAMPLE DATE:	05/02/00	05/02/00	05/02/00	05/03/00
LABORATORY ID:	A0E030194001	A0E030194002	A0E030194003	A0E040160002
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	92.9 %	90.2 %	90.0 %	95.9 %
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ARSENIC	0.52	B		0.61	B		1.0	B		1.2		
CADMIUM	0.03	U		0.03	U		0.03	U		0.16	B	
CHROMIUM	1.8			1.6			2.8			3.8		
LEAD	0.85			1.1			1.4			12.5		

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	436-SS-SB04-05	436-SS-SB09-05	/ /	/ /
SAMPLE DATE:	05/03/00	05/03/00		
LABORATORY ID:	A0E040160003	A0E040160004		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	94.9 %	94.7 %	100.0 %	100.0 %
UNITS:	MG/KG	MG/KG		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ARSENIC	1.8			0.58	B							
CADMIUM	0.19	B		0.07	B							
CHROMIUM	2.7			1.6								
LEAD	3.2			1.9								

CTO123-NS MAYPORT
LEACHATE DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	358-SS-SB05-04	436-SS-SB01-05	/ /	/ /
SAMPLE DATE:	05/04/00	05/03/00		
LABORATORY ID:	A0E050174004	A0E040160002		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.0 %	0.0 %	100.0 %	100.0 %
UNITS:	UG/L	UG/L		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ARSENIC	3.7	B		3.2	B							
BARIUM	40.4	B		79.6	B							
CADMIUM	0.4	B		1.7	B							
CHROMIUM	4.3	B		1.9	B							
LEAD	6.3	B		478	B							
MERCURY	0.66	B		1.6	B							
SELENIUM	4.9	U		4.9	U							
SILVER	1	U		1	U							

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	358-SS-SB04-04	4252-SS-SB11-05	436-SS-SB01-05	
SAMPLE DATE:	05/04/00	05/02/00	05/03/00	/ /
LABORATORY ID:	A0E050174003	A0E030194003	A0E040160002	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	91.3 %	90.0 %	95.9 %	100.0 %
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
MISCELLANEOUS PARAMETERS												
TOTAL ORGANIC CARBON(%)	0.45			2			0.89					

MP007

HOLDING TIME
06/06/00

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
UG/KG	358-SS-SB01-04	A0E050174002	NORMAL	MP007	APIXS	05/04/00	05/09/00	05/15/00	5	6	11
UG/KG	358-SS-SB04-04	A0E050174003	NORMAL	MP007	APIXS	05/04/00	05/09/00	05/15/00	5	6	11
UG/KG	358-SS-SB05-04	A0E050174004	NORMAL	MP007	APIXS	05/04/00	05/09/00	05/15/00	5	6	11
UG/KG	4252-SS-SB02-05	A0E030194001	NORMAL	MP007	APIXS	05/02/00	05/09/00	05/15/00	7	6	13
UG/KG	4252-SS-SB04-05	A0E030194002	NORMAL	MP007	APIXS	05/02/00	05/09/00	05/15/00	7	6	13
UG/KG	4252-SS-SB11-05	A0E030194003	NORMAL	MP007	APIXS	05/02/00	05/09/00	05/15/00	7	6	13
UG/KG	436-SS-SB01-05	A0E040160002	NORMAL	MP007	APIXS	05/03/00	05/09/00	05/15/00	6	6	12
UG/KG	436-SS-SB04-05	A0E040160003	NORMAL	MP007	APIXS	05/03/00	05/09/00	05/15/00	6	6	12
UG/KG	436-SS-SB09-05	A0E040160004	NORMAL	MP007	APIXS	05/03/00	05/09/00	05/15/00	6	6	12
UG/KG	358-SS-SB01-04	A0E050174002	NORMAL	MP007	APIXV	05/04/00	05/12/00	05/12/00	8	0	8
UG/KG	358-SS-SB04-04	A0E050174003	NORMAL	MP007	APIXV	05/04/00	05/12/00	05/12/00	8	0	8
UG/KG	358-SS-SB05-04	A0E050174004	NORMAL	MP007	APIXV	05/04/00	05/12/00	05/12/00	8	0	8
UG/KG	4252-SS-SB02-05	A0E030194001	NORMAL	MP007	APIXV	05/02/00	05/11/00	05/11/00	9	0	9
UG/KG	4252-SS-SB04-05	A0E030194002	NORMAL	MP007	APIXV	05/02/00	05/11/00	05/11/00	9	0	9
UG/KG	4252-SS-SB11-05	A0E050174001	NORMAL	MP007	APIXV	05/02/00	05/12/00	05/12/00	10	0	10
UG/KG	436-SS-SB01-05	A0E040160002	NORMAL	MP007	APIXV	05/03/00	05/11/00	05/11/00	8	0	8
UG/KG	436-SS-SB04-05	A0E040160003	NORMAL	MP007	APIXV	05/03/00	05/11/00	05/11/00	8	0	8
UG/KG	436-SS-SB09-05	A0E040160004	NORMAL	MP007	APIXV	05/03/00	05/11/00	05/11/00	8	0	8
MG/KG	4252-SS-SB02-05	A0E030194001	NORMAL	MP007	M	05/02/00	05/15/00	05/16/00	13	1	14
MG/KG	4252-SS-SB04-05	A0E030194002	NORMAL	MP007	M	05/02/00	05/15/00	05/16/00	13	1	14
MG/KG	4252-SS-SB11-05	A0E030194003	NORMAL	MP007	M	05/02/00	05/15/00	05/16/00	13	1	14
MG/KG	436-SS-SB01-05	A0E040160002	NORMAL	MP007	M	05/03/00	05/15/00	05/16/00	12	1	13
MG/KG	436-SS-SB04-05	A0E040160003	NORMAL	MP007	M	05/03/00	05/15/00	05/16/00	12	1	13
MG/KG	436-SS-SB09-05	A0E040160004	NORMAL	MP007	M	05/03/00	05/15/00	05/16/00	12	1	13
UG/KG	358-SS-SB01-04	A0E050174002	NORMAL	MP007	PAH	05/04/00	05/09/00	05/11/00	5	2	7

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
UG/KG	358-SS-SB04-04	A0E050174003	NORMAL	MP007	PAH	05/04/00	05/09/00	05/11/00	5	2	7
UG/KG	358-SS-SB05-04	A0E050174004	NORMAL	MP007	PAH	05/04/00	05/09/00	05/11/00	5	2	7
UG/KG	4252-SS-SB02-05	A0E030194001	NORMAL	MP007	PAH	05/02/00	05/09/00	05/11/00	7	2	9
UG/KG	4252-SS-SB04-05	A0E030194002	NORMAL	MP007	PAH	05/02/00	05/09/00	05/13/00	7	4	11
UG/KG	4252-SS-SB11-05	A0E030194003	NORMAL	MP007	PAH	05/04/00	05/09/00	05/13/00	5	4	9
UG/KG	436-SS-SB01-05	A0E040160002	NORMAL	MP007	PAH	05/03/00	05/09/00	05/11/00	6	2	8
UG/KG	436-SS-SB04-05	A0E040160003	NORMAL	MP007	PAH	05/03/00	05/09/00	05/11/00	6	2	8
UG/KG	436-SS-SB09-05	A0E040160004	NORMAL	MP007	PAH	05/03/00	05/09/00	05/11/00	6	2	8
UG/L	358-SS-SB05-04	A0E050174004	NORMAL	MP007	TCLPM	05/04/00	05/15/00	05/16/00	11	1	12
UG/L	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TCLPM	05/03/00	05/15/00	05/16/00	12	1	13
MG/L	358-SS-SB05-04	A0E050174004	NORMAL	MP007	TCLPS	05/04/00	05/15/00	05/16/00	11	1	12
MG/L	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TCLPS	05/03/00	05/15/00	05/16/00	12	1	13
MG/L	358-SS-SB05-04	A0E050174004	NORMAL	MP007	TCLPT	05/04/00	05/16/00	05/24/00	12	8	20
MG/L	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TCLPT	05/03/00	05/16/00	05/24/00	13	8	21
MG/L	358-SS-SB05-04	A0E050174004	NORMAL	MP007	TCLPV	05/04/00	05/19/00	05/19/00	15	0	15
MG/L	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TCLPV	05/03/00	05/19/00	05/19/00	16	0	16
%	358-SS-SB04-04	A0E050174003	NORMAL	MP007	TOC	05/04/00	05/22/00	05/23/00	18	1	19
%	4252-SS-SB11-05	A0E030194003	NORMAL	MP007	TOC	05/02/00	05/22/00	05/23/00	20	1	21
%	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TOC	05/03/00	05/22/00	05/23/00	19	1	20
MG/KG	358-SS-SB01-04	A0E050174002	NORMAL	MP007	TPH	05/04/00	05/09/00	05/11/00	5	2	7
MG/KG	358-SS-SB04-04	A0E050174003	NORMAL	MP007	TPH	05/04/00	05/09/00	05/11/00	5	2	7
MG/KG	358-SS-SB05-04	A0E050174004	NORMAL	MP007	TPH	05/04/00	05/09/00	05/11/00	5	2	7
MG/KG	4252-SS-SB02-05	A0E030194001	NORMAL	MP007	TPH	05/02/00	05/09/00	05/10/00	7	1	8
MG/KG	4252-SS-SB04-05	A0E030194002	NORMAL	MP007	TPH	05/02/00	05/09/00	05/10/00	7	1	8
MG/KG	4252-SS-SB11-05	A0E030194003	NORMAL	MP007	TPH	05/04/00	05/09/00	05/11/00	5	2	7
MG/KG	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TPH	05/03/00	05/09/00	05/11/00	6	2	8
MG/KG	436-SS-SB04-05	A0E040160003	NORMAL	MP007	TPH	05/03/00	05/09/00	05/11/00	6	2	8

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/KG	436-SS-SB09-05	A0E040160004	NORMAL	MP007	TPH	05/03/00	05/09/00	05/11/00	6	2	8

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DCP07 **Client ID:** 4252-SS-SB05-05

Matrix: Soil **Units:** mg/kg **Prep Date:** 5/15/00 **Prep Batch:** 0136113

Weight: 1 **Volume:** 100 **Percent Moisture:** 7.1

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.31	1.1	0.52	B	1	ICPST	5/16/00	9:59
Cadmium	226.50	0.032	0.22	0.032	U	1	ICPST	5/16/00	9:59
Chromium	267.72	0.086	0.54	1.8		1	ICPST	5/16/00	9:59
Lead	220.35	0.14	0.32	0.85		1	ICPST	5/16/00	9:59

Comments: Lot #: A0E030194 Sample #: 1

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

TETRA TECH NUS, INC.

Client Sample ID: 4252-SS-SB05-05

General Chemistry

Lot-Sample #...: A0E030194-001 Work Order #...: DCP07 Matrix.....: SO
Date Sampled...: 05/02/00 11:00 Date Received..: 05/03/00
% Moisture.....: 7.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	92.9	0.10	%	MCAWW 160.3 MOD	05/10-05/11/00	0131257

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DCP18 **Client ID:** 4252-SS-SB04-05

Matrix: Soil **Units:** mg/kg **Prep Date:** 5/15/00 **Prep Batch:** 0136113

Weight: 1 **Volume:** 100 **Percent Moisture:** 9.8

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.32	1.1	0.61	B	1	ICPST	5/16/00	10:09
Cadmium	226.50	0.033	0.22	0.033	U	1	ICPST	5/16/00	10:09
Chromium	267.72	0.089	0.55	1.6		1	ICPST	5/16/00	10:09
Lead	220.35	0.14	0.33	1.1		1	ICPST	5/16/00	10:09

Comments: Lot #: A0E030194 Sample #: 2

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

TETRA TECH NUS, INC.

Client Sample ID: 4252-SS-SB04-05

General Chemistry

Lot-Sample #...: A0E030194-002 Work Order #...: DCP18 Matrix.....: SO
Date Sampled...: 05/02/00 08:45 Date Received..: 05/03/00
% Moisture.....: 9.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	90.2	0.10	%	MCAWW 160.3 MOD	05/10-05/11/00	0131257

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DCP1J **Client ID:** 4252-SS-SB11-05

Matrix: Soil **Units:** mg/kg **Prep Date:** 5/15/00 **Prep Batch:** 0136113

Weight: 1 **Volume:** 100 **Percent Moisture:** 10.12

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.32	1.1	1	B	1	ICPST	5/16/00	10:13
Cadmium	226.50	0.033	0.22	0.033	U	1	ICPST	5/16/00	10:13
Chromium	267.72	0.089	0.56	2.8		1	ICPST	5/16/00	10:13
Lead	220.35	0.15	0.33	1.4		1	ICPST	5/16/00	10:13

Comments: Lot #: A0E030194 Sample #: 3

Version 3.62.1

U Result is less than the IDL

B Result is between IDL and RL

Form 1 Equivalent

TETRA TECH NUS, INC.

Client Sample ID: 4252-SS-SB11-05

General Chemistry

Lot-Sample #...: A0E030194-003 Work Order #...: DCP1J Matrix.....: SO
Date Sampled...: 05/02/00 13:00 Date Received..: 05/03/00
% Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	89.9	0.10	%	MCAWW 160.3 MOD	05/10-05/11/00	0131257
	Dilution Factor: 1					
Total Organic Carbon	2.0	0.11	%	ASTM D2974-84	05/22-05/23/00	0143377
	Dilution Factor: 1					

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DCQ91 **Client ID:** 436-SS-SB01-05

Matrix: Soil **Units:** mg/kg **Prep Date:** 5/15/00 **Prep Batch:** 0136113

Weight: 1 **Volume:** 100 **Percent Moisture:** 4.13

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.3	1	1.2		1	ICPST	5/16/00	10:18
Cadmium	226.50	0.031	0.21	0.16	B	1	ICPST	5/16/00	10:18
Chromium	267.72	0.083	0.52	3.8		1	ICPST	5/16/00	10:18
Lead	220.35	0.14	0.31	12.5		1	ICPST	5/16/00	10:18

Comments: Lot #: A0E040160 Sample #: 2

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

TETRA TECH NUS, INC.

Client Sample ID: 436-SS-SB01-05

General Chemistry

Lot-Sample #...: A0E040160-002 Work Order #...: DCQ91 Matrix.....: SO
Date Sampled...: 05/03/00 13:00 Date Received..: 05/04/00
% Moisture.....: 4.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	95.9	0.10	%	MCAWW 160.3 MOD	05/09-05/10/00	0130303
	Dilution Factor: 1					
Total Organic Carbon	0.89	0.10	%	ASTM D2974-84	05/22-05/23/00	0143377
	Dilution Factor: 1					

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DCQ95 **Client ID:** 436-SS-SB04-05

Matrix: Soil **Units:** mg/kg **Prep Date:** 5/15/00 **Prep Batch:** 0136113

Weight: 1 **Volume:** 100 **Percent Moisture:** 5.12

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.31	1.1	1.8		1	ICPST	5/16/00	10:34
Cadmium	226.50	0.032	0.21	0.19	B	1	ICPST	5/16/00	10:34
Chromium	267.72	0.084	0.53	2.7		1	ICPST	5/16/00	10:34
Lead	220.35	0.14	0.32	3.2		1	ICPST	5/16/00	10:34

Comments: Lot #: A0E040160 Sample #: 3

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

TETRA TECH NUS, INC.

Client Sample ID: 436-SS-SB04-05

General Chemistry

Lot-Sample #...: A0E040160-003 Work Order #...: DCQ95 Matrix.....: SO
Date Sampled...: 05/03/00 13:45 Date Received..: 05/04/00
% Moisture.....: 5.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	94.9	0.10	%	MCANW 160.3 MOD	05/09-05/10/00	0130303

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DCQ97 **Client ID:** 436-SS-SB09-05

Matrix: Soil **Units:** mg/kg **Prep Date:** 5/15/00 **Prep Batch:** 0136113

Weight: 1 **Volume:** 100 **Percent Moisture:** 5.28

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	0.31	1.1	0.58	B	1	ICPST	5/16/00	10:51
Cadmium	226.50	0.032	0.21	0.068	B	1	ICPST	5/16/00	10:51
Chromium	267.72	0.085	0.53	1.6		1	ICPST	5/16/00	10:51
Lead	220.35	0.14	0.32	1.9		1	ICPST	5/16/00	10:51

Comments: Lot #: A0E040160 Sample #: 4

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

TETRA TECH NUS, INC.

Client Sample ID: 436-SS-SB09-05

General Chemistry

Lot-Sample #...: A0E040160-004 Work Order #...: DCQ97 Matrix.....: SO
Date Sampled...: 05/03/00 14:40 Date Received..: 05/04/00
% Moisture.....: 5.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	94.7	0.10	%	MCAWW 160.3 MOD	05/09-05/10/00	0130303

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DCQ91T **Client ID:** 436-SS-SB01-05

Matrix: Water **Units:** ug/L **Prep Date:** 5/15/00 **Prep Batch:** 0136112

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	2.9	500	3.2	B	1	ICPST	5/16/00	11:12
Barium	493.41	0.3	10000	79.6	B	1	ICPST	5/16/00	11:12
Cadmium	226.50	0.3	100	1.7	B	1	ICPST	5/16/00	11:12
Chromium	267.72	0.8	500	1.9	B	1	ICPST	5/16/00	11:12
Lead	220.35	1.3	500	478	B	1	ICPST	5/16/00	11:12
Mercury	253.7	0.037	2	1.6	B	1	CVAA	5/16/00	15:13
Selenium	196.03	4.9	250	4.9	U	1	ICPST	5/16/00	11:12
Silver	328.07	1	500	1	U	1	ICPST	5/16/00	11:12

Comments:

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

TETRA TECH NUS, INC.

Client Sample ID: 4251-SS-SB05-05

General Chemistry

Lot-Sample #...: A0E040160-001 Work Order #...: DCQ8T Matrix.....: SO
Date Sampled...: 05/03/00 08:03 Date Received..: 05/04/00
% Moisture.....: 3.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	96.2	0.10	%	MCAWW 160.3 MOD	05/09-05/10/00	0130303

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

STL North Canton

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DD6K5B

Matrix: Soil **Units:** mg/kg **Prep Date:** 5/15/00 **Prep Batch:** 0136113

Weight: 1 **Volume:** 100 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	0.29	1	0.29	U	1	ICPST	5/16/00	9:48
Cadmium	226.502	0.03	0.2	0.03	U	1	ICPST	5/16/00	9:48
Chromium	267.716	0.08	0.5	0.083	B	1	ICPST	5/16/00	9:48
Lead	220.353	0.13	0.3	0.13	U	1	ICPST	5/16/00	9:48

Comments: Lot #: A0E040160

Version 3.62.1

U Result is less than the IDL

B Result is between IDL and RL

Form 3 Equivalent

STL North Canton

Metals Data Reporting Form

Continuing Calibration Blank Result

Instrument: ICPST **Units:** ug/L

Chart Number: i60516a.arc

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	CCB 5/16/00 9:43 AM		CCB 5/16/00 10:46 AM		CCB 5/16/00 11:49 AM					
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Arsenic	189.042	500	2.9	U	2.9	U	2.9	U				
Barium	493.409	10000	0.41	B	0.49	B	0.55	B				
Cadmium	226.502	100	0.3	U	0.3	U	0.3	U				
Chromium	267.716	500	0.8	U	0.8	U	0.8	U				
Lead	220.353	500	1.3	U	1.3	U	1.3	U				
Selenium	196.026	250	4.9	U	4.9	U	4.9	U				
Silver	328.068	500	1	U	1	U	1	U				

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 3 Equivalent

STL North Canton

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DD4WVBT

Matrix: Water **Units:** ug/L **Prep Date:** 5/15/00 **Prep Batch:** 0136112

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	2.9	500	2.9	U	1	ICPST	5/16/00	11:07
Barium	493.409	0.3	10000	1.3	B	1	ICPST	5/16/00	11:07
Cadmium	226.502	0.3	100	0.3	U	1	ICPST	5/16/00	11:07
Chromium	267.716	0.8	500	0.8	U	1	ICPST	5/16/00	11:07
Lead	220.353	1.3	500	1.3	U	1	ICPST	5/16/00	11:07
Mercury	253.7	0.037	2	0.037	U	1	CVAA	5/16/00	15:09
Selenium	196.026	4.9	250	4.9	U	1	ICPST	5/16/00	11:07
Silver	328.068	1	500	1	U	1	ICPST	5/16/00	11:07

Comments: Lot #: A0E040160

Version 3.62.1

U Result is less than the IDL

B Result is between IDL and RL

Form 3 Equivalent

STL North Canton

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DD6K3BT

Matrix: Water **Units:** ug/L **Prep Date:** 5/15/00 **Prep Batch:** 0136112

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	2.9	500	2.9	U	1	ICPST	5/16/00	10:55
Barium	493.409	0.3	10000	0.7	B	1	ICPST	5/16/00	10:55
Cadmium	226.502	0.3	100	0.3	U	1	ICPST	5/16/00	10:55
Chromium	267.716	0.8	500	0.8	U	1	ICPST	5/16/00	10:55
Lead	220.353	1.3	500	1.3	U	1	ICPST	5/16/00	10:55
Mercury	253.7	0.037	2	0.037	U	1	CVAA	5/16/00	15:11
Selenium	196.026	4.9	250	4.9	U	1	ICPST	5/16/00	10:55
Silver	328.068	1	500	1	U	1	ICPST	5/16/00	10:55

Comments: Lot #: A0E040160

Version 3.62.1

U Result is less than the IDL

B Result is between IDL and RL

Form 3 Equivalent

CASE NARRATIVE
GENERAL CHEMISTRY
MP007

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

Holding Time Violation

All samples were prepared and analyzed within the method-specified holding time requirements.

Method Blank Contamination

All analytes in the method blank were less than the associated reporting limits.

MS/MSD/LCS/DCS/Sample Duplicate Outside of QC Criteria

All spike recovery and RPD data met method-specific quality control criteria.

Calibrations

All calibrations and calibration verifications met method-specific quality control criteria.

Tetra Tech NUS, Inc. **Internal Correspondence**

TO: **Mr. Rick Ofsanko** **DATE: July 26, 2000**

FROM: **William Howard Engle** **CC: File**

SUBJECT: **Inorganic Data Validation –TCLP Metals and TOC**
CTO123 – NS Mayport
SDG MP008

SAMPLES: **3/Leachates**

351-SS-SB02-05
425-SS-SB11-05
436-SS-SB01-05

1/Soil

351-SS-SB07-05

OVERVIEW

The sample set for CTO123, SDG MP008; Naval Station Mayport, Jacksonville, Florida consists of three (3) leachates and one (1) soil environmental samples. The leachates were analyzed for TCLP metals using SW-846 6010B. The soil sample was analyzed for FOC using ASTM D2974-84.

The samples were collected by Tetra Tech NUS on May 24, 2000 and analyzed by STL-No. Canton (formerly Quanterra) Laboratory. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 6010B, 7470A, 1311, and ASTM D2974-84 analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

- * Data Completeness
- * Holding Times
- * Initial/continuing calibrations
- Laboratory method/field quality control blank results

The symbol (*) indicates that all quality control criteria were met for this parameter. Supporting documentation is presented in Appendix C. Qualified analytical results are presented in Appendix A. The original laboratory data is contained in Appendix B.

TCLP Metals Fraction

Laboratory Blank Analysis

Affected leachates: all

Analyte	Maximum Concentration (ug/L)	Action Level (ug/L)
Barium	29.1 (1)	145.5
Chromium	3.8 (1)	19
Lead	3.9 (1)	19.5
Mercury	0.061 (1)	0.305

(1) Contamination in the preparation blank.

An action level of 5x the maximum concentration has been used to evaluate the sample for contamination in continuing calibration blank and preparation blank. Dilution factors and sample aliquots were taken into consideration when evaluating for blank contamination. Positive results < action level were qualified nondetected "U" due to contamination in the preparation blank.

All other quality control criteria were met.

Total Organic Carbon Fraction

All quality control criteria were met for this parameter.

Notes

The initial sampling effort had to be reconducted because the samples were received outside of the temperature control limits.

Executive Summary

Laboratory performance: Several analytes were detected in the laboratory blanks. Positive results < action levels were qualified "U" due to lab blank contamination

Other factors affecting data quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Inorganic Data Validation (February, 1994), and the NFESC guidelines "Navy IRCQM" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

William Howard Engle

Project Chemist
Tetra Tech NUS, Inc.

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech NUS, Inc.

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B – Results as reported by the laboratory
3. Appendix C – Supporting Documentation

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

APPENDIX A

Qualified Analytical Results

MP008

HOLDING TIME
07/07/00

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
UG/KG	351-SS-SB02-05	A0E260112001	NORMAL	MP008	OS	05/24/00	05/30/00	06/01/00	6	2	8
UG/KG	351-SS-SB05-05	A0E260112002	NORMAL	MP008	OS	05/24/00	05/30/00	06/01/00	6	2	8
UG/KG	351-SS-SB07-05RE	A0E260112003	NORMAL	MP008	OS	05/24/00	06/05/00	06/09/00	12	4	16
UG/KG	351-SS-SB02-05	A0E260112001	NORMAL	MP008	OV	05/24/00	06/06/00	06/06/00	13	0	13
UG/KG	351-SS-SB05-05	A0E260112002	NORMAL	MP008	OV	05/24/00	06/06/00	06/06/00	13	0	13
UG/KG	351-SS-SB07-05	A0E260112003	NORMAL	MP008	OV	05/24/00	06/06/00	06/06/00	13	0	13
UG/KG	351-SS-SB02-05	A0E260112001	NORMAL	MP008	PAH	05/24/00	06/03/00	06/08/00	10	5	15
UG/KG	351-SS-SB05-05	A0E260112002	NORMAL	MP008	PAH	05/24/00	06/03/00	06/12/00	10	9	19
UG/KG	351-SS-SB07-05	A0E260112003	NORMAL	MP008	PAH	05/24/00	06/03/00	06/08/00	10	5	15
UG/L	351-SS-SB02-05	A0E260112001	NORMAL	MP008	TCLPM	05/24/00	06/01/00	06/02/00	8	1	9
UG/L	425-1-SS-SB11-05	A0E260115001	NORMAL	MP008	TCLPM	05/24/00	06/01/00	06/02/00	8	1	9
UG/L	436-SS-SB01-05	A0E260115002	NORMAL	MP008	TCLPM	05/24/00	06/01/00	06/02/00	8	1	9
MG/L	425-1-SS-SB11-05	A0E260115001	NORMAL	MP008	TCLPS	05/24/00	06/01/00	06/02/00	8	1	9
MG/L	436-SS-SB01-05	A0E260115002	NORMAL	MP008	TCLPS	05/24/00	06/01/00	06/02/00	8	1	9
MG/L	351-SS-SB02-05	A0E260112001	NORMAL	MP008	TCLPT	05/24/00	06/08/00	06/12/00	15	4	19
MG/L	425-1-SS-SB11-05	A0E260115001	NORMAL	MP008	TCLPT	05/24/00	06/08/00	06/12/00	15	4	19
MG/L	436-SS-SB01-05	A0E260115002	NORMAL	MP008	TCLPT	05/24/00	06/08/00	06/12/00	15	4	19
MG/L	351-SS-SB02-05	A0E260112001	NORMAL	MP008	TCLPV	05/24/00	06/02/00	06/02/00	9	0	9
MG/L	425-1-SS-SB11-05	A0E260115001	NORMAL	MP008	TCLPV	05/24/00	06/02/00	06/02/00	9	0	9
MG/L	436-SS-SB01-05	A0E260115002	NORMAL	MP008	TCLPV	05/24/00	06/02/00	06/02/00	9	0	9
%	351-SS-SB07-05	A0E260112003	NORMAL	MP008	TOC	05/24/00	05/30/00	05/31/00	6	1	7
UG/L	351-SS-SB02-05	A0E260112001	NORMAL	MP008	TPAH	05/24/00	06/08/00	06/14/00	15	6	21
UG/L	425-1-SS-SB11-05	A0E260115001	NORMAL	MP008	TPAH	05/24/00	06/08/00	06/14/00	15	6	21
UG/L	436-SS-SB01-05	A0E260115002	NORMAL	MP008	TPAH	05/24/00	06/08/00	06/14/00	15	6	21
MG/KG	351-SS-SB02-05	A0E260112001	NORMAL	MP008	TPH	05/24/00	06/01/00	06/05/00	8	4	12

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/KG	351-SS-SB05-05	A0E260112002	NORMAL	MP008	TPH	05/24/00	06/01/00	06/05/00	8	4	12
MG/KG	351-SS-SB07-05	A0E260112003	NORMAL	MP008	TPH	05/24/00	06/01/00	06/05/00	8	4	12

CTO123-NS MAYPORT
TCLP DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05			425-1-SS-SB11-05			436-SS-SB01-05					
SAMPLE DATE:	05/24/00			05/24/00			05/24/00			/ /		
LABORATORY ID:	A0E260112001			A0E260115001			A0E260115002					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	0.0 %			0.0 %			0.0 %			100.0 %		
UNITS:	UG/L			UG/L			UG/L					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ARSENIC	2.9	U		2.9	U		2.9	U				
BARIUM	48.6	~~B~~ U	A	28.9	~~B~~ U	A	104	~~B~~ U	A			
CADMIUM	0.30	U		0.37	~~B~~		0.90	~~B~~				
CHROMIUM	2.5	~~B~~ U	A	2.3	~~B~~ U	A	9.7	~~B~~ U	A			
LEAD	1.3	U		1.3	U		1.9	~~B~~ U	A			
MERCURY	1.4	~~B~~		2.3			13.4					
SELENIUM	8.9	~~B~~		7.7	~~B~~		6.9	~~B~~				
SILVER	1.0	U		1.0	U		1.0	U				

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB07-05			
SAMPLE DATE:	05/24/00	/ /	/ /	/ /
LABORATORY ID:	A0E260112003			
QC_TYPE:	NORMAL			
% SOLIDS:	93.5 %	100.0 %	100.0 %	100.0 %
UNITS:	%			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
MISCELLANEOUS PARAMETERS												
TOTAL ORGANIC CARBON	5.4											

APPENDIX B

Results as Reported by the Laboratory

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DDR7X **Client ID:** 425-1-SS-SB11-05

Matrix: Water **Units:** ug/L **Prep Date:** 6/1/00 **Prep Batch:** 0153104

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.04	2.9	500	2.9	U	1	ICPST	6/2/00	20:31
Barium	493.41	0.3	10000	28.9	B	1	ICPST	6/2/00	20:31
Cadmium	226.50	0.3	100	0.37	B	1	ICPST	6/2/00	20:31
Chromium	267.72	0.8	500	2.3	B	1	ICPST	6/2/00	20:31
Lead	220.35	1.3	500	1.3	U	1	ICPST	6/2/00	20:31
Mercury	253.7	0.037	2	2.3		1	CVAA	6/5/00	12:11
Selenium	196.03	4.9	250	7.7	B	1	ICPST	6/2/00	20:31
Silver	328.07	1	500	1	U	1	ICPST	6/2/00	20:31

Comments: Lot #: A0E260115 Sample #: 1

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

STL North Canton

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST **Chart Number:** i50602a.arc

Sample Name	Date of Analysis	Time of Analysis
STD1-Blank	6/2/00	9:01 AM
CALSTD	6/2/00	9:06 AM
CAL 2	6/2/00	9:11 AM
ICV	6/2/00	9:15 AM
ICB	6/2/00	9:20 AM
CRI	6/2/00	9:25 AM
ZZZZZZ	6/2/00	9:30 AM
ZZZZZZ	6/2/00	9:35 AM
ICSA	6/2/00	9:40 AM
ICSAB	6/2/00	9:46 AM
CCV	6/2/00	9:51 AM
CCB	6/2/00	9:57 AM
ZZZZZZ	6/2/00	10:32 AM
ZZZZZZ	6/2/00	10:37 AM
ZZZZZZ	6/2/00	10:42 AM
ZZZZZZ	6/2/00	10:47 AM
ZZZZZZ	6/2/00	10:53 AM
ZZZZZZ	6/2/00	10:58 AM
ZZZZZZ	6/2/00	11:04 AM
ZZZZZZ	6/2/00	11:09 AM
ZZZZZZ	6/2/00	11:14 AM
ZZZZZZ	6/2/00	11:19 AM
CCV	6/2/00	11:26 AM
CCB	6/2/00	11:32 AM
ZZZZZZ	6/2/00	11:37 AM
ZZZZZZ	6/2/00	11:42 AM
ZZZZZZ	6/2/00	11:47 AM
ZZZZZZ	6/2/00	11:53 AM
ZZZZZZ	6/2/00	11:58 AM
ZZZZZZ	6/2/00	12:03 PM
ZZZZZZ	6/2/00	12:09 PM
ZZZZZZ	6/2/00	12:14 PM
ZZZZZZ	6/2/00	12:20 PM
ZZZZZZ	6/2/00	12:25 PM
CCV	6/2/00	12:32 PM
CCB	6/2/00	12:38 PM
ZZZZZZ	6/2/00	12:43 PM
ZZZZZZ	6/2/00	12:48 PM
ZZZZZZ	6/2/00	12:54 PM
ZZZZZZ	6/2/00	12:59 PM
ZZZZZZ	6/2/00	1:04 PM

Version 3.62.1 *Form 14 Equivalent*

STL North Canton

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST **Chart Number:** i50602a.arc

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	6/2/00	1:10 PM
ZZZZZZ	6/2/00	1:15 PM
ZZZZZZ	6/2/00	1:20 PM
ZZZZZZ	6/2/00	1:25 PM
ZZZZZZ	6/2/00	1:30 PM
CCV	6/2/00	1:37 PM
CCB	6/2/00	1:43 PM
ZZZZZZ	6/2/00	1:48 PM
ZZZZZZ	6/2/00	1:53 PM
ZZZZZZ	6/2/00	1:58 PM
ZZZZZZ	6/2/00	2:03 PM
ZZZZZZ	6/2/00	2:08 PM
ZZZZZZ	6/2/00	2:13 PM
ZZZZZZ	6/2/00	2:18 PM
ZZZZZZ	6/2/00	2:23 PM
ZZZZZZ	6/2/00	2:28 PM
ZZZZZZ	6/2/00	2:33 PM
CCV	6/2/00	2:40 PM
CCB	6/2/00	2:46 PM
ZZZZZZ	6/2/00	3:03 PM
ZZZZZZ	6/2/00	3:08 PM
ZZZZZZ	6/2/00	3:13 PM
ZZZZZZ	6/2/00	3:22 PM
ZZZZZZ	6/2/00	3:27 PM
ZZZZZZ	6/2/00	3:32 PM
ZZZZZZ	6/2/00	3:38 PM
ZZZZZZ	6/2/00	3:43 PM
ZZZZZZ	6/2/00	3:49 PM
ZZZZZZ	6/2/00	3:54 PM
CCV	6/2/00	4:00 PM
CCB	6/2/00	4:06 PM
ZZZZZZ	6/2/00	4:11 PM
ZZZZZZ	6/2/00	4:16 PM
ZZZZZZ	6/2/00	4:23 PM
ZZZZZZ	6/2/00	4:28 PM
ZZZZZZ	6/2/00	4:33 PM
ZZZZZZ	6/2/00	4:38 PM
ZZZZZZ	6/2/00	4:43 PM
ZZZZZZ	6/2/00	4:48 PM
ZZZZZZ	6/2/00	4:54 PM
ZZZZZZ	6/2/00	5:00 PM

Version 3.62.1

Form 14 Equivalent

STL North Canton

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST **Chart Number:** i50602a.arc

Sample Name	Date of Analysis	Time of Analysis
CCV	6/2/00	5:05 PM
CCB	6/2/00	5:11 PM
ZZZZZZ	6/2/00	5:16 PM
ZZZZZZ	6/2/00	5:22 PM
ZZZZZZ	6/2/00	5:27 PM
ZZZZZZ	6/2/00	5:32 PM
ZZZZZZ	6/2/00	5:37 PM
ZZZZZZ	6/2/00	5:43 PM
ZZZZZZ	6/2/00	5:49 PM
ZZZZZZ	6/2/00	5:54 PM
ZZZZZZ	6/2/00	5:59 PM
ZZZZZZ	6/2/00	6:04 PM
CCV	6/2/00	6:10 PM
CCB	6/2/00	6:17 PM
ZZZZZZ	6/2/00	6:22 PM
ZZZZZZ	6/2/00	6:27 PM
ZZZZZZ	6/2/00	6:32 PM
ZZZZZZ	6/2/00	6:37 PM
ZZZZZZ	6/2/00	6:42 PM
ZZZZZZ	6/2/00	6:48 PM
ZZZZZZ	6/2/00	6:53 PM
ZZZZZZ	6/2/00	6:58 PM
ZZZZZZ	6/2/00	7:03 PM
ZZZZZZ	6/2/00	7:08 PM
CCV	6/2/00	7:14 PM
CCB	6/2/00	7:20 PM
ZZZZZZ	6/2/00	7:25 PM
ZZZZZZ	6/2/00	7:30 PM
ZZZZZZ	6/2/00	7:35 PM
DE0JJBT	6/2/00	7:42 PM
DE1F9B	6/2/00	7:47 PM
DE1F9C	6/2/00	7:52 PM
DDR70	6/2/00	7:58 PM
DDR70L	6/2/00	8:03 PM
DDR70S	6/2/00	8:08 PM
DDR70D	6/2/00	8:13 PM
CCV	6/2/00	8:19 PM
CCB	6/2/00	8:26 PM
DDR7X	6/2/00	8:31 PM
DDR83	6/2/00	8:36 PM
ZZZZZZ	6/2/00	8:41 PM

Version 3.62.1 *Form 14 Equivalent*

STL North Canton

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST **Chart Number:** i50602a.arc

Sample Name	Date of Analysis	Time of Analysis
CCV	6/2/00	8:47 PM
CCB	6/2/00	8:53 PM

STL North Canton

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAA **Chart Number:** hg10605c.prn

Sample Name	Date of Analysis	Time of Analysis
Std1Rep1	6/5/00	11:05 AM
Std2Rep1	6/5/00	11:06 AM
Std3Rep1	6/5/00	11:07 AM
Std4Rep1	6/5/00	11:08 AM
Std5Rep1	6/5/00	11:10 AM
Std6Rep1	6/5/00	11:11 AM
Ck5ICV	6/5/00	11:12 AM
Ck4ICB	6/5/00	11:14 AM
Ck3CRA	6/5/00	11:15 AM
Ck2CCV	6/5/00	11:16 AM
Ck1CCB	6/5/00	11:18 AM
ZZZZZZ	6/5/00	11:19 AM
ZZZZZZ	6/5/00	11:20 AM
ZZZZZZ	6/5/00	11:21 AM
ZZZZZZ	6/5/00	11:22 AM
ZZZZZZ	6/5/00	11:24 AM
ZZZZZZ	6/5/00	11:25 AM
ZZZZZZ	6/5/00	11:26 AM
ZZZZZZ	6/5/00	11:28 AM
ZZZZZZ	6/5/00	11:30 AM
ZZZZZZ	6/5/00	11:31 AM
Ck2CCV	6/5/00	11:32 AM
Ck1CCB	6/5/00	11:34 AM
ZZZZZZ	6/5/00	11:35 AM
ZZZZZZ	6/5/00	11:36 AM
ZZZZZZ	6/5/00	11:37 AM
ZZZZZZ	6/5/00	11:39 AM
ZZZZZZ	6/5/00	11:40 AM
ZZZZZZ	6/5/00	11:41 AM
ZZZZZZ	6/5/00	11:42 AM
ZZZZZZ	6/5/00	11:44 AM
ZZZZZZ	6/5/00	11:45 AM
ZZZZZZ	6/5/00	11:46 AM
Ck2CCV	6/5/00	11:47 AM
Ck1CCB	6/5/00	11:49 AM
ZZZZZZ	6/5/00	11:50 AM
ZZZZZZ	6/5/00	11:51 AM
ZZZZZZ	6/5/00	11:52 AM
ZZZZZZ	6/5/00	11:54 AM
ZZZZZZ	6/5/00	11:55 AM
ZZZZZZ	6/5/00	11:56 AM

Version 3.62.1

Form 14 Equivalent

STL North Canton

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAA **Chart Number:** hg10605c.prn

Sample Name	Date of Analysis	Time of Analysis
ZZZZZZ	6/5/00	11:58 AM
ZZZZZZ	6/5/00	11:59 AM
ZZZZZZ	6/5/00	12:01 PM
DE0JJB	6/5/00	12:02 PM
Ck2CCV	6/5/00	12:03 PM
Ck1CCB	6/5/00	12:04 PM
DE1F9B	6/5/00	12:05 PM
DE1F9C	6/5/00	12:06 PM
DDR70	6/5/00	12:08 PM
DDR70S	6/5/00	12:09 PM
DDR70D	6/5/00	12:10 PM
DDR7X	6/5/00	12:11 PM
ZZZZZZ	6/5/00	12:12 PM
ZZZZZZ	6/5/00	12:14 PM
Ck2CCV	6/5/00	12:15 PM
Ck1CCB	6/5/00	12:17 PM
Ck2CCV	6/5/00	12:50 PM
Ck1CCB	6/5/00	12:51 PM
DDR83	6/5/00	12:52 PM
Ck2CCV	6/5/00	12:54 PM
Ck1CCB	6/5/00	12:55 PM

STL North Canton

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: hg10605c.prn

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	Ck4ICB 6/5/00 11:14 AM									
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	2	-0.044	B								

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 3 Equivalent

STL North Canton

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: i50602a.arc

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	ICB 6/2/00 9:20 AM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Arsenic	189.042	500	2.9	U								
Barium	493.409	10000	0.52	B								
Cadmium	226.502	100	0.3	U								
Chromium	267.716	500	0.8	U								
Lead	220.353	500	1.3	U								
Selenium	196.026	250	4.9	U								
Silver	328.068	500	1	U								

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 3 Equivalent

STL North Canton

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: hg10605c.prn

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	Ck1CCB 6/5/00 11:18 AM		Ck1CCB 6/5/00 11:34 AM		Ck1CCB 6/5/00 11:49 AM		Ck1CCB 6/5/00 12:04 PM		Ck1CCB 6/5/00 12:17 PM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	2	-0.049	B	-0.046	B	-0.051	B	-0.076	B	-0.058	B

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 3 Equivalent

STL North Canton

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: hg10605c.prn

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	Ck1CCB 6/5/00 12:51 PM		Ck1CCB 6/5/00 12:55 PM							
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	2	-0.089	B	0.037	U						

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 3 Equivalent

STL North Canton

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: i50602a.arc

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	CCB 6/2/00 9:57 AM		CCB 6/2/00 11:32 AM		CCB 6/2/00 12:38 PM		CCB 6/2/00 1:43 PM		CCB 6/2/00 2:46 PM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Arsenic	189.042	500	2.9	U	2.9	U	2.9	U	2.9	U	2.9	U
Barium	493.409	10000	0.44	B	0.65	B	0.41	B	0.51	B	0.4	B
Cadmium	226.502	100	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
Chromium	267.716	500	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U
Lead	220.353	500	1.3	U	-2.2	B	-2	B	1.3	U	-1.5	B
Selenium	196.026	250	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U
Silver	328.068	500	1	U	1	U	1	U	1	U	1	U

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 3 Equivalent

STL North Canton

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: i50602a.arc

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	CCB 6/2/00 4:06 PM		CCB 6/2/00 5:11 PM		CCB 6/2/00 6:17 PM		CCB 6/2/00 7:20 PM		CCB 6/2/00 8:26 PM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Arsenic	189.042	500	2.9	U	2.9	U	2.9	U	2.9	U	-3.2	B
Barium	493.409	10000	0.67	B	0.68	B	0.61	B	0.57	B	1.2	B
Cadmium	226.502	100	0.37	B	0.3	U	0.3	U	0.3	U	0.3	U
Chromium	267.716	500	1.1	B	0.8	U	0.8	U	0.8	U	0.8	U
Lead	220.353	500	1.3	U	-1.8	B	1.3	U	1.3	U	1.3	U
Selenium	196.026	250	4.9	U	4.9	U	4.9	U	4.9	U	4.9	U
Silver	328.068	500	1	U	1	U	1	U	1	U	1	U

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 3 Equivalent

STL North Canton

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: i50602a.arc

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	CCB 6/2/00 8:53 PM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Arsenic	189.042	500	2.9	U								
Barium	493.409	10000	0.54	B								
Cadmium	226.502	100	0.3	U								
Chromium	267.716	500	1.2	B								
Lead	220.353	500	1.3	U								
Selenium	196.026	250	4.9	U								
Silver	328.068	500	1	U								

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 3 Equivalent

STL North Canton

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DE0JJB

Matrix: Water **Units:** ug/L **Prep Date:** 6/1/00 **Prep Batch:** 0153104

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	2.9	500	-3.2	B	1	ICPST	6/2/00	19:42
Barium	493.409	0.3	10000	29.1	B	1	ICPST	6/2/00	19:42
Cadmium	226.502	0.3	100	0.3	U	1	ICPST	6/2/00	19:42
Chromium	267.716	0.8	500	3.8	B	1	ICPST	6/2/00	19:42
Lead	220.353	1.3	500	3.9	B	1	ICPST	6/2/00	19:42
Mercury	253.7	0.037	2	0.061	B	1	CVAA	6/5/00	12:02
Selenium	196.026	4.9	250	4.9	U	1	ICPST	6/2/00	19:42
Silver	328.068	1	500	1	U	1	ICPST	6/2/00	19:42

Comments: Lot #: A0E260115

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 3 Equivalent

STL North Canton

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: DE1F9B

Matrix: Water **Units:** ug/L **Prep Date:** 6/1/00 **Prep Batch:** 0153104

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	2.9	500	2.9	U	1	ICPST	6/2/00	19:47
Barium	493.409	0.3	10000	0.3	U	1	ICPST	6/2/00	19:47
Cadmium	226.502	0.3	100	0.3	U	1	ICPST	6/2/00	19:47
Chromium	267.716	0.8	500	0.8	U	1	ICPST	6/2/00	19:47
Lead	220.353	1.3	500	1.3	U	1	ICPST	6/2/00	19:47
Mercury	253.7	0.037	2	0.037	U	1	CVAA	6/5/00	12:05
Selenium	196.026	4.9	250	4.9	U	1	ICPST	6/2/00	19:47
Silver	328.068	1	500	1	U	1	ICPST	6/2/00	19:47

Comments: Lot #: A0E260115

Version 3.62.1

U Result is less than the IDL
B Result is between IDL and RL

Form 3 Equivalent

CASE NARRATIVE
GENERAL CHEMISTRY
MP008

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

Holding Time Violation

All samples were prepared and analyzed within the method-specified holding time requirements.

Method Blank Contamination

All analytes in the method blank were less than the associated reporting limits.

MS/MSD/LCS/DCS/Sample Duplicate Outside of QC Criteria

All spike recovery and RPD data met method-specific quality control criteria.

Calibrations

All calibrations and calibration verifications met method-specific quality control criteria.

Tetra Tech NUS, Inc. Internal Correspondence

TO: Mr. Mark Peterson Date: August 11, 2000

FROM: William Howard Engle CC: File

SUBJECT: Organic Data Validation – VOA, SVOA, PAHs, and TRPHs,
CTO123 – NS Mayport
SDG MP008

SAMPLES: 3/Soil

351-SS-SB02-05
351-SS-SB05-05
351-SS-SB07-05

3/Leachates

351-SS-SB02-05
425-1-SS-SB11-05
436-SS-SB01-05

OVERVIEW

The sample set for CTO123, SDG MP008; Naval Station Mayport, Jacksonville, Florida consists of three (3) soil environmental samples and three (3) leachates. Samples 351-SS-SB02-05, 351-SS-SB05-05 were analyzed for volatile organics (VOAs), semi-volatile organics (SVOAs), polycyclic aromatic hydrocarbons (PAHs), and total recoverable petroleum hydrocarbons (TRPHs). Sample 351-SS-SB07-05 and the leachates were analyzed for all parameters, except FOC.

The samples were collected by Tetra Tech NUS on May 24, 2000 and analyzed by STL - North Canton (formerly Quanterra, Inc.). All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/ Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8260B (VOAs), 8270C (SVOAs), and 8310 (PAHs), and FL-PRO (TRPHs) analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial/ continuing calibrations
  • Laboratory method/ field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Supporting documentation is presented in Appendix C. Qualified analytical results are presented in Appendix A. The original laboratory data is contained in Appendix B.

Volatile Fraction

Laboratory Blank Analyses

Affected samples: 351-SS-SB02-05
351-SS-SB05-05
351-SS-SB07-05

Compound	Maximum Concentration(ug/kg)	Action Level(ug/kg)
methylene chloride	0.74	7.4
2-butanone	1.2	6.0

An action level of 5X (10X for methylene chloride and acetone) the maximum concentration has been used to evaluate the sample for blank contamination. Dilution factors, percent solid, and sample aliquot were taken into consideration when evaluating for blank contamination. Positive results, < the action level for methylene chloride and 2-butanone, were qualified as nondetects (U) as a result of blank contamination.

All other quality control criteria was met for this fraction.

Semi-Volatile Fraction

Sample 351-SS-SB05-05 had one surrogate outside of the acceptance limits. No action was taken.

Laboratory Blank Analyses

Affected samples: All Soils

Compound	Maximum Concentration(ug/kg)	Action Level(ug/kg)
Bis (2-Ethylhexyl) phthalate	42	420

An action level of 10x the maximum concentration has been used to evaluate the sample for blank contamination. Dilution factors, percent solid, and sample aliquot were taken into consideration when evaluating for blank contamination. No action was taken.

Polynuclear Aromatic Hydrocarbons

Laboratory Blank Analyses

Affected samples: Leachates

Compound	Maximum Concentration(ug/L)	Action Level(ug/L)
Anthracene	7.5	37.5

An action level of 5x the maximum concentration has been used to evaluate the sample for blank contamination. Dilution factors and sample aliquots were taken into consideration when evaluating for blank contamination. Positive results, < the action level for anthracene, were qualified as nondetects (U) as a result of blank contamination.

Total Recoverable Petroleum Hydrocarbons

Laboratory Blank Analyses

Affected leachates: All

Compound	Maximum Concentration(mg/L)	Action Level(mg/L)
TRPH	1.3	6.5

An action level of 5X the maximum concentration has been used to evaluate the sample for blank contamination. Dilution factors and sample aliquots were taken into consideration when evaluating for blank contamination. Positive results, < the action level for TRPH, were qualified as nondetects (U) as a result of blank contamination.

Note

PAHs were reported in both the 8270C and 8310 analyses for the soil samples. Since the reprting limit are lower in the 8310 analysis these results should be used instead of the 8270C PAH results.

Executive Summary

Laboratory performance: Several blanks contained contamination. Positive results above the action levels were qualified "U".

Other factors affecting data quality: None.

The data for these analyzes were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February 1994). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

William Howard Engle
Project Chemist
Tetra Tech NUS, Inc.

for:
Joseph A. Samchuck
Data Validation Quality Assurance Officer
Tetra Tech NUS, Inc.

Attachments:
1. Appendix A – Qualified analytical results
2. Appendix B – Results as reported by the laboratory
3. Appendix C – Supporting documentation

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

APPENDIX A

Qualified Analytical Results

MP008

HOLDING TIME
07/07/00

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
UG/KG	351-SS-SB02-05	A0E260112001	NORMAL	MP008	OS	05/24/00	05/30/00	06/01/00	6	2	8
UG/KG	351-SS-SB05-05	A0E260112002	NORMAL	MP008	OS	05/24/00	05/30/00	06/01/00	6	2	8
UG/KG	351-SS-SB07-05RE	A0E260112003	NORMAL	MP008	OS	05/24/00	06/05/00	06/09/00	12	4	16
UG/KG	351-SS-SB02-05	A0E260112001	NORMAL	MP008	OV	05/24/00	06/06/00	06/06/00	13	0	13
UG/KG	351-SS-SB05-05	A0E260112002	NORMAL	MP008	OV	05/24/00	06/06/00	06/06/00	13	0	13
UG/KG	351-SS-SB07-05	A0E260112003	NORMAL	MP008	OV	05/24/00	06/06/00	06/06/00	13	0	13
UG/KG	351-SS-SB02-05	A0E260112001	NORMAL	MP008	PAH	05/24/00	06/03/00	06/08/00	10	5	15
UG/KG	351-SS-SB05-05	A0E260112002	NORMAL	MP008	PAH	05/24/00	06/03/00	06/12/00	10	9	19
UG/KG	351-SS-SB07-05	A0E260112003	NORMAL	MP008	PAH	05/24/00	06/03/00	06/08/00	10	5	15
UG/L	351-SS-SB02-05	A0E260112001	NORMAL	MP008	TCLPM	05/24/00	06/01/00	06/02/00	8	1	9
UG/L	425-1-SS-SB11-05	A0E260115001	NORMAL	MP008	TCLPM	05/24/00	06/01/00	06/02/00	8	1	9
UG/L	436-SS-SB01-05	A0E260115002	NORMAL	MP008	TCLPM	05/24/00	06/01/00	06/02/00	8	1	9
MG/L	425-1-SS-SB11-05	A0E260115001	NORMAL	MP008	TCLPS	05/24/00	06/01/00	06/02/00	8	1	9
MG/L	436-SS-SB01-05	A0E260115002	NORMAL	MP008	TCLPS	05/24/00	06/01/00	06/02/00	8	1	9
MG/L	351-SS-SB02-05	A0E260112001	NORMAL	MP008	TCLPT	05/24/00	06/08/00	06/12/00	15	4	19
MG/L	425-1-SS-SB11-05	A0E260115001	NORMAL	MP008	TCLPT	05/24/00	06/08/00	06/12/00	15	4	19
MG/L	436-SS-SB01-05	A0E260115002	NORMAL	MP008	TCLPT	05/24/00	06/08/00	06/12/00	15	4	19
MG/L	351-SS-SB02-05	A0E260112001	NORMAL	MP008	TCLPV	05/24/00	06/02/00	06/02/00	9	0	9
MG/L	425-1-SS-SB11-05	A0E260115001	NORMAL	MP008	TCLPV	05/24/00	06/02/00	06/02/00	9	0	9
MG/L	436-SS-SB01-05	A0E260115002	NORMAL	MP008	TCLPV	05/24/00	06/02/00	06/02/00	9	0	9
%	351-SS-SB07-05	A0E260112003	NORMAL	MP008	TOC	05/24/00	05/30/00	05/31/00	6	1	7
UG/L	351-SS-SB02-05	A0E260112001	NORMAL	MP008	TPAH	05/24/00	06/08/00	06/14/00	15	6	21
UG/L	425-1-SS-SB11-05	A0E260115001	NORMAL	MP008	TPAH	05/24/00	06/08/00	06/14/00	15	6	21
UG/L	436-SS-SB01-05	A0E260115002	NORMAL	MP008	TPAH	05/24/00	06/08/00	06/14/00	15	6	21
MG/KG	351-SS-SB02-05	A0E260112001	NORMAL	MP008	TPH	05/24/00	06/01/00	06/05/00	8	4	12

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/KG	351-SS-SB05-05	A0E260112002	NORMAL	MP008	TPH	05/24/00	06/01/00	06/05/00	8	4	12
MG/KG	351-SS-SB07-05	A0E260112003	NORMAL	MP008	TPH	05/24/00	06/01/00	06/05/00	8	4	12

CTO123-MS MAYPORT
TCLP DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05	425-1-SS-SB11-05	436-SS-SB01-05	
SAMPLE DATE:	05/24/00	05/24/00	05/24/00	/ /
LABORATORY ID:	A0E260112001	A0E260115001	A0E260115002	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	0.0 %	0.0 %	0.0 %	100.0 %
UNITS:	MG/L	MG/L	MG/L	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1-DICHLOROETHENE	0.07	U		0.07	U		0.07	U				
1,2-DICHLOROETHANE	0.025	U		0.025	U		0.025	U				
BENZENE	0.025	U		0.025	U		0.025	U				
CARBON TETRACHLORIDE	0.025	U		0.025	U		0.025	U				
CHLOROBENZENE	0.025	U		0.025	U		0.025	U				
CHLOROFORM	0.025	U		0.025	U		0.025	U				
METHYL ETHYL KETONE	20	U		20	U		20	U				
TETRACHLOROETHENE	0.07	U		0.07	U		0.07	U				
TRICHLOROETHENE	0.05	U		0.05	U		0.05	U				
VINYL CHLORIDE	0.05	U		0.05	U		0.05	U				

CTO123-MS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05			351-SS-SB05-05			351-SS-SB07-05			/ /		
SAMPLE DATE:	05/24/00			05/24/00			05/24/00					
LABORATORY ID:	A0E260112001			A0E260112002			A0E260112003					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	95.8 %			91.0 %			93.5 %			100.0 %		
UNITS:	UG/KG			UG/KG			UG/KG					
FIELD DUPLICATE OF:												
VOLATILES	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
1,1,1,2-TETRACHLOROETHANE	5.7	U		5.7	U		6.2	U				
1,1,1-TRICHLOROETHANE	5.7	U		5.7	U		6.2	U				
1,1,2,2-TETRACHLOROETHANE	5.7	U		5.7	U		6.2	U				
1,1,2-TRICHLOROETHANE	5.7	U		5.7	U		6.2	U				
1,1-DICHLOROETHANE	5.7	U		5.7	U		6.2	U				
1,1-DICHLOROETHENE	5.7	U		5.7	U		6.2	U				
1,2,3-TRICHLOROPROPANE	5.7	U		5.7	U		6.2	U				
1,2-DIBROMO-3-CHLOROPROPANE	11	U		11	U		12	U				
1,2-DIBROMOETHANE	5.7	U		5.7	U		6.2	U				
1,2-DICHLOROETHANE	5.7	U		5.7	U		6.2	U				
1,2-DICHLOROETHENE (TOTAL)	5.7	U		5.7	U		6.2	U				
1,2-DICHLOROPROPANE	5.7	U		5.7	U		6.2	U				
2-BUTANONE	1.6	J		23	U		25	U				
2-CHLOROETHYL VINYL ETHER	57	U		57	U		62	U				
2-HEXANONE	23	U		23	U		25	U				
4-METHYL-2-PENTANONE	23	U		23	U		25	U				
ACETONE	6	J		23	U		25	U				
ACETONITRILE	110	U		110	U		120	U				
ACROLEIN	110	U		110	U		120	U				
ACRYLONITRILE	110	U		110	U		120	U				
ALLYL CHLORIDE	11	U		11	U		12	U				
BENZENE	5.7	U		5.7	U		6.2	U				
BROMODICHLOROMETHANE	5.7	U		5.7	U		6.2	U				
BROMOFORM	5.7	U		5.7	U		6.2	U				
BROMOMETHANE	11	U		11	U		12	U				
CARBON DISULFIDE	5.7	U		5.7	U		6.2	U				
CARBON TETRACHLORIDE	5.7	U		5.7	U		6.2	U				
CHLOROBENZENE	5.7	U		5.7	U		6.2	U				
CHLOROETHANE	11	U		11	U		12	U				
CHLOROFORM	5.7	U		5.7	U		6.2	U				
CHLOROMETHANE	11	U		11	U		12	U				
CHLOROPRENE	5.7	U		5.7	U		6.2	U				
CIS-1,2-DICHLOROETHENE	2.9	U		2.9	U		3.1	U				
CIS-1,3-DICHLOROPROPENE	5.7	U		5.7	U		6.2	U				

CTO123-MS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05			351-SS-SB05-05			351-SS-SB07-05					
SAMPLE DATE:	05/24/00			05/24/00			05/24/00			/ /		
LABORATORY ID:	A0E260112001			A0E260112002			A0E260112003					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	95.8 %			91.0 %			93.5 %			100.0 %		
UNITS:	UG/KG			UG/KG			UG/KG					
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
DIBROMOCHLOROMETHANE	5.7	U		5.7	U		6.2	U				
DIBROMOMETHANE	5.7	U		5.7	U		6.2	U				
DICHLORODIFLUOROMETHANE	11	U		11	U		12	U				
ETHYL METHACRYLATE	5.7	U		5.7	U		6.2	U				
ETHYLBENZENE	5.7	U		5.7	U		6.2	U				
IODOMETHANE	5.7	U		5.7	U		6.2	U				
ISOBUTYL ALCOHOL	230	U		230	U		250	U				
METHACRYLONITRILE	5.7	U		5.7	U		6.2	U				
METHYL METHACRYLATE	5.7	U		5.7	U		6.2	U				
METHYL TERT-BUTYL ETHER	23	U		23	U		25	U				
METHYLENE CHLORIDE	1.3	J	A	1.3	J	A	0.89	J	A			
PROPIONITRILE	23	U		23	U		25	U				
STYRENE	5.7	U		5.7	U		6.2	U				
TETRACHLOROETHENE	5.7	U		5.7	U		6.2	U				
TOLUENE	5.7	U		5.7	U		6.2	U				
TRANS-1,2-DICHLOROETHENE	2.9	U		2.9	U		3.1	U				
TRANS-1,3-DICHLOROPROPENE	5.7	U		5.7	U		6.2	U				
TRANS-1,4-DICHLORO-2-BUTENE	5.7	U		5.7	U		6.2	U				
TRICHLOROETHENE	5.7	U		5.7	U		6.2	U				
TRICHLOROFLUOROMETHANE	11	U		11	U		12	U				
VINYL ACETATE	11	U		11	U		12	U				
VINYL CHLORIDE	11	U		11	U		12	U				
XYLENES, TOTAL	11	U		11	U		12	U				

CTO123-MS MAYPORT
TCLP DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05	425-1-SS-SB11-05	436-SS-SB01-05	
SAMPLE DATE:	05/24/00	05/24/00	05/24/00	/ /
LABORATORY ID:	A0E260112001	A0E260115001	A0E260115002	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	0.0 %	0.0 %	0.0 %	100.0 %
UNITS:	MG/L	MG/L	MG/L	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,2-DICHLOROETHANE	0.025	U		0.025	U		0.025	U				
BENZENE	0.025	U		0.025	U		0.025	U				
CARBON TETRACHLORIDE	0.025	U		0.025	U		0.025	U				
CHLOROBENZENE	0.025	U		0.025	U		0.025	U				
CHLOROFORM	0.025	U		0.025	U		0.025	U				
METHYL ETHYL KETONE	20	U		20	U		20	U				
VINYL CHLORIDE	0.05	U		0.05	U		0.05	U				

CTO123-NS MAYPORT
TCLP DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	425-1-SS-SB11-05	436-SS-SB01-05		
SAMPLE DATE:	05/24/00	05/24/00	/ /	/ /
LABORATORY ID:	A0E260115001	A0E260115002		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.0 %	0.0 %	100.0 %	100.0 %
UNITS:	MG/L	MG/L		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,4-DICHLOROBENZENE	0.05	U		0.05	U							
2,4,5-TRICHLOROPHENOL	0.05	U		0.05	U							
2,4,6-TRICHLOROPHENOL	0.05	U		0.05	U							
2,4-DINITROTOLUENE	0.05	U		0.05	U							
HEXACHLOROBENZENE	0.05	U		0.05	U							
HEXACHLOROBUTADIENE	0.05	U		0.05	U							
HEXACHLOROETHANE	0.05	U		0.05	U							
M & P-CRESOL	0.1	U		0.1	U							
NITROBENZENE	0.05	U		0.05	U							
O-CRESOL				0.05	U							
PENTACHLOROPHENOL	0.1	U		0.1	U							
PYRIDINE	0.1	U		0.1	U							

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05	351-SS-SB05-05	351-SS-SB07-05RE	
SAMPLE DATE:	05/24/00	05/24/00	05/24/00	/ /
LABORATORY ID:	A0E260112001	A0E260112002	A0E260112003	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	95.8 %	91.0 %	93.5 %	100.0 %
UNITS:	UG/KG	UG/KG	UG/KG	
FIELD DUPLICATE OF:				

SEMIVOLATILES	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
1,2,4,5-TETRACHLOROBENZENE	340	U		360	U		350	U				
1,2,4-TRICHLOROBENZENE	340	U		360	U		350	U				
1,2-DICHLOROBENZENE	340	U		360	U		350	U				
1,2-DIPHENYLHYDRAZINE	340	U		360	U		350	U				
1,3,5-TRINITROBENZENE	1700	U		1800	U		1700	U				
1,3-DICHLOROBENZENE	340	U		360	U		350	U				
1,3-DINITROBENZENE	340	U		360	U		350	U				
1,4-BENZENEDIAMINE	3400	U		3600	U		3500	U				
1,4-DICHLOROBENZENE	340	U		360	U		350	U				
1,4-DIOXANE	340	U		360	U		350	U				
1,4-NAPHTHOQUINONE	1700	U		1800	U		1700	U				
1-NAPHTHYLAMINE	340	U		360	U		350	U				
2,2'-OXYBIS(1-CHLOROPROPANE)	340	U		360	U		350	U				
2,3,4,6-TETRACHLOROPHENOL	1700	U		1800	U		1700	U				
2,4,5-TRICHLOROPHENOL	340	U		360	U		350	U				
2,4,6-TRICHLOROPHENOL	340	U		360	U		350	U				
2,4-DICHLOROPHENOL	340	U		360	U		350	U				
2,4-DIMETHYLPHENOL	340	U		360	U		350	U				
2,4-DINITROPHENOL	1700	U		1800	U		1700	U				
2,4-DINITROTOLUENE	340	U		360	U		350	U				
2,6-DICHLOROPHENOL	340	U		360	U		350	U				
2,6-DINITROTOLUENE	340	U		360	U		350	U				
2-ACETYLAMINOFLUORENE	3400	U		3600	U		3500	U				
2-CHLORONAPHTHALENE	340	U		360	U		350	U				
2-CHLOROPHENOL	340	U		360	U		350	U				
2-METHYLNAPHTHALENE	340	U		360	U		350	U				
2-METHYLPHENOL	340	U		360	U		350	U				
2-NAPHTHYLAMINE	340	U		360	U		350	U				
2-NITROANILINE	1700	U		1800	U		1700	U				
2-NITROPHENOL	340	U		360	U		350	U				
2-PICOLINE	690	U		730	U		710	U				
2-SEC-BUTYL-4,6-DINITROPHENOL	690	U		730	U		710	U				
3,3'-DICHLOROBENZIDINE	1700	U		1800	U		1700	U				
3,3'-DIMETHYLBENZIDINE	1700	U		1800	U		1700	U				

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05			351-SS-SB05-05			351-SS-SB07-05RE			/ /		
SAMPLE DATE:	05/24/00			05/24/00			05/24/00					
LABORATORY ID:	A0E260112001			A0E260112002			A0E260112003					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	95.8 %			91.0 %			93.5 %			100.0 %		
UNITS:	UG/KG			UG/KG			UG/KG					
FIELD DUPLICATE OF:												
SEMIVOLATILES	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
3-METHYLCHOLANTHRENE	690	U		730	U		710	U				
3-METHYLPHENOL	340	U		360	U		350	U				
3-NITROANILINE	1700	U		1800	U		1700	U				
4,6-DINITRO-2-METHYLPHENOL	1700	U		1800	U		1700	U				
4-AMINOBIPHENYL	1700	U		1800	U		1700	U				
4-BROMOPHENYL PHENYL ETHER	340	U		360	U		350	U				
4-CHLORO-3-METHYLPHENOL	340	U		360	U		350	U				
4-CHLOROANILINE	340	U		360	U		350	U				
4-CHLOROPHENYL PHENYL ETHER	340	U		360	U		350	U				
4-METHYLPHENOL	340	U		360	U		350	U				
4-NITROANILINE	1700	U		1800	U		1700	U				
4-NITROPHENOL	1700	U		1800	U		1700	U				
4-NITROQUINOLINE-1-OXIDE	3400	U		3600	U		3500	U				
5-NITRO-O-TOLUIDINE	690	U		730	U		710	U				
7,12-DIMETHYLBENZ(A)ANTHRACENE	690	U		730	U		710	U				
A,A-DIMETHYLPHENETHYLAMINE	1700	U		1800	U		1700	U				
ACENAPHTHENE	340	U		360	U		350	U				
ACENAPHTHYLENE	340	U		360	U		350	U				
ACETOPHENONE	340	U		360	U		350	U				
ANILINE	340	U		360	U		350	U				
ANTHRACENE	340	U		360	U		350	U				
ARAMITE	690	U		730	U		710	U				
BENZIDINE	3400	U		3600	U		3500	U				
BENZO(A)ANTHRACENE	340	U		360	U		350	U				
BENZO(A)PYRENE	340	U		360	U		350	U				
BENZO(B)FLUORANTHENE	340	U		360	U		350	U				
BENZO(G,H,I)PERYLENE	340	U		360	U		350	U				
BENZO(K)FLUORANTHENE	340	U		360	U		350	U				
BENZYL ALCOHOL	340	U		360	U		350	U				
BIS(2-CHLOROETHOXY)METHANE	340	U		360	U		350	U				
BIS(2-CHLOROETHYL)ETHER	340	U		360	U		350	U				
BIS(2-ETHYLHEXYL)PHTHALATE	340	U		360	U		350	U				
BUTYLBENZYL PHTHALATE	340	U		360	U		350	U				
CARBAZOLE	340	U		360	U		350	U				

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05	351-SS-SB05-05	351-SS-SB07-05RE	
SAMPLE DATE:	05/24/00	05/24/00	05/24/00	/ /
LABORATORY ID:	A0E260112001	A0E260112002	A0E260112003	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	95.8 %	91.0 %	93.5 %	100.0 %
UNITS:	UG/KG	UG/KG	UG/KG	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
CHLOROBENZILATE	340	U		360	U		350	U				
CHRYSENE	340	U		360	U		350	U				
DI-N-BUTYL PHTHALATE	340	U		360	U		350	U				
DI-N-OCTYL PHTHALATE	340	U		360	U		350	U				
DIALLATE	690	U		730	U		710	U				
DIBENZO(A,H)ANTHRACENE	340	U		360	U		350	U				
DIBENZOFURAN	340	U		360	U		350	U				
DIETHYL PHTHALATE	340	U		360	U		350	U				
DIMETHYL PHTHALATE	340	U		360	U		350	U				
DIPHENYLAMINE	340	U		360	U		350	U				
ETHYL METHANESULFONATE	340	U		360	U		350	U				
FLUORANTHENE	340	U		360	U		350	U				
FLUORENE	340	U		360	U		350	U				
HEXACHLOROBENZENE	340	U		360	U		350	U				
HEXACHLOROBUTADIENE	340	U		360	U		350	U				
HEXACHLOROCYCLOPENTADIENE	1700	U		1800	U		1700	U				
HEXACHLOROETHANE	340	U		360	U		350	U				
HEXACHLOROPROPENE	3400	U		3600	U		3500	U				
INDENO(1,2,3-CD)PYRENE	340	U		360	U		350	U				
ISOPHORONE	340	U		360	U		350	U				
ISOSAFROLE	690	U		730	U		710	U				
METHAPYRILENE	1700	U		1800	U		1700	U				
METHYL METHANESULFONATE	340	U		360	U		350	U				
N-NITROSO-DI-N-BUTYLAMINE	340	U		360	U		350	U				
N-NITROSO-DI-N-PROPYLAMINE	340	U		360	U		350	U				
N-NITROSODIETHYLAMINE	340	U		360	U		350	U				
N-NITROSODIMETHYLAMINE	340	U		360	U		350	U				
N-NITROSODIPHENYLAMINE	340	U		360	U		350	U				
N-NITROSOMETHYLETHYLAMINE	340	U		360	U		350	U				
N-NITROSOMORPHOLINE	340	U		360	U		350	U				
N-NITROSOPIPERIDINE	340	U		360	U		350	U				
N-NITROSOPYRROLIDINE	340	U		360	U		350	U				
NAPHTHALENE	340	U		360	U		350	U				
NITROBENZENE	340	U		360	U		350	U				

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05	351-SS-SB05-05	351-SS-SB07-05RE	
SAMPLE DATE:	05/24/00	05/24/00	05/24/00	/ /
LABORATORY ID:	A0E260112001	A0E260112002	A0E260112003	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	95.8 %	91.0 %	93.5 %	100.0 %
UNITS:	UG/KG	UG/KG	UG/KG	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
O-TOLUIDINE	690	U		730	U		710	U				
P-DIMETHYLAMINOAZOBENZENE	690	U		730	U		710	U				
PENTACHLOROBENZENE	340	U		360	U		350	U				
PENTACHLOROETHANE	1700	U		1800	U		1700	U				
PENTACHLORONITROBENZENE	1700	U		1800	U		1700	U				
PENTACHLOROPHENOL	1700	U		1800	U		1700	U				
PHENACETIN	690	U		730	U		710	U				
PHENANTHRENE	340	U		360	U		350	U				
PHENOL	340	U		360	U		350	U				
PRONAMIDE	690	U		730	U		710	U				
PYRENE	340	U		360	U		350	U				
PYRIDINE	690	U		730	U		710	U				
SAFROLE	690	U		730	U		710	U				

CTO123-NS MAYPORT
TCLP DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05	425-1-SS-SB11-05	436-SS-SB01-05	
SAMPLE DATE:	05/24/00	05/24/00	05/24/00	/ /
LABORATORY ID:	A0E260112001	A0E260115001	A0E260115002	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	0.0 %	0.0 %	0.0 %	100.0 %
UNITS:	UG/L	UG/L	UG/L	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	20	U		20	U		20	U				
2-METHYLNAPHTHALENE	20	U		20	U		20	U				
ACENAPHTHENE	10	U		10	U		10	U				
ACENAPHTHYLENE	10	U		10	U		10	U				
ANTHRACENE	~~7.8~~ 10	J UL	A	10	U		~~7.7~~ 10	J UL	A			
BENZO(A)ANTHRACENE	1	U		1	U		1	U				
BENZO(A)PYRENE	1	U		1	U		1	U				
BENZO(B)FLUORANTHENE	1	U		1	U		1	U				
BENZO(G,H,I)PERYLENE	1	U		1	U		1	U				
BENZO(K)FLUORANTHENE	3	U		3	U		3	U				
CHRYSENE	1	U		1	U		1	U				
DIBENZO(A,H)ANTHRACENE	1	U		1	U		1	U				
FLUORANTHENE	2	U		2	U		2	U				
FLUORENE	20	U		20	U		20	U				
INDENO(1,2,3-CD)PYRENE	1	U		1	U		1	U				
NAPHTHALENE	20	U		20	U		20	U				
PHENANTHRENE	10	U		10	U		10	U				
PYRENE	1	U		1	U		1	U				

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05	351-SS-SB05-05	351-SS-SB07-05	
SAMPLE DATE:	05/24/00	05/24/00	05/24/00	/ /
LABORATORY ID:	A0E260112001	A0E260112002	A0E260112003	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	95.8 %	91.0 %	93.5 %	100.0 %
UNITS:	UG/KG	UG/KG	UG/KG	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	52	U		55	U		53	U				
2-METHYLNAPHTHALENE	52	U		55	U		53	U				
ACENAPHTHENE	52	U		55	U		53	U				
ACENAPHTHYLENE	52	U		55	U		53	U				
ANTHRACENE	24	J	A	26	J	A	25	J	A			
BENZO(A)ANTHRACENE	5.2	U		5.5	U		5.3	U				
BENZO(A)PYRENE	5.2	U		5.5	U		5.3	U				
BENZO(B)FLUORANTHENE	5.2	U		5.5	U		5.3	U				
BENZO(G,H,I)PERYLENE	5.2	U		5.5	U		5.3	U				
BENZO(K)FLUORANTHENE	5.2	U		5.5	U		5.3	U				
CHRYSENE	5.2	U		5.5	U		5.3	U				
DIBENZO(A,H)ANTHRACENE	5.2	U		5.5	U		5.3	U				
FLUORANTHENE	5.2	U		5.5	U		6.9					
FLUORENE	52	U		55	U		53	U				
INDENO(1,2,3-CD)PYRENE	5.2	U		5.5	U		5.3	U				
NAPHTHALENE	52	U		55	U		53	U				
PHENANTHRENE	52	U		55	U		53	U				
PYRENE	5.2	U		5.5	U		5.3	U				

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05	351-SS-SB05-05	351-SS-SB07-05	
SAMPLE DATE:	05/24/00	05/24/00	05/24/00	/ /
LABORATORY ID:	A0E260112001	A0E260112002	A0E260112003	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	95.8 %	91.0 %	93.5 %	100.0 %
UNITS:	MG/KG	MG/KG	MG/KG	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TPH (C8-C40)	9.8	J		36			11	U				

CTO123-NS MAYPORT
TCLP DATA
QUANTERRA
SDG: MP008

SAMPLE NUMBER:	351-SS-SB02-05	425-1-SS-SB11-05	436-SS-SB01-05	/ /
SAMPLE DATE:	05/24/00	05/24/00	05/24/00	
LABORATORY ID:	A0E260112001	A0E260115001	A0E260115002	
QC_TYPE:	NORMAL	NORMAL	NORMAL	
% SOLIDS:	0.0 %	0.0 %	0.0 %	100.0 %
UNITS:	MG/L	MG/L	MG/L	
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TPH (C8-C40)	1.4	J	A	1.1	J	A	1.4	J	A			

APPENDIX B

Results as Reported by the Laboratory

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP008

Matrix: (soil/water) SO Lab Sample ID:A0E260115 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 1 / mL Date Received: 05/25/00
Work Order: DDR7X101 Date Extracted:06/02/00
Dilution factor: 1 Date Analyzed: 06/02/00
Moisture %:

QC Batch: 0157473

Client Sample Id: 425-1-SS-SB11-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.025	U
56-23-5	Carbon tetrachloride	0.025	U
108-90-7	Chlorobenzene	0.025	U
67-66-3	Chloroform	0.025	U
74-87-3	Chloromethane	0.050	U
107-06-2	1,2-Dichloroethane	0.025	U
74-83-9	Bromomethane	0.050	U
75-35-4	1,1-Dichloroethylene	0.070	U
78-93-3	Methyl ethyl ketone	20	U
127-18-4	Tetrachloroethylene	0.070	U
75-00-3	Chloroethane	0.050	U
79-01-6	Trichloroethylene	0.050	U
75-01-4	Vinyl chloride	0.050	U
75-09-2	Methylene chloride	0.0067	J
67-64-1	Acetone	0.026	J
75-15-0	Carbon disulfide	0.025	U
75-34-3	1,1-Dichloroethane	0.025	U
540-59-0	1,2-Dichloroethene (total)	0.025	U
71-55-6	1,1,1-Trichloroethane	0.025	U
75-27-4	Bromodichloromethane	0.025	U
78-87-5	1,2-Dichloropropane	0.025	U
10061-01-5	cis-1,3-Dichloropropene	0.025	U
124-48-1	Dibromochloromethane	0.025	U
79-00-5	1,1,2-Trichloroethane	0.025	U
10061-02-6	trans-1,3-Dichloropropene	0.025	U
75-25-2	Bromoform	0.025	U
108-10-1	4-Methyl-2-pentanone	0.0072	J
591-78-6	2-Hexanone	0.25	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP008

Matrix: (soil/water) SO Lab Sample ID:A0E260115 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 1 / mL Date Received: 05/25/00
Work Order: DDR7X101 Date Extracted:06/02/00
Dilution factor: 1 Date Analyzed: 06/02/00
Moisture %:

QC Batch: 0157473

Client Sample Id: 425-1-SS-SB11-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	0.025	U
108-88-3	Toluene	0.025	U
100-41-4	Ethylbenzene	0.025	U
100-42-5	Styrene	0.025	U
1330-20-7	Xylenes (total)	0.025	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
110-54-3	n-Hexane	5.0	U

FORM I

Cooler Receipt Form

STL Pittsburgh

P: Preserved

UP: Unpreserved

Sample ID	TMET PH<2	DMET PH<2	HG PH<2	NUT(1) PH<2	CN PH ≥12	OG TPHC PH<2	PHEN PH<2	SULF PH ≥12	TOC PH<2	TOX PH<2	VOA P/UP	hardness PH<2			

(1) "NUT" could include sample bottles for ammonia, chemical oxygen demand, nitrate/nitrite, TKN, or total phosphorus

Comments: _____

Cooler Number	Temperature	Bottle Type	Lot Number*
	20°		

* Please use an asterisk if bottle lot number was covered by the label.

[redacted]

Chain of Custody Record

Quanterra

OUK-4194

Client: TETRA TECH NUS	Project Manager: RICK OSANKO	Date: 5/24/00	Chain Of Custody Number: 14155
Address: 794 S. MILITARY TRAIL	Telephone Number (Area Code)/Fax Number: (954) 570-5885 / 570-5974	Lab Number:	Page ____ of ____
City: DEERFIELD BEACH; State: FL; Zip Code: 33442	Site Contact: GARY BRAGANZA		
Project Name: NS MAYPORT, CTO-122 + 123	Carrier/Waybill Number: FED-EX / 811289329463		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOC	SVOC	TRPH	PAH	FOC	LEACHABILITY
351-SB-SB02-05	5/24/00	12:00	SOIL				NONE		✓	✓	✓	✓		✓
351-SS-SB05-05	↓	15:00	↓				↓		✓	✓	✓	✓		
351-SS-SB07-05	↓	16:00	↓				↓		✓	✓	✓	✓	✓	
425-1-SS-SB11-05	↓	14:00	↓				↓							✓
436-SS-SB01-05	↓	13:00	↓				↓							✓

Special Instructions: temp = 5.1°C

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☑ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Turn Around Time Required: ☑ Normal ☐ Rush

QC Level: ☑ I. ☐ II. ☐ III.

Project Specific (Specify):

	Date	Time		Date	Time
1. Relinquished By: Gary Braganza	5/24/00	17:30	1. Received By: Jennifer Miller	5-25-00	10:15A
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL Northeastern

20

North Canton Facility

AOE 260112

Client: TetraTech Project: NS Marport Quote#: 33026
Cooler Received on: 5-25-00 Opened on: 5-25-00 by Jennifer Miller (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ Airborne ☐
Other:_____

Cooler ☑ Safe ☐ Foam Box ☐ Client Cooler ☐ Other:_____
Quanterra Shipper No#: 5584

1. Were custody seals on the outside of the cooler and intact? Yes ☐ No ☒
   If YES, Quantity_____ Location_____
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:
Peanuts ☐ Bubble Wrap ☑ Vermiculite ☐ Foam ☐ None ☐ Other :_____
6. Cooler temperature upon receipt 5.1 °C (see back of form for multiple coolers/temp)
METHOD: Temperature Vial ☑ Coolant ☐ Against Bottles ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☐ No ☒
8. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☒ No ☐
10. Were samples at the correct pH? Yes ☐ No ☐ NA ☒
11. Were correct bottles used for the tests indicated? Yes ☒ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
13. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐
Contacted PM _____ Date:_____ by:_____ via Voice Mail ☐ Verbal ☐ Other ☐
Concerning:_____

Check √	MACRO	MACRO
1. CHAIN OF CUSTODY		
√	SR1A	Samples were received under proper custody procedures and without discrepancies.
	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred_____
2. SAMPLE CONDITION		
	SR2A	Sample(s)_____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s)_____ were received in a broken container.
3. SAMPLE PRESERVATION		
√	SR3A	The temperature of the cooler was _____ ° C
	SR3C	Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving.
	SR3D	Sample(s) _____ were received incorrectly preserved and split off in sample receiving.
	SR3E	Samples (s)_____ were received incorrectly preserved and were unable to be analyzed.
	SR3F	Sample(s)_____ were received with bubble > 6 mm in diameter (cc: PM)
	N/A	See back for other anomalies

Quanterra ® Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

Revision #13. Date: 09/04/98
SOP: NC-SC-0005, Sample Receiving
n:\qaqc\narrativ\cooler.doc

Chain of Custody Record

Quanterra

OUA-4124

Client: TETRA TECH NUS	Project Manager: RICK OPSANKO	Date: 5/24/00	Chain Of Custody Number: 14155
Address: 794 S. MILITARY TRAIL	Telephone Number (Area Code)/Fax Number: (954) 570-5885 / 570-5974	Lab Number:	Page ____ of ____
City: DEERFIELD BEACH; State: FL; Zip Code: 33442	Site Contact: GARY BRAGANZA		
Project Name: NS MAYPORT, CTO-122 + 123	Carrier/Waybill Number: FED-EX / 811289329463		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOC	SVOC	TRPH	PAH	PCC	REACTIVITY
351-SB-SB02-05	5/24/00	12:00	SOIL				NONE		✓	✓	✓	✓		✓
351-SS-SB05-05	↓	15:00	↓				↓		✓	✓	✓	✓		
351-SS-SB07-05	↓	16:00	↓				↓		✓	✓	✓	✓	✓	
425-1-SS-SB11-05	↓	14:00	↓				↓							✓
436-SS-SB01-05	↓	13:00	↓				↓							✓

Special Instructions: temp 5.1°C

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months*

Turn Around Time Required: ☒ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify):

	Date	Time		Date	Time
1. Relinquished By: Gary Braganza	5/24/00	17:30	1. Received By: Jerry Miller	5-25-00	10:15A
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

21

North Canton Facility

ADE 260115

Client: TetraTech Project: NS Mayport Quote#: 33626
Cooler Received on: 5-25-00 Opened on: 5-25-00 by: Jennifer Miller (Signature)

Fedx [X] Client Drop Off [ ] UPS [ ] Airborne [ ]
Other: _____

Cooler [X] Safe [ ] Foam Box [ ] Client Cooler [ ] Other: _____
Quanterra Shipper No#: 5584

1. Were custody seals on the outside of the cooler and intact? Yes [ ] No [X]
   If YES, Quantity _____ Location _____
   Were the custody seals signed and dated? Yes [ ] No [ ] NA [X]
2. Shipper's packing slip attached to this form? Yes [X] No [ ]
3. Were custody papers included inside the cooler and relinquished? Yes [X] No [ ]
4. Did you sign the custody papers in the appropriate place? Yes [X] No [ ]
5. Packing material used:
Peanuts [ ] Bubble Wrap [X] Vermiculite [ ] Foam [ ] None [ ] Other: _____
6. Cooler temperature upon receipt 5.1 °C (see back of form for multiple coolers/temp)
METHOD: Temperature Vial [X] Coolant [ ] Against Bottles [ ]
COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] None [ ]
7. Were all the bottles sealed in separate plastic bags? Yes [ ] No [X]
8. Did all bottles arrive in good condition (Unbroken)? Yes [X] No [ ]
9. Did all bottle labels and tags agree with the custody papers? Yes [X] No [ ]
10. Were samples at the correct pH? Yes [ ] No [ ] NA [X]
11. Were correct bottles used for the tests indicated? Yes [X] No [ ]
12. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [ ] NA [X]
13. Was a sufficient amount of sample sent in each bottle? Yes [X] No [ ]
Contacted PM _____ Date: _____ by: _____ via Voice Mail [ ] Verbal [ ] Other [ ]
Concerning: _____

Check √	MACRO	MACRO
1. CHAIN OF CUSTODY		
√	SR1A	Samples were received under proper custody procedures and without discrepancies.
	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred _____
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
√	SR3A	The temperature of the cooler was _____ °C
	SR3C	Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving.
	SR3D	Sample(s) _____ were received incorrectly preserved and split off in sample receiving.
	SR3E	Samples (s) _____ were received incorrectly preserved and were unable to be analyzed.
	SR3F	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	N/A	See back for other anomalies

Quanterra ® Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

CASE NARRATIVE
GC/MS VOLATILES
MP008

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

Samples in this lot were preserved by freezing in water due to samples effervescing when preserved with sodium bisulfate.

Sample(s) which contain results between the MDL and the RL are flagged with "J". There is the possibility of false positive or misidentification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation will be performed only down to the standard reporting limit (SRL). The acceptance criteria for quality control criteria may not be met at these quantitation levels.

Holding Time Violation

All samples were prepared and analyzed within the method-specified holding time requirements.

Method Blank Contamination

Sample(s) which contain concentrations of target analyte(s) at a reportable level in the associated method blank(s) have been flagged with B. All target analytes in the method blank must be below the reporting limits (RL) or the associated sample(s) must be ND with the exception of Methylene chloride, Acetone, and 2-Butanone. These are common laboratory contaminants and may be present in concentrations up to five times the reporting limits.

MS/MSD/LCS/DCS and Surrogates Outside of QC Criteria

All spike recovery and RPD data met method-specific quality control criteria.

Calibrations

All calibrations and calibration verifications met method-specific quality control criteria.

UX8
Batch # _____

STL-North Canton
GC/MS VOA Run Log

Date: 5-13-00

Column	BFB	Analysis	Purge & Trap
Type: DB624	100 C for 0.1 min	65 C for 2 min	Trap: 10
Length 30 M	to 200 C @ 30 C/min	to 200 C @ 15 C/min	Purge: 11
I.D. 0.18 mm	Hold — min	to — C @ — C/min	Desorb: 1 min @ 180 C
Flow Rate 0.4 ml/min		Hold 3 min	Bake: 6 min @ 220 C

Autor num	Sample ID Workorder#	Method	File Name	Amt purged	Sample prep	Comments	Sample status	Level 2 Review
—	BFB		BFB8417	50ng	Direct Inj.	8007	ok	SJC
1	8260 STD		UX87806	1000ng	V7185, V7193 V7202, V7204		ok	
2			UX87807	500ng	V7195, V7196 V7260		ok	
3			UX87808	250ng		V00523-8	ok	
4			UX87809	100ng			ok	
5			UX87810	25ng			ok	
6	Extract		UX87811	250ng		V7185 AFEE	ok	
7			UX87812			V7187 CLP Alang		
8			UX87813			V7188 Acetone	ok	
9	A-H TR STD		UX87814	1000ng	V7189		R	
10			UX87815	500ng		Vial did not seal		
11			UX87816	250ng		V00523-8A9		
12			UX87817	100ng				
13			UX87818	25ng				

SJC 5-23-00

Analyst SAM

№ 068

N:\MSVOA\ux8 run log

Due: 5/29

UX8
Batch # _____

STL-North Canton
GC/MS VOA Run Log

Date: 6-1-00

Column	BFB	Analysis	Purge & Trap
Type: DB624	100 C for 0.1 min	45 C for 2 min	Trap: 10
Length 20 M	to 200 C @ 20 C/min	to 200 C @ 15 C/min	Purge: 11
I.D. 0.18 mm	Hold — min	to — C @ — C/min	Desorb: 1 min @ 150 C
Flow Rate 0.4 ml/min		Hold 3 min	Bake: 6 min @ 220 C

MLS/2HE's.

Auto num	Sample ID Workorder	Method	File Name	Amt purged	Sample prep	Comments	Sample status	Level 2 Review
—	BFB		BF68424	50ng	Direct Inj.	(1914)	ok	
1	8260 STD		UX87966	250ng		V00523-8	ok	
2	APPIX STD		UX87967			V00523-8A9	ok	
3	CHech		UX87968	250ng (5ml final)		AHEE	ok	
4	VBlk		UX87969	5ml final			ok	
5	DDL3C 10m	MLS	UX87970	1ml/5ml	0152364	m/p-xylene >1000ng	ok	AOE246104
6	DDMCH102		UX87971	30ml/5ml		724ng 1,3,4-TMB	ok	AOE240222
7	DDNHG101		UX87972			(ok) xylene-2733ng, toluene-599ng, TMB (R)	ok	AOE250121
8	DDM6T10C	VM (MLS)	UX87973	100ml/5ml	0152366	290ng PCE	ok	AOE240206
9	DDM72102		UX87974	40ml/5ml		660ng PCE	ok	
10	DDM7510C		UX87975	100ml/5ml		487ng PCE	ok	
11	DDM77102		UX87976			524ng PCE	ok	
12	DDM7810C		UX87977			752ng PCE	ok	
13	DDM7J102		UX87978			477ng PCE	ok	
14	DDGA4	TOX/MLS	UX87979	5ml/5ml		TIC >500ng	ok	AOE200102
15	~~DDGA2~~		UX87980	1/100* 10ml/5ml		(R) 10ml/5ml	(R)	
16	DE7DG102 2HEChek	2HE	UX87981	1ml/5ml	250ng	(0157473) AHEE	ok	
17	DE7DG103 2HEChek		UX87982				ok	
18	DE7DG101 2HE VBlk		UX87983				ok	
19	DDL3C101		UX87984	0.5ml/5ml		1ml	(R)	AOE240104
20	DDL5810 1		UX87985	1ml/5ml			ok	AOE240112
21	DDMQ110C		UX87986				ok	AOE240272
22	DDMQ1100	MS	UX87987		250ng	AHEE	ok	
23	DDMQ110E	MSD	UX87988				ok	
24	DDMQE10C		UX87989				ok	
25	DDNHG102		UX87990	0.5ml/5ml		Toluene >500ng	ok	AOE250121
26	DDR70106		UX87991	1ml/5ml			ok	AOE240112
27	DDR7X101		UX87992				ok	AOE240115
28	DDR83101		UX87993				ok	
29	DDR96101		UX87994				ok	AOE240119
30	DDVAK10C		UX87995				ok	AOE270103

Analyst: SAM

STL North Canton

№ 075

N:\MSVOA\ux8 run log

Due: 6/6

UX8 0158434 - LLW
Batch # 0157495 - LLS

STL-North Canton
GC/MS VOA Run Log

Date: 6-5-00

MS#: 0158213

Column	BFB	Analysis	Purge & Trap
Type: DB624	100 C for 0.1 min	45 C for 2 min	Trap: 10
Length 20 M	to 200 C @ 20 C/min	to 220 C @ 15 C/min	Purge: 11
I.D. 0.18 mm	Hold — min	to — C @ — C/min	Desorb: 1 min @ 190 C
Flow Rate 0.4 ml/min		Hold 3 min	Bake: 6 min @ 210 C

Ok MS/MO LLS

Autoinj num	Sample ID Workorder#	Method	File Name	Amt purged	Sample prep	Comments	Sample status	Level 2 Review
—	BFB		BF88427	50g	Direct Inj.	(1826) Single scan at apex	OK	
1	8260 STD		ux88027	250g		V00523-8	Ok	
2	MPB STD		ux88028			V00522-8A7	Ok	
3	DE746102	DE949102	ux88029	250g (5ml/5ml)		MFLEE	Ok	
4	DE749103 CHeck Blank		ux88030				Ok	
5	VBLK		ux88031	5ml/5ml		cis-1,2-DCE + TCE >5 - value	(R)	
6	DDK38101		ux88032	5.4ml/5ml		Check not cleaned.	(R)	
7	VBLK		ux88033	5ml/5ml			Ok	
8	DE746101	DE949101	ux88034	5ml/5ml			Ok	
9	DDK38101		ux88035	5.87ml/5ml			Ok	A0E230169
10	VBLK		ux88036	5ml/5ml			—	
11	MS CHeck	(9a) MS MS STD	ux88037	100ml/5ml		41-DCE↓	Ok	
12	MS CHeck Blank		ux88038				Ok	
13	MS VBLK		ux88039			TCE "J" ↓.	Ok	
14	DDWE8101	6.34	ux88040	100ml/5ml		(R) LLS		A0E300103
15	DDWC8101		ux88041	5ml/5ml			Ok	A0E300102
16	DEOF0101		ux88042	4ml/5ml			Ok	A0E310177
17	DEOF5101		ux88043	3ml/5ml			Ok	
18	DEOF6101		ux88044	5ml/5ml			Ok	
19	DEOF6102	MS	ux88045		250g	MFLEE	Ok	
20	DEOF6103	MSD	ux88046				Ok	
21	DE253101		ux88047				Ok	A0PO160182
22	DE259101		ux88048	6.7ml/5ml			Ok	
23	DE250101		ux88049	5ml/5ml			Ok	
24	DE25E101		ux88050				Ok	
25	DDR7X10E	TBX 8260 MS	ux88051	1ml/5ml	250g	0157473 MFLEE	Ok	A0E260115
26	DDR7X10F	MSD	ux88052				Ok	
27	DE522103		ux88053	5ml/5ml			OK	A0F020291
28	DE523103		ux88054				Ok	
29	DE524103		ux88055				Ok	
30	DE525101		ux88056				Ok	

STL North Canton Analyst: [illegible]

№ 078

N:\MSVOA\ux8 run log

UX9
Batch # _____

STL-North Canton
GC/MS VOA Run Log

NON-VAP

Date: 5-9-2000

Column	BFB	Analysis	Purge & Trap
Type: DB624 soil	100 C for 0.1 min	45 C for 2 min Heated	Trap: 10
Length 20 M	to 200 C @ 26 C/min	to 200 C @ 15 C/min	Purge: 11
I.D. 0.18 mm	Hold ✓ min	to — C @ — C/min	Desorb: 1 min @ 190 C
Flow Rate 0.4 ml/min		Hold 4 min	Bake: 6 min @ 210 C

Autonum	Sample ID Workorder#	Method	File Name	Amt purged	Sample prep	Comments	Sample status	Level 2 Review
	BFB		BFB063	50 ng	direct	injection (9:01)	OK	RA
1	Blank		UX91646	5 ml				
2	8260 std		UX91647	1000 ng			OK	
3			UX91648	500 ng	V7168		OK	
4			UX91649	250 ng	V7157 V7165	N00509-VAP N00509	OK	
5			UX91650	100 ng	V7155 V7153		OK	
6			UX91651	25 ng	V7158		OK	
7	App IX std		UX91652	1000 ng			OK	
8			UX91653	500 ng			OK	
9			UX91654	250 ng	V7163		OK	
10			UX91655	100 ng		N00509-A9 VAP N00509-A9	OK	
11			UX91656	25 ng			OK	
12	check/IOV		UX91657	250 ng			OK	
13	check-Acetone IOV		UX91658	250 ng		Acetone only	OK	

0065095K

STL North Canton
Analyst: SK

№ .051

N:\MSVOA\ux9 run log

UX9

Batch # QK 0152174

MS Run # 0152058

STL-North Canton

GC/MS VOA Run Log

(5/30)

Date: 5·30·00

MCM A02362

Column	BFB	Analysis	Purge & Trap
Type: DB624 50:1	100 C for 0.1 min	45 C for 2 min	Heated
Length 26 M	to 200 C @ 20 C/min	to 200 C @ 15 C/min	Trap: 10
I.D. 0.18 mm	Hold 1 min	to — C @ — C/min	Purge: 11
Flow Rate 0.4 ml/min		Hold 4 min	Desorb: 1 min @ 190 C
			Bake: 6 min @ 210 C

Autonum	Sample ID / Workorder	Method	File Name	Amt purged	Sample prep	Comments	Sample status	Review
	BFB		BF6081	50ng	direct	injection (11:32)	O/C	TS
1	8260std		UX92302	250ng		@ ~~N00509 Ag~~		
2	AppIXstd		UX92303	250ng		N00509-Ag	O/C	
3	8260std		UX92304	1000ng	U7220		O/C	
4			UX92305	500ng	U7213 U7209	N00530	O/C	
5			UX92306	250ng	U7210 U7211		OK	
6			UX92307	100ng	U7215 U7219		OK	
7			UX92308	25ng			OK	
8	check	ddxwH-102	UX92309	250ng		MEK failed	O/C	
9	Blank	ddxwH-401	UX92310	5.0g Sand			OK	
10	check		UX92311	250ng			OK	
11	check-Acetone		UX92312	250ng		Acetone only	O/C	
12	ddNPK-102	QK	UX92313	0.5g		not needed		
13	ddNPK302		UX92314	1.0g			OK	
14	ddP41-103	Ed	UX92315	5.0g		IS1557 (x2)		
15	ddP43-103		UX92316	5.0g		IS1 (x3)	OK	
16	ddP45-103		UX92317	5.0g		IS1 (x2)		
17	ddP47-103		UX92318	5.0g		IS1 (x2)		
18	ddP4M-103		UX92319	5.0g		IS1 1557 777 (x2)		
19	ddP43 10K		UX92320	5.0g	T250ng	IS1557	OK	
20	ddP43 10L		UX92321	5.0g	T250ng	IS1	OK	
21	ddM60-10C	MZ	UX92322	5.0g			OK	
22	ddM6A-102		UX92323	5.0g			OK	
23	ddM6L-10C		UX92324	5.0g		IS1557 (x2)		
24	ddM6N-102		UX92325	5.0g			OK	
25	ddM6Q-10C		UX92326	5.0g			OK	
26	ddM6V-10C		UX92327	5.0g			OK	
27	ddM6W-102		UX92328	5.0g			OK	
28	ddM6X-10C		UX92329	5.0g			OK	
29	ddM6T-10C		UX92330	0.5g		MLP		

Analyst: SK

STL North Canton

№ .065

N:\MSVOA\ux9 run log

UX9
Batch # 0159220

STL-North Canton
GC/MS VOA Run Log

(6/8)

Date: 6·6·00

Column	BFB	Analysis	Purge & Trap
Type: DB624 so: 1	100 C for 0.1 min	45 C for 2 min Heated	Trap: 10
Length 20 M	to 200 C @ 20 C/min	to 200 C @ 15 C/min	Purge: 11
I.D. 0.18 mm	Hold ✓ min	to — C @ — C/min	Desorb: 1 min @ 190 C
Flow Rate 0.4 ml/min		Hold 4 min	Bake: 6 min @ 210 C

Auto num	Sample ID Workorder#	Method	File Name	Amt purged	Sample prep	Comments	Sample status	Data Review
	BFB		BF6085	50 ng	direct injection (8:28)		OK	
1	8260 std		UX92443	250 ng		N00530	OK	
2	App IX std		UX92444	250 ng		N00509-19	OK	
3	check	dE9J0-102	UX92445	250 ng			OK	
4	check	dE9J0-103	UX92446	250 ng			OK	
5	Blank	dE9J0-101	UX92447	5.0 g/5 ml			OK	
6	dd P9W-101	Frozen Ed	UX92448	4.71 g			OK	
7	dd R70-102	Ed	UX92449	4.56 g			OK	
8	dd R76-102		UX92450	4.79 g			OK	
9	dd R7M-102		UX92451	4.33 g			OK	
10	dd WE6-101		UX92452	6.27 g		IS1557		
11	dd WE7-101		UX92453	5.78 g			OK	
12	dd WE9-101		UX92454	6.21 g			OK	
13	d E04V-102		UX92455	5.58 g			OK	
14	dE05A-102		UX92456	5.56 g			OK	
15	dE05d-102		UX92457	6.28 g			OK	
16	dE05F-102		UX92458	5.22 g			OK	
17	dE05H-102		UX92459	5.47 g			OK	
18	dE05K-102		UX92460	5.63 g			OK	
19	dE05L-102		UX92461	5.87 g			OK	
20	dE05M-102		UX92462	5.76 g			OK	
21	dE05N-102		UX92463	5.95 g			OK	
22	dE05P-102		UX92464	5.88 g			OK	
23	dE089-101	Ed	UX92465	4.46 g			OK	
24	dE08d-101		UX92466	5.84 g			OK	
25	dE08E-101		UX92467	5.57 g			OK	
26	dd WE6-101	Ed	UX92468	5.99 g			OK	
							0001	0750

25 0198
26 0112
30 0103
310148
310157

Analyst: SK

STL North Canton

№ 069

N:\MSVOA\ux9 run log

BLANK WORKORDER NO.

DE9J0101

SW846 8260B METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP008

Lab File ID: ux92447.d

Lot Number: A0E260112

Date Analyzed: 06/06/00

Time Analyzed: 10:25

Matrix: SOLID

Date Extracted:06/06/00

GC Column: DB 624 ID: .18

Extraction Method: 5035

Instrument ID: UX9

Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	351-SS-SB05-05	DDR7G102	ux92450.d	06/06/00	11:39
02	351-SS-SB07-05	DDR7M102	ux92451.d	06/06/00	12:04
03	351-SS-SB02-05	DDR70102	ux92449.d	06/06/00	11:15
04	CHECK SAMPLE	DE9J0102 C	ux92445.d	06/06/00	09:35
05	DUPLICATE CHECK	DE9J0103 L	ux92446.d	06/06/00	10:00
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COMMENTS:

FORM IV

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP008

Matrix: (soil/water) SOLID Lab Sample ID:A0F070000 220
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/25/00
Work Order: DE9J0101 Date Extracted:06/06/00
Dilution factor: 1 Date Analyzed: 06/06/00
Moisture %:NA

QC Batch: 0159220

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
67-64-1	Acetone	3.2	J
75-05-8	Acetonitrile	100	U
107-02-8	Acrolein	100	U
107-13-1	Acrylonitrile	100	U
71-43-2	Benzene	5.0	U
75-27-4	Bromodichloromethane	5.0	U
75-25-2	Bromoform	5.0	U
74-83-9	Bromomethane	10	U
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
126-99-8	Chloroprene	5.0	U
124-48-1	Dibromochloromethane	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
75-00-3	Chloroethane	10	U
110-75-8	2-Chloroethyl vinyl ether	50	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	10	U
107-05-1	Allyl chloride	10	U
74-95-3	Dibromomethane	5.0	U
110-57-6	trans-1,4-Dichloro-2-butene	5.0	U
75-71-8	Dichlorodifluoromethane	10	U
75-34-3	1,1-Dichloroethane	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
540-59-0	1,2-Dichloroethene (total)	5.0	U

FORM I

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP008

Matrix: (soil/water) SOLID Lab Sample ID:A0F070000 220
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/25/00
Work Order: DE9J0101 Date Extracted:06/06/00
Dilution factor: 1 Date Analyzed: 06/06/00
Moisture %:NA

QC Batch: 0159220

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
78-87-5	1,2-Dichloropropane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
100-41-4	Ethylbenzene	5.0	U
97-63-2	Ethyl methacrylate	5.0	U
75-69-4	Trichlorofluoromethane	10	U
591-78-6	2-Hexanone	20	U
74-88-4	Iodomethane	5.0	U
78-83-1	Isobutyl alcohol	200	U
126-98-7	Methacrylonitrile	5.0	U
75-09-2	Methylene chloride	0.74	J
80-62-6	Methyl methacrylate	5.0	U
107-12-0	Propionitrile	20	U
100-42-5	Styrene	5.0	U
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
108-88-3	Toluene	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
79-01-6	Trichloroethene	5.0	U
96-18-4	1,2,3-Trichloropropane	5.0	U
108-05-4	Vinyl acetate	10	U
75-01-4	Vinyl chloride	10	U
1330-20-7	Xylenes (total)	10	U
1634-04-4	Methyl tert-butyl ether	20	U
106-93-4	1,2-Dibromoethane (EDB)	5.0	U
78-93-3	2-Butanone (MEK)	1.2	J

FORM I

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP008

Matrix: (soil/water) SOLID Lab Sample ID:A0F070000 220
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g
Work Order: DE9J0101
Dilution factor: 1
Moisture %:NA

Date Received: 05/25/00
Date Extracted:06/06/00
Date Analyzed: 06/06/00

QC Batch: 0159220

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	20	U

FORM I

BLANK WORKORDER NO.

DE7DG101

SW846 8260B METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP008

Lab File ID: ux87983.d

Lot Number: A0E260115

Date Analyzed: 06/02/00

Time Analyzed: 02:21

Matrix: WATER

Date Extracted:06/02/00

GC Column: DB 624 ID: .18

Extraction Method: 1311/5030B

Instrument ID: UX8

Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	INTRA-LAB QC	DDMQ110C	ux87986.d	06/02/00	03:32
02	LAB MS/MSD	DDMQ110D S	ux87987.d	06/02/00	03:56
03	LAB MS/MSD	DDMQ110E D	ux87988.d	06/02/00	04:20
04	425-1-SS-SB11-05	DDR7X10E S	ux88051.d	06/06/00	04:20
05	425-1-SS-SB11-05	DDR7X10F D	ux88052.d	06/06/00	04:43
06	425-1-SS-SB11-05	DDR7X101	ux87992.d	06/02/00	05:56
07	436-SS-SB01-05	DDR83101	ux87993.d	06/02/00	06:19
08	CHECK SAMPLE	DE7DG102 C	ux87981.d	06/02/00	01:33
09	DUPLICATE CHECK	DE7DG103 L	ux87982.d	06/02/00	01:57
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COMMENTS:

FORM IV

SW846 8260B METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DE7DG101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP008

Lab File ID: ux87983.d

Lot Number: A0E260112

Date Analyzed: 06/02/00

Time Analyzed: 02:21

Matrix: WATER

Date Extracted:06/02/00

GC Column: DB 624 ID: .18

Extraction Method: 1311/5030B

Instrument ID: UX8

Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	INTRA-LAB QC	DDMQ110C	ux87986.d	06/02/00	03:32
02	LAB MS/MSD	DDMQ110D S	ux87987.d	06/02/00	03:56
03	LAB MS/MSD	DDMQ110E D	ux87988.d	06/02/00	04:20
04	LAB MS/MSD	DDR7X10E S	ux88051.d	06/06/00	04:20
05	LAB MS/MSD	DDR7X10F D	ux88052.d	06/06/00	04:43
06	INTRA-LAB QC	DDR7X101	ux87992.d	06/02/00	05:56
07	351-SS-SB02-05	DDR70106	ux87991.d	06/02/00	05:32
08	CHECK SAMPLE	DE7DG102 C	ux87981.d	06/02/00	01:33
09	DUPLICATE CHECK	DE7DG103 L	ux87982.d	06/02/00	01:57
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COMMENTS:

FORM IV

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP008

Matrix: (soil/water) WATER Lab Sample ID:A0F050000 473
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 1 / mL
Work Order: DE7DG101
Dilution factor: 1
Moisture %:NA

Date Received: 05/25/00
Date Extracted:06/02/00
Date Analyzed: 06/02/00

QC Batch: 0157473

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.025	U
56-23-5	Carbon tetrachloride	0.025	U
108-90-7	Chlorobenzene	0.025	U
67-66-3	Chloroform	0.025	U
107-06-2	1,2-Dichloroethane	0.025	U
75-35-4	1,1-Dichloroethylene	0.070	U
78-93-3	Methyl ethyl ketone	0.0085	J
127-18-4	Tetrachloroethylene	0.070	U
79-01-6	Trichloroethylene	0.050	U
75-01-4	Vinyl chloride	0.050	U

FORM I

CASE NARRATIVE
GC/MS SEMIVOLATILES
MP008

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

Holding Time Violation

All samples were prepared and analyzed within the method-specified holding time requirements.

Method Blank Contamination

All analytes in the method blank were less than the associated reporting limits.

MS/MSD/LCS/DCS and Surrogates Outside of QC Criteria

Sample 351-SS-SB05-05 had up to one surrogate recovery per fraction outside acceptance limits. However, since the recovery was greater than 10% and all associated QC met criteria, no corrective action was taken.

Calibrations

All calibrations and calibration verifications met method-specific quality control criteria.

SW846 8270C METHOD BLANK SUMMARY

BLANK WORKORDER NO.

DE5XT101

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP008

Lab File ID: de5xt101.

Lot Number: A0E260112

Date Analyzed: 06/12/00

Time Analyzed: 12:40

Matrix: SOLID

Date Extracted:06/05/00

GC Column: DB-5.625 ID: .32

Extraction Method: 3550B

Instrument ID: HP7

Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	351-SS-SB07-05	DDR7M203	ddr7m203.	06/09/00	15:45
02	LAB MS/MSD	DE3RL10A D	de3rl10a.	06/12/00	16:10
03	INTRA-LAB QC	DE3RL108	de3rl108.	06/12/00	14:59
04	LAB MS/MSD	DE3RL109 S	de3rl109.	06/12/00	15:35
05	CHECK SAMPLE	DE5XT102 C	de5xt102.	06/09/00	14:35
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COMMENTS:

FORM IV

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP008

Matrix: (soil/water) SOLID Lab Sample ID:A0F050000 106
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30 / g Date Received: 06/02/00
Work Order: DE5XT101 Date Extracted:06/05/00
Dilution factor: 1 Date Analyzed: 06/12/00
Moisture %:NA

QC Batch: 0157106

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	330	U
208-96-8	Acenaphthylene	330	U
98-86-2	Acetophenone	330	U
53-96-3	2-Acetylaminofluorene	3300	U
92-67-1	4-Aminobiphenyl	1600	U
62-53-3	Aniline	330	U
120-12-7	Anthracene	330	U
92-87-5	Benzidine	3300	U
56-55-3	Benzo(a)anthracene	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
191-24-2	Benzo(ghi)perylene	330	U
50-32-8	Benzo(a)pyrene	330	U
100-51-6	Benzyl alcohol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
111-44-4	bis(2-Chloroethyl) ether	330	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	330	U
117-81-7	bis(2-Ethylhexyl) phthalate	42	J
101-55-3	4-Bromophenyl phenyl ether	330	U
85-68-7	Butyl benzyl phthalate	330	U
106-47-8	4-Chloroaniline	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-58-7	2-Chloronaphthalene	330	U
95-57-8	2-Chlorophenol	330	U
7005-72-3	4-Chlorophenyl phenyl ether	330	U
218-01-9	Chrysene	330	U
2303-16-4	Diallate	660	U
53-70-3	Dibenz(a,h)anthracene	330	U

FORM I

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP008

Matrix: (soil/water) SOLID Lab Sample ID:A0F050000 106
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30 / g Date Received: 06/02/00
Work Order: DE5XT101 Date Extracted:06/05/00
Dilution factor: 1 Date Analyzed: 06/12/00
Moisture %:NA

QC Batch: 0157106

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
132-64-9	Dibenzofuran	330	U
84-74-2	Di-n-butyl phthalate	330	U
95-50-1	1,2-Dichlorobenzene	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
120-83-2	2,4-Dichlorophenol	330	U
87-65-0	2,6-Dichlorophenol	330	U
84-66-2	Diethyl phthalate	330	U
60-11-7	p-Dimethylaminoazobenzene	660	U
57-97-6	7,12-Dimethylbenz(a)anthrace	660	U
119-93-7	3,3'-Dimethylbenzidine	1600	U
105-67-9	2,4-Dimethylphenol	330	U
131-11-3	Dimethyl phthalate	330	U
117-84-0	Di-n-octyl phthalate	330	U
99-65-0	1,3-Dinitrobenzene	330	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
51-28-5	2,4-Dinitrophenol	1600	U
121-14-2	2,4-Dinitrotoluene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	660	U
123-91-1	1,4-Dioxane	330	U
122-39-4	Diphenylamine	330	U
122-66-7	1,2-Diphenylhydrazine	330	U
62-50-0	Ethyl methanesulfonate	330	U
206-44-0	Fluoranthene	330	U
86-73-7	Fluorene	330	U
118-74-1	Hexachlorobenzene	330	U

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP008

Matrix: (soil/water) SOLID Lab Sample ID:A0F050000 106
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30 / g Date Received: 06/02/00
Work Order: DE5XT101 Date Extracted:06/05/00
Dilution factor: 1 Date Analyzed: 06/12/00
Moisture %:NA

QC Batch: 0157106

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
87-68-3	Hexachlorobutadiene	330	U
77-47-4	Hexachlorocyclopentadiene	1600	U
67-72-1	Hexachloroethane	330	U
1888-71-7	Hexachloropropene	3300	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
78-59-1	Isophorone	330	U
120-58-1	Isosafrole	660	U
91-80-5	Methapyrilene	1600	U
95-53-4	o-Toluidine	660	U
56-49-5	3-Methylcholanthrene	660	U
66-27-3	Methyl methanesulfonate	330	U
91-57-6	2-Methylnaphthalene	330	U
95-48-7	2-Methylphenol	330	U
108-39-4	3-Methylphenol	330	U
106-44-5	4-Methylphenol	330	U
91-20-3	Naphthalene	330	U
130-15-4	1,4-Naphthoquinone	1600	U
134-32-7	1-Naphthylamine	330	U
91-59-8	2-Naphthylamine	330	U
88-74-4	2-Nitroaniline	1600	U
99-09-2	3-Nitroaniline	1600	U
100-01-6	4-Nitroaniline	1600	U
98-95-3	Nitrobenzene	330	U
88-75-5	2-Nitrophenol	330	U
100-02-7	4-Nitrophenol	1600	U
56-57-5	4-Nitroquinoline-1-oxide	3300	U
924-16-3	N-Nitrosodi-n-butylamine	330	U
55-18-5	N-Nitrosodiethylamine	330	U

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP008

Matrix: (soil/water) SOLID Lab Sample ID:A0F050000 106
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30 / g Date Received: 06/02/00
Work Order: DE5XT101 Date Extracted:06/05/00
Dilution factor: 1 Date Analyzed: 06/12/00
Moisture %:NA

QC Batch: 0157106

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
62-75-9	N-Nitrosodimethylamine	330	U
621-64-7	N-Nitrosodi-n-propylamine	330	U
86-30-6	N-Nitrosodiphenylamine	330	U
10595-95-6	N-Nitrosomethylethylamine	330	U
59-89-2	N-Nitrosomorpholine	330	U
100-75-4	N-Nitrosopiperidine	330	U
930-55-2	N-Nitrosopyrrolidine	330	U
99-55-8	5-Nitro-o-toluidine	660	U
608-93-5	Pentachlorobenzene	330	U
76-01-7	Pentachloroethane	1600	U
82-68-8	Pentachloronitrobenzene	1600	U
87-86-5	Pentachlorophenol	1600	U
62-44-2	Phenacetin	660	U
85-01-8	Phenanthrene	330	U
108-95-2	Phenol	330	U
106-50-3	p-Phenylene diamine	3300	U
109-06-8	2-Picoline	660	U
23950-58-5	Pronamide	660	U
129-00-0	Pyrene	330	U
110-86-1	Pyridine	660	U
94-59-7	Safrole	660	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U
58-90-2	2,3,4,6-Tetrachlorophenol	1600	U
120-82-1	1,2,4-Trichlorobenzene	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
99-35-4	1,3,5-Trinitrobenzene	1600	U
86-74-8	Carbazole	330	U

FORM I

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP008

Matrix: (soil/water) SOLID Lab Sample ID:A0F050000 106
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30 / g Date Received: 06/02/00
Work Order: DE5XT101 Date Extracted:06/05/00
Dilution factor: 1 Date Analyzed: 06/12/00
Moisture %:NA

QC Batch: 0157106

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
510-15-6	Chlorobenzilate	330	U
122-09-8	a,a-Dimethylphenethylamine	1600	U
140-57-8	Aramite	660	U

FORM I

Tetra Tech NUS, Inc. Internal Correspondence

TO: Mr. Rick Ofsanko DATE: July 18, 2000

FROM: William Howard Engle CC: File

SUBJECT: Organic Data Validation – VOA, SVOA, PAH, and TRPH
CTO123 – NS Mayport
SDG MP007

SAMPLES: 9/Soils

358-SS-SB01-04	4252-SS-SB04-05	436-SS-SB09-05
358-SS-SB04-04	4252-SS-SB11-05	
358-SS-SB05-04	436-SS-SB01-05	
4252-SS-SB02-05	436-SS-SB04-05	

2/Leachates

358-SS-SB05-04-L
436-SS-SB01-05-L

OVERVIEW

The sample set for CTO123, SDG MP007; Naval Station Mayport, Jacksonville, Florida consists of nine (9) soil environmental samples and two (2) leachates. The soil samples were analyzed for volatile (VOA), semivolatile (SVOA), polynuclear aromatic hydrocarbon (PAH), and total residual petroleum hydrocarbon organic compounds. The leachate samples were analyzed for TCLP VOAs, SVOAs, and PAHs.

The samples were collected by Tetra Tech NUS from May 2-4, 2000 and analyzed by STL-North Canton Laboratory (formerly Quanterra). All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8260B, 8270C, 8310, and FL-PRO analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

- * Data Completeness
- * Holding Times
- * Initial/continuing calibrations
- Laboratory method blank results
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Supporting documentation is presented in Appendix C. Qualified analytical results are presented in Appendix A. The original laboratory data is contained in Appendix B.

Volatile Fraction

Sample 4252-SS-SB11-05 was reported on a wet-weight basis due to insufficient sample.

The following compounds were outside of the control limits for the LCS/LCSD analysis affecting the soil samples:

Compound	LCS/LCSD	Percent Recovery	Control Limit	Batch
acetone	LCS	151%	80 – 120%	0136257
2-hexanone	LCS	146%	87 – 129%	0136257
acetone	LCSD	154%	80 – 120%	0136257
2-hexanone	LCSD	148%	87 – 129%	0136257
styrene	LCSD	102%	79 – 100%	0136257
chloroethane	LCS	118%	82 – 114%	0133230
acetone	LCS	188%	80 – 120%	0133230
2-hexanone	LCS	150%	87 – 129%	0133230
chloroethane	LCSD	116%	82 – 114%	0133230
acetone	LCSD	182%	80 – 120%	0133230
2-hexanone	LCSD	147%	87 – 129%	0133230
chloroethane	LCS	121%	82 – 114%	0138243
acetone	LCS	72%	80 – 120%	0138243

No validation action was taken on this basis.

The following compounds were outside of the control limits for the MS/MSD analysis affecting the leachate samples:

Compound	MS/MSD	Percent Recovery	Control Limit	Batch
styrene	MS	128%	79 – 110%	0136257
styrene	MSD	71%	79 – 110%	0136257
xylenes	MS	72%	83 – 129%	0136257
xylenes	MSD	71%	83 – 129%	0136257
chloroethane	MS	128%	79 – 110%	0138243
chloroethane	MSD	125%	79 – 110%	0138243
MiBK	MSD	89%	90 – 125%	0138243

No validation action was taken on this basis.

Laboratory Blank Analysis

Affected samples: all

Compound	Maximum Concentration (ug/L)	Action Level(ug/kg)
acetone	2.4	24
methylene chloride	0.40	4.0
2-butanone	1.3	13

An action level of 10x the maximum concentration has been used to evaluate the sample for contamination in continuing calibration blanks. Dilution factors and sample aliquots were taken into consideration when evaluating blank contamination. Positive results < the action level for 2-butanone and methylene chloride were qualified as nondetects (U) as a result of blank contamination.

Semivolatile Fraction

All quality control parameters were met for this fraction.

Polynuclear Aromatic Hydrocarbon Fraction

The following compounds were outside of the control limits for the MS/MSD analysis:

Compound	MS/MSD	Percent Recovery	Control Limit	Batch
Naphthalene	MSD	26%	28 – 116%	0130193

No validation action was taken on this basis

The following compounds were outside of the control limits for relative percent deviation for the MS/MSD analysis:

Compound	Relative Percent Deviation	Control Limit	Batch
1-methylnaphthalene	28%	< 27%	0130193
chrysene	34%	< 27%	0130193
naphthalene	72%	<26%	0130193

No validation action was taken on this basis.

Total Residual Petroleum Hydrocarbon Fraction

Laboratory Blank Analysis

Affected samples: leachate samples

Compound	Maximum Concentration (mg/L)	Action Level(mg/L)
TRPH	3.0	15

An action level of 5x the maximum concentration has been used to evaluate the sample for contamination in continuing calibration blanks. Dilution factors and sample aliquots were taken into consideration when evaluating blank contamination. Positive results < the action level for TRPH in the affected samples were qualified as nondetects (U) as a result of blank contamination.

All other quality control criteria were met for this parameter.

Executive Summary

Laboratory performance: Several LCS/LCSD analyses had results outside of the control limits. No action was taken. Several MS/MSD analyses had results outside of the control limits. Several compounds were present in the method blanks.

Other factors affecting data quality: None.

Notes

Positive results less than the reporting limits were qualified as estimated "J".

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (October, 1999), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

William Howard Engle

Project Chemist
Tetra Tech NUS, Inc.

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech NUS, Inc.

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B – Results as reported by the laboratory
3. Appendix C – Supporting Documentation

MP007

HOLDING TIME
06/06/00

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
UG/KG	358-SS-SB01-04	A0E050174002	NORMAL	MP007	APIXS	05/04/00	05/09/00	05/15/00	5	6	11
UG/KG	358-SS-SB04-04	A0E050174003	NORMAL	MP007	APIXS	05/04/00	05/09/00	05/15/00	5	6	11
UG/KG	358-SS-SB05-04	A0E050174004	NORMAL	MP007	APIXS	05/04/00	05/09/00	05/15/00	5	6	11
UG/KG	4252-SS-SB02-05	A0E030194001	NORMAL	MP007	APIXS	05/02/00	05/09/00	05/15/00	7	6	13
UG/KG	4252-SS-SB04-05	A0E030194002	NORMAL	MP007	APIXS	05/02/00	05/09/00	05/15/00	7	6	13
UG/KG	4252-SS-SB11-05	A0E030194003	NORMAL	MP007	APIXS	05/02/00	05/09/00	05/15/00	7	6	13
UG/KG	436-SS-SB01-05	A0E040160002	NORMAL	MP007	APIXS	05/03/00	05/09/00	05/15/00	6	6	12
UG/KG	436-SS-SB04-05	A0E040160003	NORMAL	MP007	APIXS	05/03/00	05/09/00	05/15/00	6	6	12
UG/KG	436-SS-SB09-05	A0E040160004	NORMAL	MP007	APIXS	05/03/00	05/09/00	05/15/00	6	6	12
UG/KG	358-SS-SB01-04	A0E050174002	NORMAL	MP007	APIXV	05/04/00	05/12/00	05/12/00	8	0	8
UG/KG	358-SS-SB04-04	A0E050174003	NORMAL	MP007	APIXV	05/04/00	05/12/00	05/12/00	8	0	8
UG/KG	358-SS-SB05-04	A0E050174004	NORMAL	MP007	APIXV	05/04/00	05/12/00	05/12/00	8	0	8
UG/KG	4252-SS-SB02-05	A0E030194001	NORMAL	MP007	APIXV	05/02/00	05/11/00	05/11/00	9	0	9
UG/KG	4252-SS-SB04-05	A0E030194002	NORMAL	MP007	APIXV	05/02/00	05/11/00	05/11/00	9	0	9
UG/KG	4252-SS-SB11-05	A0E050174001	NORMAL	MP007	APIXV	05/02/00	05/12/00	05/12/00	10	0	10
UG/KG	436-SS-SB01-05	A0E040160002	NORMAL	MP007	APIXV	05/03/00	05/11/00	05/11/00	8	0	8
UG/KG	436-SS-SB04-05	A0E040160003	NORMAL	MP007	APIXV	05/03/00	05/11/00	05/11/00	8	0	8
UG/KG	436-SS-SB09-05	A0E040160004	NORMAL	MP007	APIXV	05/03/00	05/11/00	05/11/00	8	0	8
MG/KG	4252-SS-SB02-05	A0E030194001	NORMAL	MP007	M	05/02/00	05/15/00	05/16/00	13	1	14
MG/KG	4252-SS-SB04-05	A0E030194002	NORMAL	MP007	M	05/02/00	05/15/00	05/16/00	13	1	14
MG/KG	4252-SS-SB11-05	A0E030194003	NORMAL	MP007	M	05/02/00	05/15/00	05/16/00	13	1	14
MG/KG	436-SS-SB01-05	A0E040160002	NORMAL	MP007	M	05/03/00	05/15/00	05/16/00	12	1	13
MG/KG	436-SS-SB04-05	A0E040160003	NORMAL	MP007	M	05/03/00	05/15/00	05/16/00	12	1	13
MG/KG	436-SS-SB09-05	A0E040160004	NORMAL	MP007	M	05/03/00	05/15/00	05/16/00	12	1	13
UG/KG	358-SS-SB01-04	A0E050174002	NORMAL	MP007	PAH	05/04/00	05/09/00	05/11/00	5	2	7

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
UG/KG	358-SS-SB04-04	A0E050174003	NORMAL	MP007	PAH	05/04/00	05/09/00	05/11/00	5	2	7
UG/KG	358-SS-SB05-04	A0E050174004	NORMAL	MP007	PAH	05/04/00	05/09/00	05/11/00	5	2	7
UG/KG	4252-SS-SB02-05	A0E030194001	NORMAL	MP007	PAH	05/02/00	05/09/00	05/11/00	7	2	9
UG/KG	4252-SS-SB04-05	A0E030194002	NORMAL	MP007	PAH	05/02/00	05/09/00	05/13/00	7	4	11
UG/KG	4252-SS-SB11-05	A0E030194003	NORMAL	MP007	PAH	05/04/00	05/09/00	05/13/00	5	4	9
UG/KG	436-SS-SB01-05	A0E040160002	NORMAL	MP007	PAH	05/03/00	05/09/00	05/11/00	6	2	8
UG/KG	436-SS-SB04-05	A0E040160003	NORMAL	MP007	PAH	05/03/00	05/09/00	05/11/00	6	2	8
UG/KG	436-SS-SB09-05	A0E040160004	NORMAL	MP007	PAH	05/03/00	05/09/00	05/11/00	6	2	8
UG/L	358-SS-SB05-04	A0E050174004	NORMAL	MP007	TCLPM	05/04/00	05/15/00	05/16/00	11	1	12
UG/L	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TCLPM	05/03/00	05/15/00	05/16/00	12	1	13
MG/L	358-SS-SB05-04	A0E050174004	NORMAL	MP007	TCLPS	05/04/00	05/15/00	05/16/00	11	1	12
MG/L	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TCLPS	05/03/00	05/15/00	05/16/00	12	1	13
MG/L	358-SS-SB05-04	A0E050174004	NORMAL	MP007	TCLPT	05/04/00	05/16/00	05/24/00	12	8	20
MG/L	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TCLPT	05/03/00	05/16/00	05/24/00	13	8	21
MG/L	358-SS-SB05-04	A0E050174004	NORMAL	MP007	TCLPV	05/04/00	05/19/00	05/19/00	15	0	15
MG/L	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TCLPV	05/03/00	05/19/00	05/19/00	16	0	16
%	358-SS-SB04-04	A0E050174003	NORMAL	MP007	TOC	05/04/00	05/22/00	05/23/00	18	1	19
%	4252-SS-SB11-05	A0E030194003	NORMAL	MP007	TOC	05/02/00	05/22/00	05/23/00	20	1	21
%	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TOC	05/03/00	05/22/00	05/23/00	19	1	20
MG/KG	358-SS-SB01-04	A0E050174002	NORMAL	MP007	TPH	05/04/00	05/09/00	05/11/00	5	2	7
MG/KG	358-SS-SB04-04	A0E050174003	NORMAL	MP007	TPH	05/04/00	05/09/00	05/11/00	5	2	7
MG/KG	358-SS-SB05-04	A0E050174004	NORMAL	MP007	TPH	05/04/00	05/09/00	05/11/00	5	2	7
MG/KG	4252-SS-SB02-05	A0E030194001	NORMAL	MP007	TPH	05/02/00	05/09/00	05/10/00	7	1	8
MG/KG	4252-SS-SB04-05	A0E030194002	NORMAL	MP007	TPH	05/02/00	05/09/00	05/10/00	7	1	8
MG/KG	4252-SS-SB11-05	A0E030194003	NORMAL	MP007	TPH	05/04/00	05/09/00	05/11/00	5	2	7
MG/KG	436-SS-SB01-05	A0E040160002	NORMAL	MP007	TPH	05/03/00	05/09/00	05/11/00	6	2	8
MG/KG	436-SS-SB04-05	A0E040160003	NORMAL	MP007	TPH	05/03/00	05/09/00	05/11/00	6	2	8

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
MG/KG	436-SS-SB09-05	A0E040160004	NORMAL	MP007	TPH	05/03/00	05/09/00	05/11/00	6	2	8

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	358-SS-SB01-04			358-SS-SB04-04			358-SS-SB05-04			4252-SS-SB02-05		
SAMPLE DATE:	05/04/00			05/04/00			05/04/00			05/02/00		
LABORATORY ID:	A0E050174002			A0E050174003			A0E050174004			A0E030194001		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	87.0 %			91.3 %			82.0 %			92.9 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1,2-TETRACHLOROETHANE	7.4	U		7.1	U		7	U		7	U	
1,1,1-TRICHLOROETHANE	7.4	U		7.1	U		7	U		7	U	
1,1,2,2-TETRACHLOROETHANE	7.4	U		7.1	U		7	U		7	U	
1,1,2-TRICHLOROETHANE	7.4	U		7.1	U		7	U		7	U	
1,1-DICHLOROETHANE	7.4	U		7.1	U		7	U		7	U	
1,1-DICHLOROETHENE	7.4	U		1.9	J	P	2.3	J	P	2.9	J	P
1,2,3-TRICHLOROPROPANE	7.4	U		7.1	U		7	U		7	U	
1,2-DIBROMO-3-CHLOROPROPANE	15	U		14	U		14	U		14	U	
1,2-DIBROMOETHANE	7.4	U		7.1	U		7	U		7	U	
1,2-DICHLOROETHANE	7.4	U		7.1	U		7	U		7	U	
1,2-DICHLOROETHENE (TOTAL)	7.4	U		7.1	U		7	U		7	U	
1,2-DICHLOROPROPANE	7.4	U		7.1	U		7	U		7	U	
2-BUTANONE	30	U		28	U		28	U		7	U	A
2-CHLOROETHYL VINYL ETHER	74	U		71	U		70	U		70	U	
2-HEXANONE	30	U		28	U		28	U		28	U	
4-METHYL-2-PENTANONE	30	U		28	U		28	U		2.8	J	P
ACETONE	30	U		28	U		28	U		28	U	A
ACETONITRILE	150	U		140	U		140	U		140	U	
ACROLEIN	150	U		140	U		140	U		140	U	
ACRYLONITRILE	150	U		140	U		140	U		140	U	
ALLYL CHLORIDE	15	U		14	U		14	U		14	U	
BENZENE	7.4	U		7.1	U		7	U		7	U	
BROMODICHLOROMETHANE	7.4	U		7.1	U		7	U		7	U	
BROMOFORM	7.4	U		7.1	U		7	U		7	U	
BROMOMETHANE	15	U		14	U		14	U		14	U	
CARBON DISULFIDE	7.4	U		7.1	U		7	U		7	U	
CARBON TETRACHLORIDE	7.4	U		7.1	U		7	U		7	U	
CHLOROBENZENE	7.4	U		7.1	U		7	U		7	U	
CHLOROETHANE	15	U		14	U		14	U		14	U	
CHLOROFORM	7.4	U		7.1	U		7	U		7	U	
CHLOROMETHANE	15	U		14	U		14	U		14	U	
CHLOROPRENE	7.4	U		7.1	U		7	U		7	U	
CIS-1,2-DICHLOROETHENE	3.7	U		3.5	U		3.5	U		3.5	U	
CIS-1,3-DICHLOROPROPENE	7.4	U		7.1	U		7	U		7	U	

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	358-SS-SB01-04			358-SS-SB04-04			358-SS-SB05-04			4252-SS-SB02-05		
SAMPLE DATE:	05/04/00			05/04/00			05/04/00			05/02/00		
LABORATORY ID:	A0E050174002			A0E050174003			A0E050174004			A0E030194001		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	87.0 %			91.3 %			82.0 %			92.9 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
DIBROMOCHLOROMETHANE	7.4	U		7.1	U		7	U		7	U	
DIBROMOMETHANE	7.4	U		7.1	U		7	U		7	U	
DICHLORODIFLUOROMETHANE	15	U		14	U		14	U		14	U	
ETHYL METHACRYLATE	7.4	U		7.1	U		7	U		7	U	
ETHYLBENZENE	7.4	U		7.1	U		7	U		0.46	J	P
IODOMETHANE	7.4	U		7.1	U		7	U		7	U	
ISOBUTYL ALCOHOL	300	U		280	U		280	U		280	U	
METHACRYLONITRILE	7.4	U		7.1	U		7	U		7	U	
METHYL METHACRYLATE	7.4	U		7.1	U		7	U		7	U	
METHYL TERT-BUTYL ETHER	30	U		28	U		28	U				
METHYLENE CHLORIDE	7.4	U		7.1	U		7	U		7	U	A
PROPIONITRILE	30	U		28	U		28	U		28	U	
STYRENE	7.4	U		7.1	U		7	U		7	U	
TETRACHLOROETHENE	7.4	U		7.1	U		7	U		7	U	
TOLUENE	0.65	J	P	0.54	J	P	7	U		0.64	J	P
TRANS-1,2-DICHLOROETHENE	3.7	U		3.5	U		3.5	U		3.5	U	
TRANS-1,3-DICHLOROPROPENE	7.4	U		7.1	U		7	U		7	U	
TRANS-1,4-DICHLORO-2-BUTENE	7.4	U		7.1	U		7	U		7	U	
TRICHLOROETHENE	7.4	U		7.1	U		7	U		7	U	
TRICHLOROFLUOROMETHANE	15	U		14	U		14	U		14	U	
VINYL ACETATE	15	U		14	U		14	U		14	U	
VINYL CHLORIDE	15	U		14	U		14	U		14	U	
XYLENES, TOTAL	15	U		14	U		14	U		1.7	J	P

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	4252-SS-SB04-05			4252-SS-SB11-05			436-SS-SB01-05			436-SS-SB04-05		
SAMPLE DATE:	05/02/00			05/04/00			05/03/00			05/03/00		
LABORATORY ID:	A0E030194002			A0E050174001			A0E040160002			A0E040160003		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	90.2 %			100.0 %			95.9 %			94.9 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
1,1,1,2-TETRACHLOROETHANE	7	U		13	U		6.3	U		6.1	U	
1,1,1-TRICHLOROETHANE	7	U		13	U		6.3	U		6.1	U	
1,1,2,2-TETRACHLOROETHANE	7	U		13	U		6.3	U		6.1	U	
1,1,2-TRICHLOROETHANE	7	U		13	U		6.3	U		6.1	U	
1,1-DICHLOROETHANE	7	U		13	U		6.3	U		6.1	U	
1,1-DICHLOROETHENE	7	U		13	U		1	J	P	6.1	U	
1,2,3-TRICHLOROPROPANE	7	U		13	U		6.3	U		6.1	U	
1,2-DIBROMO-3-CHLOROPROPANE	14	U		26	U		13	U		12	U	
1,2-DIBROMOETHANE	7	U		13	U		6.3	U		6.1	U	
1,2-DICHLOROETHANE	7	U		13	U		6.3	U		6.1	U	
1,2-DICHLOROETHENE (TOTAL)	7	U		13	U		6.3	U		6.1	U	
1,2-DICHLOROPROPANE	7	U		13	U		6.3	U		6.1	U	
2-BUTANONE	28	U		52	U		25	U		6.1	U	A
2-CHLOROETHYL VINYL ETHER	70	U		130	U		63	U		61	U	
2-HEXANONE	28	U		52	U		25	U		24	U	
4-METHYL-2-PENTANONE	28	U		52	U		25	U		24	U	
ACETONE	28	U	A	52	U	A	25	U	A	24	U	A
ACETONITRILE	140	U		260	U		130	U		120	U	
ACROLEIN	140	U		260	U		130	U		120	U	
ACRYLONITRILE	140	U		260	U		130	U		120	U	
ALLYL CHLORIDE	14	U		26	U		13	U		12	U	
BENZENE	7	U		13	U		6.3	U		6.1	U	
BROMODICHLOROMETHANE	7	U		13	U		6.3	U		6.1	U	
BROMOFORM	7	U		13	U		6.3	U		6.1	U	
BROMOMETHANE	14	U		26	U		13	U		12	U	
CARBON DISULFIDE	7	U		13	U		6.3	U		6.1	U	
CARBON TETRACHLORIDE	7	U		13	U		6.3	U		6.1	U	
CHLOROBENZENE	7	U		13	U		6.3	U		6.1	U	
CHLOROETHANE	14	U		26	U		13	U		12	U	
CHLOROFORM	7	U		13	U		6.3	U		6.1	U	
CHLOROMETHANE	14	U		26	U		13	U		12	U	
CHLOROPRENE	7	U		13	U		6.3	U		6.1	U	
CIS-1,2-DICHLOROETHENE	3.5	U		6.4	U		3.1	U		3.1	U	
CIS-1,3-DICHLOROPROPENE	7	U		13	U		6.3	U		6.1	U	

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	4252-SS-SB04-05			4252-SS-SB11-05			436-SS-SB01-05			436-SS-SB04-05		
SAMPLE DATE:	05/02/00			05/04/00			05/03/00			05/03/00		
LABORATORY ID:	A0E030194002			A0E050174001			A0E040160002			A0E040160003		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	90.2 %			100.0 %			95.9 %			94.9 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
DIBROMOCHLOROMETHANE	7	U		13	U		6.3	U		6.1	U	
DIBROMOMETHANE	7	U		13	U		6.3	U		6.1	U	
DICHLORODIFLUOROMETHANE	14	U		26	U		13	U		12	U	
ETHYL METHACRYLATE	7	U		13	U		6.3	U		6.1	U	
ETHYLBENZENE	7	U		13	U		6.3	U		6.1	U	
IODOMETHANE	7	U		13	U		6.3	U		6.1	U	
ISOBUTYL ALCOHOL	280	U		520	U		250	U		240	U	
METHACRYLONITRILE	7	U		13	U		6.3	U		6.1	U	
METHYL METHACRYLATE	7	U		13	U		6.3	U		6.1	U	
METHYL TERT-BUTYL ETHER	28	U		52	U		25	U		24	U	
METHYLENE CHLORIDE	7	U	A	13	U		6.3	U		6.1	U	A
PROPIONITRILE	28	U		52	U		25	U		24	U	
STYRENE	7	U		13	U		6.3	U		6.1	U	
TETRACHLOROETHENE	7	U		13	U		6.3	U		6.1	U	
TOLUENE	0.65	J	P	1.3	J	P	0.32	J	P	0.33	J	P
TRANS-1,2-DICHLOROETHENE	3.5	U		6.4	U		3.1	U		3.1	U	
TRANS-1,3-DICHLOROPROPENE	7	U		13	U		6.3	U		6.1	U	
TRANS-1,4-DICHLORO-2-BUTENE	7	U		13	U		6.3	U		6.1	U	
TRICHLOROETHENE	7	U		13	U		6.3	U		6.1	U	
TRICHLOROFLUOROMETHANE	14	U		26	U		13	U		12	U	
VINYL ACETATE	14	U		26	U		13	U		12	U	
VINYL CHLORIDE	14	U		26	U		13	U		12	U	
XYLENES, TOTAL	14	U		26	U		13	U		12	U	

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	436-SS-SB09-05											
SAMPLE DATE:	05/03/00			/ /			/ /			/ /		
LABORATORY ID:	A0E040160004											
QC_TYPE:	NORMAL											
% SOLIDS:	94.7 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/KG											
FIELD DUPLICATE OF:												
VOLATILES	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
1,1,1,2-TETRACHLOROETHANE	5.8	U										
1,1,1-TRICHLOROETHANE	5.8	U										
1,1,2,2-TETRACHLOROETHANE	5.8	U										
1,1,2-TRICHLOROETHANE	5.8	U										
1,1-DICHLOROETHANE	5.8	U										
1,1-DICHLOROETHENE	0.58	J	P									
1,2,3-TRICHLOROPROPANE	5.8	U										
1,2-DIBROMO-3-CHLOROPROPANE	12	U										
1,2-DIBROMOETHANE	5.8	U										
1,2-DICHLOROETHANE	5.8	U										
1,2-DICHLOROETHENE (TOTAL)	5.8	U										
1,2-DICHLOROPROPANE	5.8	U										
2-BUTANONE	23	U										
2-CHLOROETHYL VINYL ETHER	58	U										
2-HEXANONE	23	U										
4-METHYL-2-PENTANONE	23	U										
ACETONE	23	U										
ACETONITRILE	120	U										
ACROLEIN	120	U										
ACRYLONITRILE	120	U										
ALLYL CHLORIDE	12	U										
BENZENE	5.8	U										
BROMODICHLOROMETHANE	5.8	U										
BROMOFORM	5.8	U										
BROMOMETHANE	12	U										
CARBON DISULFIDE	5.8	U										
CARBON TETRACHLORIDE	5.8	U										
CHLOROBENZENE	5.8	U										
CHLOROETHANE	12	U										
CHLOROFORM	5.8	U										
CHLOROMETHANE	12	U										
CHLOROPRENE	5.8	U										
CIS-1,2-DICHLOROETHENE	2.9	U										
CIS-1,3-DICHLOROPROPENE	5.8	U										

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	436-SS-SB09-05			
SAMPLE DATE:	05/03/00	/ /	/ /	/ /
LABORATORY ID:	A0E040160004			
QC_TYPE:	NORMAL			
% SOLIDS:	94.7 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/KG			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
DIBROMOCHLOROMETHANE	5.8	U										
DIBROMOMETHANE	5.8	U										
DICHLORODIFLUOROMETHANE	12	U										
ETHYL METHACRYLATE	5.8	U										
ETHYLBENZENE	5.8	U										
IODOMETHANE	5.8	U										
ISOBUTYL ALCOHOL	230	U										
METHACRYLONITRILE	5.8	U										
METHYL METHACRYLATE	5.8	U										
METHYL TERT-BUTYL ETHER	23	U										
METHYLENE CHLORIDE	5.8	U										
PROPIONITRILE	23	U										
STYRENE	5.8	U										
TETRACHLOROETHENE	5.8	U										
TOLUENE	0.31	J	P									
TRANS-1,2-DICHLOROETHENE	2.9	U										
TRANS-1,3-DICHLOROPROPENE	5.8	U										
TRANS-1,4-DICHLORO-2-BUTENE	5.8	U										
TRICHLOROETHENE	5.8	U										
TRICHLOROFLUOROMETHANE	12	U										
VINYL ACETATE	12	U										
VINYL CHLORIDE	12	U										
XYLENES, TOTAL	12	U										

CTO123-NS MAYPORT
LEACHATE DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	358-SS-SB05-04			358-SS-SB05-04			436-SS-SB01-05			436-SS-SB01-05		
SAMPLE DATE:	05/04/00			05/04/00			05/03/00			05/03/00		
LABORATORY ID:	A0E050174004			A0E050174004			A0E040160002			A0E040160002		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	MG/L			UG/L			MG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,4-DICHLOROBENZENE	0.05	U		0.05	U		0.05	U		0.05	U	
1-METHYLNAPHTHALENE	20	U		20	U		20	U		20	U	
2,4,5-TRICHLOROPHENOL	0.05	U		0.05	U		0.05	U		0.05	U	
2,4,6-TRICHLOROPHENOL	0.05	U		0.05	U		0.05	U		0.05	U	
2,4-DINITROTOLUENE	0.05	U		0.05	U		0.05	U		0.05	U	
2-METHYLNAPHTHALENE	20	U		20	U		20	U		20	U	
ACENAPHTHENE	10	U		10	U		10	U		10	U	
ACENAPHTHYLENE	10	U		10	U		10	U		10	U	
ANTHRACENE	10	U		10	U		10	U		10	U	
BENZO(A)ANTHRACENE	1	U		1	U		1	U		1	U	
BENZO(A)PYRENE	1	U		1	U		1	U		1	U	
BENZO(B)FLUORANTHENE	1	U		1	U		1	U		1	U	
BENZO(G,H,I)PERYLENE	1	U		1	U		1	U		1	U	
BENZO(K)FLUORANTHENE	3	U		3	U		3	U		3	U	
CHRYSENE	1	U		1	U		1	U		1	U	
DIBENZO(A,H)ANTHRACENE	1	U		1	U		1	U		1	U	
FLUORANTHENE	2	U		2	U		2	U		2	U	
FLUORENE	20	U		20	U		20	U		20	U	
HEXACHLOROBENZENE	0.05	U		0.05	U		0.05	U		0.05	U	
HEXACHLOROBUTADIENE	0.05	U		0.05	U		0.05	U		0.05	U	
HEXACHLOROETHANE	0.05	U		0.05	U		0.05	U		0.05	U	
INDENO(1,2,3-CD)PYRENE	1	U		1	U		1	U		1	U	
M & P-CRESOL	0.1	U		0.1	U		0.1	U		0.1	U	
NAPHTHALENE	20	U		20	U		20	U		20	U	
NITROBENZENE	0.05	U		0.05	U		0.05	U		0.05	U	
O-CRESOL	0.05	U		0.05	U		0.05	U		0.05	U	
PENTACHLOROPHENOL	0.1	U		0.1	U		0.1	U		0.1	U	
PHENANTHRENE	10	U		10	U		10	U		10	U	
PYRENE	1	U		1	U		1	U		1	U	
PYRIDINE	0.1	U		0.1	U		0.1	U		0.1	U	

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	358-SS-SB01-04	358-SS-SB04-04	358-SS-SB05-04	4252-SS-SB02-05
SAMPLE DATE:	05/04/00	05/04/00	05/04/00	05/02/00
LABORATORY ID:	A0E050174002	A0E050174003	A0E050174004	A0E030194001
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	87.0 %	91.3 %	82.0 %	92.9 %
UNITS:	UG/KG	UG/KG	UG/KG	UG/KG
FIELD DUPLICATE OF:				

SEMIVOLATILES	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
1,2,4,5-TETRACHLOROBENZENE	380	U		360	U		400	U		360	U	
1,2,4-TRICHLOROBENZENE	380	U		360	U		400	U		360	U	
1,2-DICHLOROBENZENE	380	U		360	U		400	U		360	U	
1,2-DIPHENYLHYDRAZINE	380	U		360	U		400	U		360	U	
1,3,5-TRINITROBENZENE	1800	U		1800	U		1900	U		1700	U	
1,3-DICHLOROBENZENE	380	U		360	U		400	U		360	U	
1,3-DINITROBENZENE	380	U		360	U		400	U		360	U	
1,4-DICHLOROBENZENE	380	U		360	U		400	U		360	U	
1,4-DIOXANE	380	U		360	U		400	U		360	U	
1,4-NAPHTHOQUINONE	1800	U		1800	U		1900	U		1700	U	
1-NAPHTHYLAMINE	380	U		360	U		400	U		360	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	380	U		360	U		400	U		360	U	
2,3,4,6-TETRACHLOROPHENOL	1800	U		1800	U		1900	U		1700	U	
2,4,5-TRICHLOROPHENOL	380	U		360	U		400	U		360	U	
2,4,6-TRICHLOROPHENOL	380	U		360	U		400	U		360	U	
2,4-DICHLOROPHENOL	380	U		360	U		400	U		360	U	
2,4-DIMETHYLPHENOL	380	U		360	U		400	U		360	U	
2,4-DINITROPHENOL	1800	U		1800	U		1900	U		1700	U	
2,4-DINITROTOLUENE	380	U		360	U		400	U		360	U	
2,6-DICHLOROPHENOL	380	U		360	U		400	U		360	U	
2,6-DINITROTOLUENE	380	U		360	U		400	U		360	U	
2-ACETYLAMINOFLUORENE	3800	U		3600	U		4000	U		3600	U	
2-CHLORONAPHTHALENE	380	U		360	U		400	U		360	U	
2-CHLOROPHENOL	380	U		360	U		400	U		360	U	
2-METHYLNAPHTHALENE	380	U		360	U		400	U		360	U	
2-METHYLPHENOL	380	U		360	U		400	U		360	U	
2-NAPHTHYLAMINE	380	U		360	U		400	U		360	U	
2-NITROANILINE	1800	U		1800	U		1900	U		1700	U	
2-NITROPHENOL	380	U		360	U		400	U		360	U	
2-PICOLINE	750	U		720	U		800	U		710	U	
2-SEC-BUTYL-4,6-DINITROPHENOL	750	U		720	U		800	U		710	U	
3,3'-DICHLOROBENZIDINE	1800	U		1800	U		1900	U		1700	U	
3,3'-DIMETHYLBENZIDINE	1800	U		1800	U		1900	U		1700	U	
3-METHYLCHOLANTHRENE	750	U		720	U		800	U		710	U	

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	358-SS-SB01-04	358-SS-SB04-04	358-SS-SB05-04	4252-SS-SB02-05
SAMPLE DATE:	05/04/00	05/04/00	05/04/00	05/02/00
LABORATORY ID:	A0E050174002	A0E050174003	A0E050174004	A0E030194001
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	87.0 %	91.3 %	82.0 %	92.9 %
UNITS:	UG/KG	UG/KG	UG/KG	UG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
3-METHYLPHENOL	380	U		360	U		400	U		360	U	
3-NITROANILINE	1800	U		1800	U		1900	U		1700	U	
4,6-DINITRO-2-METHYLPHENOL	1800	U		1800	U		1900	U		1700	U	
4-AMINOBIPHENYL	1800	U		1800	U		1900	U		1700	U	
4-BROMOPHENYL PHENYL ETHER	380	U		360	U		400	U		360	U	
4-CHLORO-3-METHYLPHENOL	380	U		360	U		400	U		360	U	
4-CHLOROANILINE	380	U		360	U		400	U		360	U	
4-CHLOROPHENYL PHENYL ETHER	380	U		360	U		400	U		360	U	
4-METHYLPHENOL	380	U		360	U		400	U		360	U	
4-NITROANILINE	1800	U		1800	U		1900	U		1700	U	
4-NITROPHENOL	1800	U		1800	U		1900	U		1700	U	
4-NITROQUINOLINE-1-OXIDE	3800	U		3600	U		4000	U		3600	U	
5-NITRO-O-TOLUIDINE	750	U		720	U		800	U		710	U	
7,12-DIMETHYLBENZ(A)ANTHRACENE	750	U		720	U		800	U		710	U	
A,A-DIMETHYLPHENETHYLAMINE	1800	U		1800	U		1900	U		1700	U	
ACENAPHTHENE	380	U		360	U		400	U		360	U	
ACENAPHTHYLENE	380	U		360	U		400	U		360	U	
ACETOPHENONE	380	U		360	U		400	U		360	U	
ANILINE	380	U		360	U		400	U		360	U	
ANTHRACENE	380	U		360	U		400	U		360	U	
ARAMITE	750	U		720	U		800	U		710	U	
BENZIDINE	3800	U		3600	U		4000	U		3600	U	
BENZO(A)ANTHRACENE	380	U		360	U		400	U		360	U	
BENZO(A)PYRENE	380	U		360	U		400	U		360	U	
BENZO(B)FLUORANTHENE	380	U		360	U		400	U		360	U	
BENZO(G,H,I)PERYLENE	380	U		360	U		400	U		360	U	
BENZO(K)FLUORANTHENE	380	U		360	U		400	U		360	U	
BENZYL ALCOHOL	380	U		360	U		400	U		360	U	
BIS(2-CHLOROETHOXY)METHANE	380	U		360	U		400	U		360	U	
BIS(2-CHLOROETHYL)ETHER	380	U		360	U		400	U		360	U	
BIS(2-ETHYLHEXYL)PHTHALATE	380	U		360	U		400	U		360	U	
BUTYLBENZYL PHTHALATE	380	U		360	U		400	U		360	U	
CARBAZOLE	380	U		360	U		400	U		360	U	
CHLOROBENZILATE	380	U		360	U		400	U		360	U	

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SAMPLE NUMBER:	358-SS-SB01-04			358-SS-SB04-04			358-SS-SB05-04			4252-SS-SB02-05		
SAMPLE DATE:	05/04/00			05/04/00			05/04/00			05/02/00		
LABORATORY ID:	A0E050174002			A0E050174003			A0E050174004			A0E030194001		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	87.0 %			91.3 %			82.0 %			92.9 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
SEMIVOLATILES	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
CHRYSENE	380	U		360	U		400	U		360	U	
DI-N-BUTYL PHTHALATE	380	U		360	U		400	U		360	U	
DI-N-OCTYL PHTHALATE	380	U		360	U		400	U		360	U	
DIALLATE	750	U		720	U		800	U		710	U	
DIBENZO(A,H)ANTHRACENE	380	U		360	U		400	U		360	U	
DIBENZOFURAN	380	U		360	U		400	U		360	U	
DIETHYL PHTHALATE	380	U		360	U		400	U		360	U	
DIMETHYL PHTHALATE	380	U		360	U		400	U		360	U	
DIPHENYLAMINE	380	U		360	U		400	U		360	U	
ETHYL METHANESULFONATE	380	U		360	U		400	U		360	U	
FLUORANTHENE	380	U		360	U		400	U		360	U	
FLUORENE	380	U		360	U		400	U		360	U	
HEXACHLOROBENZENE	380	U		360	U		400	U		360	U	
HEXACHLOROBUTADIENE	380	U		360	U		400	U		360	U	
HEXACHLOROCYCLOPENTADIENE	1800	U		1800	U		1900	U		1700	U	
HEXACHLOROETHANE	380	U		360	U		400	U		360	U	
HEXACHLOROPROPENE	3800	U		3600	U		4000	U		3600	U	
INDENO(1,2,3-CD)PYRENE	380	U		360	U		400	U		360	U	
ISOPHORONE	380	U		360	U		400	U		360	U	
ISOSAFROLE	750	U		720	U		800	U		710	U	
METHAPYRILENE	1800	U		1800	U		1900	U		1700	U	
METHYL METHANESULFONATE	380	U		360	U		400	U		360	U	
N-NITROSO-DI-N-BUTYLAMINE	380	U		360	U		400	U		360	U	
N-NITROSO-DI-N-PROPYLAMINE	380	U		360	U		400	U		360	U	
N-NITROSODIETHYLAMINE	380	U		360	U		400	U		360	U	
N-NITROSODIMETHYLAMINE	380	U		360	U		400	U		360	U	
N-NITROSODIPHENYLAMINE	380	U		360	U		400	U		360	U	
N-NITROSOMETHYLETHYLAMINE	380	U		360	U		400	U		360	U	
N-NITROSOMORPHOLINE	380	U		360	U		400	U		360	U	
N-NITROSOPIPERIDINE	380	U		360	U		400	U		360	U	
N-NITROSOPYRROLIDINE	380	U		360	U		400	U		360	U	
NAPHTHALENE	380	U		360	U		400	U		360	U	
NITROBENZENE	380	U		360	U		400	U		360	U	
O-TOLUIDINE	750	U		720	U		800	U		710	U	

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SAMPLE NUMBER:	358-SS-SB01-04	358-SS-SB04-04	358-SS-SB05-04	4252-SS-SB02-05
SAMPLE DATE:	05/04/00	05/04/00	05/04/00	05/02/00
LABORATORY ID:	A0E050174002	A0E050174003	A0E050174004	A0E030194001
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	87.0 %	91.3 %	82.0 %	92.9 %
UNITS:	UG/KG	UG/KG	UG/KG	UG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
P-DIMETHYLAMINOAZOBENZENE	750	U		720	U		800	U		710	U	
P-PHENYLENEDIAMINE	3800	U		3600	U		4000	U		3600	U	
PENTACHLOROBENZENE	380	U		360	U		400	U		360	U	
PENTACHLOROETHANE	1800	U		1800	U		1900	U		1700	U	
PENTACHLORONITROBENZENE	1800	U		1800	U		1900	U		1700	U	
PENTACHLOROPHENOL	1800	U		1800	U		1900	U		1700	U	
PHENACETIN	750	U		720	U		800	U		710	U	
PHENANTHRENE	380	U		360	U		400	U		360	U	
PHENOL	380	U		360	U		400	U		360	U	
PRONAMIDE	750	U		720	U		800	U		710	U	
PYRENE	380	U		360	U		400	U		360	U	
PYRIDINE	750	U		720	U		800	U		710	U	
SAFROLE	750	U		720	U		800	U		710	U	

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SDG: MP007

SAMPLE NUMBER:	4252-SS-SB04-05			4252-SS-SB11-05			436-SS-SB01-05			436-SS-SB04-05		
SAMPLE DATE:	05/02/00			05/02/00			05/03/00			05/03/00		
LABORATORY ID:	A0E030194002			A0E030194003			A0E040160002			A0E040160003		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	90.2 %			90.0 %			95.9 %			94.9 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
SEMIVOLATILES	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
1,2,4,5-TETRACHLOROBENZENE	370	U		370	U		340	U		350	U	
1,2,4-TRICHLOROBENZENE	370	U		370	U		340	U		350	U	
1,2-DICHLOROBENZENE	370	U		370	U		340	U		350	U	
1,2-DIPHENYLHYDRAZINE	370	U		370	U		340	U		350	U	
1,3,5-TRINITROBENZENE	1800	U		1800	U		1700	U		1700	U	
1,3-DICHLOROBENZENE	370	U		370	U		340	U		350	U	
1,3-DINITROBENZENE	370	U		370	U		340	U		350	U	
1,4-DICHLOROBENZENE	370	U		370	U		340	U		350	U	
1,4-DIOXANE	370	U		370	U		340	U		350	U	
1,4-NAPHTHOQUINONE	1800	U		1800	U		1700	U		1700	U	
1-NAPHTHYLAMINE	370	U		370	U		340	U		350	U	
2,2'-OXYBIS(1-CHLOROPROPANE)	370	U		370	U		340	U		350	U	
2,3,4,6-TETRACHLOROPHENOL	1800	U		1800	U		1700	U		1700	U	
2,4,5-TRICHLOROPHENOL	370	U		370	U		340	U		350	U	
2,4,6-TRICHLOROPHENOL	370	U		370	U		340	U		350	U	
2,4-DICHLOROPHENOL	370	U		370	U		340	U		350	U	
2,4-DIMETHYLPHENOL	370	U		370	U		340	U		350	U	
2,4-DINITROPHENOL	1800	U		1800	U		1700	U		1700	U	
2,4-DINITROTOLUENE	370	U		370	U		340	U		350	U	
2,6-DICHLOROPHENOL	370	U		370	U		340	U		350	U	
2,6-DINITROTOLUENE	370	U		370	U		340	U		350	U	
2-ACETYLAMINOFLUORENE	3700	U		3700	U		3400	U		3500	U	
2-CHLORONAPHTHALENE	370	U		370	U		340	U		350	U	
2-CHLOROPHENOL	370	U		370	U		340	U		350	U	
2-METHYLNAPHTHALENE	370	U		370	U		340	U		350	U	
2-METHYLPHENOL	370	U		370	U		340	U		350	U	
2-NAPHTHYLAMINE	370	U		370	U		340	U		350	U	
2-NITROANILINE	1800	U		1800	U		1700	U		1700	U	
2-NITROPHENOL	370	U		370	U		340	U		350	U	
2-PICOLINE	730	U		730	U		690	U		700	U	
2-SEC-BUTYL-4,6-DINITROPHENOL	730	U		730	U		690	U		700	U	
3,3'-DICHLOROBENZIDINE	1800	U		1800	U		1700	U		1700	U	
3,3'-DIMETHYLBENZIDINE	1800	U		1800	U		1700	U		1700	U	
3-METHYLCHOLANTHRENE	730	U		730	U		690	U		700	U	

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SAMPLE NUMBER:	4252-SS-SB04-05			4252-SS-SB11-05			436-SS-SB01-05			436-SS-SB04-05		
SAMPLE DATE:	05/02/00			05/02/00			05/03/00			05/03/00		
LABORATORY ID:	A0E030194002			A0E030194003			A0E040160002			A0E040160003		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	90.2 %			90.0 %			95.9 %			94.9 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
SEMIVOLATILES	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
3-METHYLPHENOL	370	U		370	U		340	U		350	U	
3-NITROANILINE	1800	U		1800	U		1700	U		1700	U	
4,6-DINITRO-2-METHYLPHENOL	1800	U		1800	U		1700	U		1700	U	
4-AMINOBIPHENYL	1800	U		1800	U		1700	U		1700	U	
4-BROMOPHENYL PHENYL ETHER	370	U		370	U		340	U		350	U	
4-CHLORO-3-METHYLPHENOL	370	U		370	U		340	U		350	U	
4-CHLOROANILINE	370	U		370	U		340	U		350	U	
4-CHLOROPHENYL PHENYL ETHER	370	U		370	U		340	U		350	U	
4-METHYLPHENOL	370	U		370	U		340	U		350	U	
4-NITROANILINE	1800	U		1800	U		1700	U		1700	U	
4-NITROPHENOL	1800	U		1800	U		1700	U		1700	U	
4-NITROQUINOLINE-1-OXIDE	3700	U		3700	U		3400	U		3500	U	
5-NITRO-O-TOLUIDINE	730	U		730	U		690	U		700	U	
7,12-DIMETHYLBENZ(A)ANTHRACENE	730	U		730	U		690	U		700	U	
A,A-DIMETHYLPHENETHYLAMINE	1800	U		1800	U		1700	U		1700	U	
ACENAPHTHENE	370	U		370	U		340	U		350	U	
ACENAPHTHYLENE	370	U		370	U		340	U		350	U	
ACETOPHENONE	370	U		370	U		340	U		350	U	
ANILINE	370	U		370	U		340	U		350	U	
ANTHRACENE	370	U		370	U		340	U		350	U	
ARAMITE	730	U		730	U		690	U		700	U	
BENZIDINE	3700	U		3700	U		3400	U		3500	U	
BENZO(A)ANTHRACENE	370	U		370	U		340	U		350	U	
BENZO(A)PYRENE	370	U		370	U		340	U		350	U	
BENZO(B)FLUORANTHENE	370	U		370	U		340	U		350	U	
BENZO(G,H,I)PERYLENE	370	U		370	U		340	U		350	U	
BENZO(K)FLUORANTHENE	370	U		370	U		340	U		350	U	
BENZYL ALCOHOL	370	U		370	U		340	U		350	U	
BIS(2-CHLOROETHOXY)METHANE	370	U		370	U		340	U		350	U	
BIS(2-CHLOROETHYL)ETHER	370	U		370	U		340	U		350	U	
BIS(2-ETHYLHEXYL)PHTHALATE	370	U		370	U		340	U		350	U	
BUTYLBENZYL PHTHALATE	370	U		370	U		340	U		350	U	
CARBAZOLE	370	U		370	U		340	U		350	U	
CHLOROBENZILATE	370	U		370	U		340	U		350	U	

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SDG: MP007

SAMPLE NUMBER:	4252-SS-SB04-05			4252-SS-SB11-05			436-SS-SB01-05			436-SS-SB04-05		
SAMPLE DATE:	05/02/00			05/02/00			05/03/00			05/03/00		
LABORATORY ID:	A0E030194002			A0E030194003			A0E040160002			A0E040160003		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	90.2 %			90.0 %			95.9 %			94.9 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
SEMIVOLATILES	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
CHRYSENE	370	U		370	U		340	U		350	U	
DI-N-BUTYL PHTHALATE	370	U		370	U		340	U		350	U	
DI-N-OCTYL PHTHALATE	370	U		370	U		340	U		350	U	
DIALLATE	730	U		730	U		690	U		700	U	
DIBENZO(A,H)ANTHRACENE	370	U		370	U		340	U		350	U	
DIBENZOFURAN	370	U		370	U		340	U		350	U	
DIETHYL PHTHALATE	370	U		370	U		340	U		350	U	
DIMETHYL PHTHALATE	370	U		370	U		340	U		350	U	
DIPHENYLAMINE	370	U		370	U		340	U		350	U	
ETHYL METHANESULFONATE	370	U		370	U		340	U		350	U	
FLUORANTHENE	370	U		370	U		340	U		350	U	
FLUORENE	370	U		370	U		340	U		350	U	
HEXACHLOROBENZENE	370	U		370	U		340	U		350	U	
HEXACHLOROBUTADIENE	370	U		370	U		340	U		350	U	
HEXACHLOROCYCLOPENTADIENE	1800	U		1800	U		1700	U		1700	U	
HEXACHLOROETHANE	370	U		370	U		340	U		350	U	
HEXACHLOROPROPENE	3700	U		3700	U		3400	U		3500	U	
INDENO(1,2,3-CD)PYRENE	370	U		370	U		340	U		350	U	
ISOPHORONE	370	U		370	U		340	U		350	U	
ISOSAFROLE	730	U		730	U		690	U		700	U	
METHAPYRILENE	1800	U		1800	U		1700	U		1700	U	
METHYL METHANESULFONATE	370	U		370	U		340	U		350	U	
N-NITROSO-DI-N-BUTYLAMINE	370	U		370	U		340	U		350	U	
N-NITROSO-DI-N-PROPYLAMINE	370	U		370	U		340	U		350	U	
N-NITROSODIETHYLAMINE	370	U		370	U		340	U		350	U	
N-NITROSODIMETHYLAMINE	370	U		370	U		340	U		350	U	
N-NITROSODIPHENYLAMINE	370	U		370	U		340	U		350	U	
N-NITROSOMETHYLETHYLAMINE	370	U		370	U		340	U		350	U	
N-NITROSOMORPHOLINE	370	U		370	U		340	U		350	U	
N-NITROSOPIPERIDINE	370	U		370	U		340	U		350	U	
N-NITROSOPYRROLIDINE	370	U		370	U		340	U		350	U	
NAPHTHALENE	370	U		370	U		340	U		350	U	
NITROBENZENE	370	U		370	U		340	U		350	U	
O-TOLUIDINE	730	U		730	U		690	U		700	U	

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	4252-SS-SB04-05	4252-SS-SB11-05	436-SS-SB01-05	436-SS-SB04-05
SAMPLE DATE:	05/02/00	05/02/00	05/03/00	05/03/00
LABORATORY ID:	A0E030194002	A0E030194003	A0E040160002	A0E040160003
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	90.2 %	90.0 %	95.9 %	94.9 %
UNITS:	UG/KG	UG/KG	UG/KG	UG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
P-DIMETHYLAMINOAZOBENZENE	730	U		730	U		690	U		700	U	
P-PHENYLENEDIAMINE	3700	U		3700	U		3400	U		3500	U	
PENTACHLOROBENZENE	370	U		370	U		340	U		350	U	
PENTACHLOROETHANE	1800	U		1800	U		1700	U		1700	U	
PENTACHLORONITROBENZENE	1800	U		1800	U		1700	U		1700	U	
PENTACHLOROPHENOL	1800	U		1800	U		1700	U		1700	U	
PHENACETIN	730	U		730	U		690	U		700	U	
PHENANTHRENE	370	U		370	U		340	U		350	U	
PHENOL	370	U		370	U		340	U		350	U	
PRONAMIDE	730	U		730	U		690	U		700	U	
PYRENE	370	U		370	U		340	U		350	U	
PYRIDINE	730	U		730	U		690	U		700	U	
SAFROLE	730	U		730	U		690	U		700	U	

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SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	436-SS-SB09-05			/ /			/ /			/ /		
SAMPLE DATE:	05/03/00											
LABORATORY ID:	A0E040160004											
QC_TYPE:	NORMAL											
% SOLIDS:	94.7 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/KG											
FIELD DUPLICATE OF:												
SEMIVOLATILES	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
1,2,4,5-TETRACHLOROBENZENE	350	U										
1,2,4-TRICHLOROBENZENE	350	U										
1,2-DICHLOROBENZENE	350	U										
1,2-DIPHENYLHYDRAZINE	350	U										
1,3,5-TRINITROBENZENE	1700	U										
1,3-DICHLOROBENZENE	350	U										
1,3-DINITROBENZENE	350	U										
1,4-DICHLOROBENZENE	350	U										
1,4-DIOXANE	350	U										
1,4-NAPHTHOQUINONE	1700	U										
1-NAPHTHYLAMINE	350	U										
2,2'-OXYBIS(1-CHLOROPROPANE)	350	U										
2,3,4,6-TETRACHLOROPHENOL	1700	U										
2,4,5-TRICHLOROPHENOL	350	U										
2,4,6-TRICHLOROPHENOL	350	U										
2,4-DICHLOROPHENOL	350	U										
2,4-DIMETHYLPHENOL	350	U										
2,4-DINITROPHENOL	1700	U										
2,4-DINITROTOLUENE	350	U										
2,6-DICHLOROPHENOL	350	U										
2,6-DINITROTOLUENE	350	U										
2-ACETYLAMINOFLUORENE	3500	U										
2-CHLORONAPHTHALENE	350	U										
2-CHLOROPHENOL	350	U										
2-METHYLNAPHTHALENE	350	U										
2-METHYLPHENOL	350	U										
2-NAPHTHYLAMINE	350	U										
2-NITROANILINE	1700	U										
2-NITROPHENOL	350	U										
2-PICOLINE	700	U										
2-SEC-BUTYL-4,6-DINITROPHENOL	700	U										
3,3'-DICHLOROBENZIDINE	1700	U										
3,3'-DIMETHYLBENZIDINE	1700	U										
3-METHYLCHOLANTHRENE	700	U										

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	436-SS-SB09-05			/ /			/ /			/ /		
SAMPLE DATE:	05/03/00											
LABORATORY ID:	A0E040160004											
QC_TYPE:	NORMAL											
% SOLIDS:	94.7 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/KG											
FIELD DUPLICATE OF:												
SEMIVOLATILES	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
3-METHYLPHENOL	350	U										
3-NITROANILINE	1700	U										
4,6-DINITRO-2-METHYLPHENOL	1700	U										
4-AMINOBIPHENYL	1700	U										
4-BROMOPHENYL PHENYL ETHER	350	U										
4-CHLORO-3-METHYLPHENOL	350	U										
4-CHLOROANILINE	350	U										
4-CHLOROPHENYL PHENYL ETHER	350	U										
4-METHYLPHENOL	350	U										
4-NITROANILINE	1700	U										
4-NITROPHENOL	1700	U										
4-NITROQUINOLINE-1-OXIDE	3500	U										
5-NITRO-O-TOLUIDINE	700	U										
7,12-DIMETHYLBENZ(A)ANTHRACENE	700	U										
A,A-DIMETHYLPHENETHYLAMINE	1700	U										
ACENAPHTHENE	350	U										
ACENAPHTHYLENE	350	U										
ACETOPHENONE	350	U										
ANILINE	350	U										
ANTHRACENE	350	U										
ARAMITE	700	U										
BENZIDINE	3500	U										
BENZO(A)ANTHRACENE	350	U										
BENZO(A)PYRENE	350	U										
BENZO(B)FLUORANTHENE	350	U										
BENZO(G,H,I)PERYLENE	350	U										
BENZO(K)FLUORANTHENE	350	U										
BENZYL ALCOHOL	350	U										
BIS(2-CHLOROETHOXY)METHANE	350	U										
BIS(2-CHLOROETHYL)ETHER	350	U										
BIS(2-ETHYLHEXYL)PHTHALATE	350	U										
BUTYLBENZYL PHTHALATE	350	U										
CARBAZOLE	350	U										
CHLOROBENZILATE	350	U										

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	436-SS-SB09-05											
SAMPLE DATE:	05/03/00			/ /			/ /			/ /		
LABORATORY ID:	A0E040160004											
QC_TYPE:	NORMAL											
% SOLIDS:	94.7 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/KG											
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
CHRYSENE	350	U										
DI-N-BUTYL PHTHALATE	350	U										
DI-N-OCTYL PHTHALATE	350	U										
DIALLATE	700	U										
DIBENZO(A,H)ANTHRACENE	350	U										
DIBENZOFURAN	350	U										
DIETHYL PHTHALATE	350	U										
DIMETHYL PHTHALATE	350	U										
DIPHENYLAMINE	350	U										
ETHYL METHANESULFONATE	350	U										
FLUORANTHENE	350	U										
FLUORENE	350	U										
HEXACHLOROBENZENE	350	U										
HEXACHLOROBUTADIENE	350	U										
HEXACHLOROCYCLOPENTADIENE	1700	U										
HEXACHLOROETHANE	350	U										
HEXACHLOROPROPENE	3500	U										
INDENO(1,2,3-CD)PYRENE	350	U										
ISOPHORONE	350	U										
ISOSAFROLE	700	U										
METHAPYRILENE	1700	U										
METHYL METHANESULFONATE	350	U										
N-NITROSO-DI-N-BUTYLAMINE	350	U										
N-NITROSO-DI-N-PROPYLAMINE	350	U										
N-NITROSODIETHYLAMINE	350	U										
N-NITROSODIMETHYLAMINE	350	U										
N-NITROSODIPHENYLAMINE	350	U										
N-NITROSOMETHYLETHYLAMINE	350	U										
N-NITROSOMORPHOLINE	350	U										
N-NITROSOPIPERIDINE	350	U										
N-NITROSOPYRROLIDINE	350	U										
NAPHTHALENE	350	U										
NITROBENZENE	350	U										
O-TOLUIDINE	700	U										

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	436-SS-SB09-05			
SAMPLE DATE:	05/03/00	/ /	/ /	/ /
LABORATORY ID:	A0E040160004			
QC_TYPE:	NORMAL			
% SOLIDS:	94.7 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/KG			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
P-DIMETHYLAMINOAZOBENZENE	700	U										
P-PHENYLENEDIAMINE	3500	U										
PENTACHLOROBENZENE	350	U										
PENTACHLOROETHANE	1700	U										
PENTACHLORONITROBENZENE	1700	U										
PENTACHLOROPHENOL	1700	U										
PHENACETIN	700	U										
PHENANTHRENE	350	U										
PHENOL	350	U										
PRONAMIDE	700	U										
PYRENE	350	U										
PYRIDINE	700	U										
SAFROLE	700	U										

CTO123-NS MAYPORT
LEACHATE DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	358-SS-SB05-04			436-SS-SB01-05								
SAMPLE DATE:	05/04/00			05/03/00			/ /			/ /		
LABORATORY ID:	A0E050174004			A0E040160002								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	0.0 %			0.0 %			100.0 %			100.0 %		
UNITS:	MG/L			MG/L								
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
TOTAL PETROLEUM HYDROCARBONS	1.3	J	A	1.6	J	A						

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	358-SS-SB01-04			358-SS-SB04-04			358-SS-SB05-04			4252-SS-SB02-05		
SAMPLE DATE:	05/04/00			05/04/00			05/04/00			05/02/00		
LABORATORY ID:	A0E050174002			A0E050174003			A0E050174004			A0E030194001		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	87.0 %			91.3 %			82.0 %			92.9 %		
UNITS:	MG/KG			MG/KG			MG/KG			MG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	11	U		11	U		12	U		11	U	

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	4252-SS-SB04-05			4252-SS-SB11-05			436-SS-SB01-05			436-SS-SB04-05		
SAMPLE DATE:	05/02/00			05/02/00			05/03/00			05/03/00		
LABORATORY ID:	A0E030194002			A0E030194003			A0E040160002			A0E040160003		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	90.2 %			90.0 %			95.9 %			94.9 %		
UNITS:	MG/KG			MG/KG			MG/KG			MG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	10	J		11	U		10	U		11	U	

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	436-SS-SB09-05											
SAMPLE DATE:	05/03/00			/ /			/ /			/ /		
LABORATORY ID:	A0E040160004											
QC_TYPE:	NORMAL											
% SOLIDS:	94.7 %			100.0 %			100.0 %			100.0 %		
UNITS:	MG/KG											
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TOTAL PETROLEUM HYDROCARBONS	11	U										

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	358-SS-SB01-04			358-SS-SB04-04			358-SS-SB05-04			4252-SS-SB02-05		
SAMPLE DATE:	05/04/00			05/04/00			05/04/00			05/02/00		
LABORATORY ID:	A0E050174002			A0E050174003			A0E050174004			A0E030194001		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	87.0 %			91.3 %			82.0 %			92.9 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	57	U		55	U		61	U		54	U	
2-METHYLNAPHTHALENE	57	U		55	U		61	U		54	U	
ACENAPHTHENE	57	U		55	U		61	U		54	U	
ACENAPHTHYLENE	57	U		55	U		61	U		54	U	
ANTHRACENE	57	U		55	U		61	U		54	U	
BENZO(A)ANTHRACENE	5.7	U		5.5	U		6.1	U		5.4	U	
BENZO(A)PYRENE	5.7	U		5.5	U		6.1	U		5.4	U	
BENZO(B)FLUORANTHENE	5.7	U		5.5	U		6.1	U		5.4	U	
BENZO(G,H,I)PERYLENE	5.7	U		5.5	U		6.1	U		5.4	U	
BENZO(K)FLUORANTHENE	5.7	U		5.5	U		6.1	U		5.4	U	
CHRYSENE	5.7	U		5.5	U		6.1	U		5.4	U	
DIBENZO(A,H)ANTHRACENE	5.7	U		5.5	U		6.1	U		5.4	U	
FLUORANTHENE	5.7	U		5.5	U		6.1	U		5.4	U	
FLUORENE	57	U		55	U		61	U		54	U	
INDENO(1,2,3-CD)PYRENE	5.7	U		5.5	U		6.1	U		5.4	U	
NAPHTHALENE	57	U		55	U		61	U		54	U	
PHENANTHRENE	57	U		55	U		61	U		54	U	
PYRENE	5.7	U		5.5	U		6.1	U		5.4	U	

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	4252-SS-SB04-05			4252-SS-SB11-05			436-SS-SB01-05			436-SS-SB04-05		
SAMPLE DATE:	05/02/00			05/02/00			05/03/00			05/03/00		
LABORATORY ID:	A0E030194002			A0E030194003			A0E040160002			A0E040160003		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	90.2 %			90.0 %			95.9 %			94.9 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	55	U		56	U		52	U		53	U	
2-METHYLNAPHTHALENE	55	U		56	U		52	U		53	U	
ACENAPHTHENE	55	U		56	U		52	U		53	U	
ACENAPHTHYLENE	55	U		56	U		52	U		53	U	
ANTHRACENE	55	U		56	U		52	U		53	U	
BENZO(A)ANTHRACENE	5.5	U		5.6	U		5.2	U		1.2	J	
BENZO(A)PYRENE	5.5	U		5.6	U		5.2	U		5.3	U	
BENZO(B)FLUORANTHENE	5.5	U		5.6	U		5.2	U		5.3	U	
BENZO(G,H,I)PERYLENE	5.5	U		5.6	U		5.2	U		5.3	U	
BENZO(K)FLUORANTHENE	5.5	U		5.6	U		5.2	U		5.3	U	
CHRYSENE	5.5	U		5.6	U		2	J	P	5.3	U	
DIBENZO(A,H)ANTHRACENE	5.5	U		5.6	U		5.2	U		5.3	U	
FLUORANTHENE	5.5	U		5.6	U		5.2	U		5.3	U	
FLUORENE	55	U		56	U		52	U		53	U	
INDENO(1,2,3-CD)PYRENE	5.5	U		5.6	U		5.2	U		5.3	U	
NAPHTHALENE	55	U		56	U		52	U		53	U	
PHENANTHRENE	55	U		56	U		52	U		53	U	
PYRENE	5.5	U		5.6	U		2.8	J	P	3.9	J	

CTO123-NS MAYPORT
SOIL DATA
QUANTERRA
SDG: MP007

SAMPLE NUMBER:	436-SS-SB09-05			
SAMPLE DATE:	05/03/00	/ /	/ /	/ /
LABORATORY ID:	A0E040160004			
QC_TYPE:	NORMAL			
% SOLIDS:	94.7 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/KG			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	53	U										
2-METHYLNAPHTHALENE	53	U										
ACENAPHTHENE	53	U										
ACENAPHTHYLENE	53	U										
ANTHRACENE	53	U										
BENZO(A)ANTHRACENE	5.3	U										
BENZO(A)PYRENE	5.3	U										
BENZO(B)FLUORANTHENE	5.3	U										
BENZO(G,H,I)PERYLENE	5.3	U										
BENZO(K)FLUORANTHENE	5.3	U										
CHRYSENE	5.3	U										
DIBENZO(A,H)ANTHRACENE	5.3	U										
FLUORANTHENE	5.3	U										
FLUORENE	53	U										
INDENO(1,2,3-CD)PYRENE	5.3	U										
NAPHTHALENE	53	U										
PHENANTHRENE	53	U										
PYRENE	5.3	U										

Chain of Custody Record

Quanterra

0.0°C

GUA-4124

Client: TETRA TECH NUS	Project Manager: RICK OFSANKO	Date: 5/2/00	Chain Of Custody Number: 59266
Address: 794 S. MILITARY TRAIL	Telephone Number (Area Code)/Fax Number: (954) 570-5885 ext 250	Lab Number:	Page 1 of 1
City: DEERFIELD BEACH; State: FL; Zip Code: 33442	Site Contact: GARY BRAGANZA		
Project Name: NS MAYPORT	Carrier/Waybill Number: FED-EX		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOC	SVOC	PAH	TRPH	TOTAL LEAD	As, Cd + Cr	FOC
4252-SS-SB02-05	5/2/00	8:00	SOIL				NONE		✓	✓	✓	✓	✓	✓	
4252-SS-SB04-05	↓	8:45	↓				↓		✓	✓	✓	✓	✓	✓	
4252-SS-SB11-05	↓	13:00	↓				↓		✓	✓	✓	✓	✓	✓	✓

Analysis

Special Instructions

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☑ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time
1. Relinquished By: Gary Braganza	5/2/00	
2. Relinquished By		
3. Relinquished By		

	Date	Time
1. Received By		
2. Received By: S	5/3/00	9 05
3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g
Work Order: DCP07105
Dilution factor: 1.3
Moisture %:7.1

Date Received: 05/03/00
Date Extracted:05/11/00
Date Analyzed: 05/11/00

QC Batch: 0133230

Client Sample Id: 4252-SS-SB05-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
110-75-8	2-Chloroethyl vinyl ether	70	U
156-59-2	cis-1,2-Dichloroethene	3.5	U
540-59-0	1,2-Dichloroethene (total)	7.0	U
67-64-1	Acetone	5.0	J B
75-05-8	Acetonitrile	140	U
107-02-8	Acrolein	140	U
107-13-1	Acrylonitrile	140	U
107-05-1	Allyl chloride	14	U
71-43-2	Benzene	7.0	U
75-27-4	Bromodichloromethane	7.0	U
75-25-2	Bromoform	7.0	U
74-83-9	Bromomethane	14	U
78-93-3	2-Butanone (MEK)	1.7	J B
75-15-0	Carbon disulfide	7.0	U
56-23-5	Carbon tetrachloride	7.0	U
108-90-7	Chlorobenzene	7.0	U
75-00-3	Chloroethane	14	U
67-66-3	Chloroform	7.0	U
74-87-3	Chloromethane	14	U
126-99-8	Chloroprene	7.0	U
124-48-1	Dibromochloromethane	7.0	U
96-12-8	1,2-Dibromo-3-chloropropane	14	U
106-93-4	1,2-Dibromoethane (EDB)	7.0	U
74-95-3	Dibromomethane	7.0	U
110-57-6	trans-1,4-Dichloro-2-butene	7.0	U
75-71-8	Dichlorodifluoromethane	14	U
75-34-3	1,1-Dichloroethane	7.0	U
107-06-2	1,2-Dichloroethane	7.0	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g
Work Order: DCP07105
Dilution factor: 1.3
Moisture %:7.1

Date Received: 05/03/00
Date Extracted:05/11/00
Date Analyzed: 05/11/00

QC Batch: 0133230

Client Sample Id: 4252-SS-SB05-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
75-35-4	1,1-Dichloroethene	2.9	J
156-60-5	trans-1,2-Dichloroethene	3.5	U
78-87-5	1,2-Dichloropropane	7.0	U
10061-01-5	cis-1,3-Dichloropropene	7.0	U
10061-02-6	trans-1,3-Dichloropropene	7.0	U
100-41-4	Ethylbenzene	0.46	J
97-63-2	Ethyl methacrylate	7.0	U
591-78-6	2-Hexanone	28	U
74-88-4	Iodomethane	7.0	U
78-83-1	Isobutyl alcohol	280	U
126-98-7	Methacrylonitrile	7.0	U
75-09-2	Methylene chloride	0.64	J
80-62-6	Methyl methacrylate	7.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	2.8	J
107-12-0	Propionitrile	28	U
100-42-5	Styrene	7.0	U
630-20-6	1,1,1,2-Tetrachloroethane	7.0	U
79-34-5	1,1,2,2-Tetrachloroethane	7.0	U
127-18-4	Tetrachloroethene	7.0	U
108-88-3	Toluene	0.64	J
71-55-6	1,1,1-Trichloroethane	7.0	U
79-00-5	1,1,2-Trichloroethane	7.0	U
79-01-6	Trichloroethene	7.0	U
75-69-4	Trichlorofluoromethane	14	U
96-18-4	1,2,3-Trichloropropane	7.0	U
108-05-4	Vinyl acetate	14	U
75-01-4	Vinyl chloride	14	U
1330-20-7	Xylenes (total)	1.7	J

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.19 / g Date Received: 05/03/00
Work Order: DCP07109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:7.1

QC Batch: 0130139

Client Sample Id: 4252-SS-SB05-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	360	U
208-96-8	Acenaphthylene	360	U
98-86-2	Acetophenone	360	U
53-96-3	2-Acetylaminofluorene	3600	U
92-67-1	4-Aminobiphenyl	1700	U
62-53-3	Aniline	360	U
120-12-7	Anthracene	360	U
92-87-5	Benzidine	3600	U
56-55-3	Benzo(a)anthracene	360	U
205-99-2	Benzo(b)fluoranthene	360	U
207-08-9	Benzo(k)fluoranthene	360	U
191-24-2	Benzo(ghi)perylene	360	U
50-32-8	Benzo(a)pyrene	360	U
100-51-6	Benzyl alcohol	360	U
111-91-1	bis(2-Chloroethoxy)methane	360	U
111-44-4	bis(2-Chloroethyl) ether	360	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	360	U
117-81-7	bis(2-Ethylhexyl) phthalate	360	U
101-55-3	4-Bromophenyl phenyl ether	360	U
85-68-7	Butyl benzyl phthalate	360	U
106-47-8	4-Chloroaniline	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-58-7	2-Chloronaphthalene	360	U
95-57-8	2-Chlorophenol	360	U
7005-72-3	4-Chlorophenyl phenyl ether	360	U
218-01-9	Chrysene	360	U
2303-16-4	Diallate	710	U
53-70-3	Dibenz(a,h)anthracene	360	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.19 / g
Work Order: DCP07109
Dilution factor: 1
Moisture %:7.1

Date Received: 05/03/00
Date Extracted:05/09/00
Date Analyzed: 05/15/00

QC Batch: 0130139

Client Sample Id: 4252-SS-SB05-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
132-64-9	Dibenzofuran	360	U
84-74-2	Di-n-butyl phthalate	360	U
95-50-1	1,2-Dichlorobenzene	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
120-83-2	2,4-Dichlorophenol	360	U
87-65-0	2,6-Dichlorophenol	360	U
84-66-2	Diethyl phthalate	360	U
60-11-7	p-Dimethylaminoazobenzene	710	U
57-97-6	7,12-Dimethylbenz(a)anthrace	710	U
119-93-7	3,3'-Dimethylbenzidine	1700	U
105-67-9	2,4-Dimethylphenol	360	U
131-11-3	Dimethyl phthalate	360	U
117-84-0	Di-n-octyl phthalate	360	U
99-65-0	1,3-Dinitrobenzene	360	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
51-28-5	2,4-Dinitrophenol	1700	U
121-14-2	2,4-Dinitrotoluene	360	U
606-20-2	2,6-Dinitrotoluene	360	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	710	U
123-91-1	1,4-Dioxane	360	U
122-39-4	Diphenylamine	360	U
122-66-7	1,2-Diphenylhydrazine	360	U
62-50-0	Ethyl methanesulfonate	360	U
206-44-0	Fluoranthene	360	U
86-73-7	Fluorene	360	U
118-74-1	Hexachlorobenzene	360	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.19 / g Date Received: 05/03/00
Work Order: DCP07109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:7.1

QC Batch: 0130139

Client Sample Id: 4252-SS-SB05-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
87-68-3	Hexachlorobutadiene	360	U
77-47-4	Hexachlorocyclopentadiene	1700	U
67-72-1	Hexachloroethane	360	U
1888-71-7	Hexachloropropene	3600	U
193-39-5	Indeno(1,2,3-cd)pyrene	360	U
78-59-1	Isophorone	360	U
120-58-1	Isosafrole	710	U
91-80-5	Methapyrilene	1700	U
95-53-4	o-Toluidine	710	U
56-49-5	3-Methylcholanthrene	710	U
66-27-3	Methyl methanesulfonate	360	U
91-57-6	2-Methylnaphthalene	360	U
95-48-7	2-Methylphenol	360	U
108-39-4	3-Methylphenol	360	U
106-44-5	4-Methylphenol	360	U
91-20-3	Naphthalene	360	U
130-15-4	1,4-Naphthoquinone	1700	U
134-32-7	1-Naphthylamine	360	U
91-59-8	2-Naphthylamine	360	U
88-74-4	2-Nitroaniline	1700	U
99-09-2	3-Nitroaniline	1700	U
100-01-6	4-Nitroaniline	1700	U
98-95-3	Nitrobenzene	360	U
88-75-5	2-Nitrophenol	360	U
100-02-7	4-Nitrophenol	1700	U
56-57-5	4-Nitroquinoline-1-oxide	3600	U
924-16-3	N-Nitrosodi-n-butylamine	360	U
55-18-5	N-Nitrosodiethylamine	360	U

FORM I

TETRA TECH NUS, INC.

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Matrix: (soil/water) SO Lab Sample ID:A0E030194 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.19 / g Date Received: 05/03/00
Work Order: DCP07109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:7.1

QC Batch: 0130139

Client Sample Id: 4252-SS-SB05-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
62-75-9	N-Nitrosodimethylamine	360	U
621-64-7	N-Nitrosodi-n-propylamine	360	U
86-30-6	N-Nitrosodiphenylamine	360	U
10595-95-6	N-Nitrosomethylethylamine	360	U
59-89-2	N-Nitrosomorpholine	360	U
100-75-4	N-Nitrosopiperidine	360	U
930-55-2	N-Nitrosopyrrolidine	360	U
99-55-8	5-Nitro-o-toluidine	710	U
608-93-5	Pentachlorobenzene	360	U
76-01-7	Pentachloroethane	1700	U
82-68-8	Pentachloronitrobenzene	1700	U
87-86-5	Pentachlorophenol	1700	U
62-44-2	Phenacetin	710	U
85-01-8	Phenanthrene	360	U
108-95-2	Phenol	360	U
106-50-3	p-Phenylene diamine	3600	U
109-06-8	2-Picoline	710	U
23950-58-5	Pronamide	710	U
129-00-0	Pyrene	360	U
110-86-1	Pyridine	710	U
94-59-7	Safrole	710	U
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U
58-90-2	2,3,4,6-Tetrachlorophenol	1700	U
120-82-1	1,2,4-Trichlorobenzene	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
99-35-4	1,3,5-Trinitrobenzene	1700	U
86-74-8	Carbazole	360	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.19 / g Date Received: 05/03/00
Work Order: DCP07109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:7.1

QC Batch: 0130139

Client Sample Id: 4252-SS-SB05-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
510-15-6	Chlorobenzilate	360	U
122-09-8	a,a-Dimethylphenethylamine	1700	U
140-57-8	Aramite	710	U

FORM I

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP007

Lab Sample ID: A0E030194 001

Matrix: (soil/water) SO
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g
Work Order: DCP07107
Dilution factor: 1

Date Received: 05/03/00
Date Extracted: 05/09/00
Date Analyzed: 05/10/00

QC Batch: 0130194

Client Sample Id: 4252-SS-SB05-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q743	Petroleum Range Organics (C8	11	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	85	(22 - 152)
o-Terphenyl	96	(45 - 143)

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g
Work Order: DCP18105
Dilution factor: 1.27
Moisture %:9.8

Date Received: 05/03/00
Date Extracted:05/11/00
Date Analyzed: 05/11/00

QC Batch: 0133230

Client Sample Id: 4252-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
110-75-8	2-Chloroethyl vinyl ether	70	U
156-59-2	cis-1,2-Dichloroethene	3.5	U
540-59-0	1,2-Dichloroethene (total)	7.0	U
67-64-1	Acetone	6.7	J B
75-05-8	Acetonitrile	140	U
107-02-8	Acrolein	140	U
107-13-1	Acrylonitrile	140	U
107-05-1	Allyl chloride	14	U
71-43-2	Benzene	7.0	U
75-27-4	Bromodichloromethane	7.0	U
75-25-2	Bromoform	7.0	U
74-83-9	Bromomethane	14	U
78-93-3	2-Butanone (MEK)	28	U
75-15-0	Carbon disulfide	7.0	U
56-23-5	Carbon tetrachloride	7.0	U
108-90-7	Chlorobenzene	7.0	U
75-00-3	Chloroethane	14	U
67-66-3	Chloroform	7.0	U
74-87-3	Chloromethane	14	U
126-99-8	Chloroprene	7.0	U
124-48-1	Dibromochloromethane	7.0	U
96-12-8	1,2-Dibromo-3-chloropropane	14	U
106-93-4	1,2-Dibromoethane (EDB)	7.0	U
74-95-3	Dibromomethane	7.0	U
110-57-6	trans-1,4-Dichloro-2-butene	7.0	U
75-71-8	Dichlorodifluoromethane	14	U
75-34-3	1,1-Dichloroethane	7.0	U
107-06-2	1,2-Dichloroethane	7.0	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/03/00
Work Order: DCP18105 Date Extracted:05/11/00
Dilution factor: 1.27 Date Analyzed: 05/11/00
Moisture %:9.8

QC Batch: 0133230

Client Sample Id: 4252-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
75-35-4	1,1-Dichloroethene	7.0	U
156-60-5	trans-1,2-Dichloroethene	3.5	U
78-87-5	1,2-Dichloropropane	7.0	U
10061-01-5	cis-1,3-Dichloropropene	7.0	U
10061-02-6	trans-1,3-Dichloropropene	7.0	U
100-41-4	Ethylbenzene	7.0	U
97-63-2	Ethyl methacrylate	7.0	U
591-78-6	2-Hexanone	28	U
74-88-4	Iodomethane	7.0	U
78-83-1	Isobutyl alcohol	280	U
126-98-7	Methacrylonitrile	7.0	U
75-09-2	Methylene chloride	0.79	J
80-62-6	Methyl methacrylate	7.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	28	U
107-12-0	Propionitrile	28	U
100-42-5	Styrene	7.0	U
630-20-6	1,1,1,2-Tetrachloroethane	7.0	U
79-34-5	1,1,2,2-Tetrachloroethane	7.0	U
127-18-4	Tetrachloroethene	7.0	U
108-88-3	Toluene	0.65	J
71-55-6	1,1,1-Trichloroethane	7.0	U
79-00-5	1,1,2-Trichloroethane	7.0	U
79-01-6	Trichloroethene	7.0	U
75-69-4	Trichlorofluoromethane	14	U
96-18-4	1,2,3-Trichloropropane	7.0	U
108-05-4	Vinyl acetate	14	U
75-01-4	Vinyl chloride	14	U
1330-20-7	Xylenes (total)	14	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.1 / g Date Received: 05/03/00
Work Order: DCP18109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:9.8

QC Batch: 0130139

Client Sample Id: 4252-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	370	U
208-96-8	Acenaphthylene	370	U
98-86-2	Acetophenone	370	U
53-96-3	2-Acetylaminofluorene	3700	U
92-67-1	4-Aminobiphenyl	1800	U
62-53-3	Aniline	370	U
120-12-7	Anthracene	370	U
92-87-5	Benzidine	3700	U
56-55-3	Benzo(a)anthracene	370	U
205-99-2	Benzo(b)fluoranthene	370	U
207-08-9	Benzo(k)fluoranthene	370	U
191-24-2	Benzo(ghi)perylene	370	U
50-32-8	Benzo(a)pyrene	370	U
100-51-6	Benzyl alcohol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	370	U
117-81-7	bis(2-Ethylhexyl) phthalate	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
85-68-7	Butyl benzyl phthalate	370	U
106-47-8	4-Chloroaniline	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-58-7	2-Chloronaphthalene	370	U
95-57-8	2-Chlorophenol	370	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
218-01-9	Chrysene	370	U
2303-16-4	Diallate	730	U
53-70-3	Dibenz(a,h)anthracene	370	U

FORM I

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP007

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QC Batch: 0130139

Client Sample Id: 4252-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
132-64-9	Dibenzofuran	370	U
84-74-2	Di-n-butyl phthalate	370	U
95-50-1	1,2-Dichlorobenzene	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
120-83-2	2,4-Dichlorophenol	370	U
87-65-0	2,6-Dichlorophenol	370	U
84-66-2	Diethyl phthalate	370	U
60-11-7	p-Dimethylaminoazobenzene	730	U
57-97-6	7,12-Dimethylbenz(a)anthrace	730	U
119-93-7	3,3'-Dimethylbenzidine	1800	U
105-67-9	2,4-Dimethylphenol	370	U
131-11-3	Dimethyl phthalate	370	U
117-84-0	Di-n-octyl phthalate	370	U
99-65-0	1,3-Dinitrobenzene	370	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
51-28-5	2,4-Dinitrophenol	1800	U
121-14-2	2,4-Dinitrotoluene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	730	U
123-91-1	1,4-Dioxane	370	U
122-39-4	Diphenylamine	370	U
122-66-7	1,2-Diphenylhydrazine	370	U
62-50-0	Ethyl methanesulfonate	370	U
206-44-0	Fluoranthene	370	U
86-73-7	Fluorene	370	U
118-74-1	Hexachlorobenzene	370	U

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TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

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Base/Neutrals and Acids (8270C)

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QC Batch: 0130139

Client Sample Id: 4252-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
87-68-3	Hexachlorobutadiene	370	U
77-47-4	Hexachlorocyclopentadiene	1800	U
67-72-1	Hexachloroethane	370	U
1888-71-7	Hexachloropropene	3700	U
193-39-5	Indeno(1,2,3-cd)pyrene	370	U
78-59-1	Isophorone	370	U
120-58-1	Isosafrole	730	U
91-80-5	Methapyrilene	1800	U
95-53-4	o-Toluidine	730	U
56-49-5	3-Methylcholanthrene	730	U
66-27-3	Methyl methanesulfonate	370	U
91-57-6	2-Methylnaphthalene	370	U
95-48-7	2-Methylphenol	370	U
108-39-4	3-Methylphenol	370	U
106-44-5	4-Methylphenol	370	U
91-20-3	Naphthalene	370	U
130-15-4	1,4-Naphthoquinone	1800	U
134-32-7	1-Naphthylamine	370	U
91-59-8	2-Naphthylamine	370	U
88-74-4	2-Nitroaniline	1800	U
99-09-2	3-Nitroaniline	1800	U
100-01-6	4-Nitroaniline	1800	U
98-95-3	Nitrobenzene	370	U
88-75-5	2-Nitrophenol	370	U
100-02-7	4-Nitrophenol	1800	U
56-57-5	4-Nitroquinoline-1-oxide	3700	U
924-16-3	N-Nitrosodi-n-butylamine	370	U
55-18-5	N-Nitrosodiethylamine	370	U

FORM I

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP007

Matrix: (soil/water) SO Lab Sample ID: A0E030194 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.1 / g Date Received: 05/03/00
Work Order: DCP18109 Date Extracted: 05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %: 9.8

QC Batch: 0130139

Client Sample Id: 4252-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
62-75-9	N-Nitrosodimethylamine	370	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
86-30-6	N-Nitrosodiphenylamine	370	U
10595-95-6	N-Nitrosomethylethylamine	370	U
59-89-2	N-Nitrosomorpholine	370	U
100-75-4	N-Nitrosopiperidine	370	U
930-55-2	N-Nitrosopyrrolidine	370	U
99-55-8	5-Nitro-o-toluidine	730	U
608-93-5	Pentachlorobenzene	370	U
76-01-7	Pentachloroethane	1800	U
82-68-8	Pentachloronitrobenzene	1800	U
87-86-5	Pentachlorophenol	1800	U
62-44-2	Phenacetin	730	U
85-01-8	Phenanthrene	370	U
108-95-2	Phenol	370	U
106-50-3	p-Phenylene diamine	3700	U
109-06-8	2-Picoline	730	U
23950-58-5	Pronamide	730	U
129-00-0	Pyrene	370	U
110-86-1	Pyridine	730	U
94-59-7	Safrole	730	U
95-94-3	1,2,4,5-Tetrachlorobenzene	370	U
58-90-2	2,3,4,6-Tetrachlorophenol	1800	U
120-82-1	1,2,4-Trichlorobenzene	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
99-35-4	1,3,5-Trinitrobenzene	1800	U
86-74-8	Carbazole	370	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.1 / g Date Received: 05/03/00
Work Order: DCP18109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:9.8

QC Batch: 0130139

Client Sample Id: 4252-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
510-15-6	Chlorobenzilate	370	U
122-09-8	a,a-Dimethylphenethylamine	1800	U
140-57-8	Aramite	730	U

FORM I

TETRA TECH NUS, INC.

Client Sample ID: 4252-SS-SB04-05

HPLC

Lot-Sample #...: A0E030194-002 Work Order #...: DCP18106 Matrix.....: SO
Date Sampled...: 05/02/00 08:45 Date Received..: 05/03/00
Prep Date.....: 05/09/00 Analysis Date..: 05/13/00
Prep Batch #...: 0130193
Dilution Factor: 1
% Moisture.....: 9.8 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Methylnaphthalene	ND	55	ug/kg
1-Methylnaphthalene	ND	55	ug/kg
Acenaphthene	ND	55	ug/kg
Acenaphthylene	ND	55	ug/kg
Anthracene	ND	55	ug/kg
Benzo(a)anthracene	ND	5.5	ug/kg
Benzo(a)pyrene	ND	5.5	ug/kg
Benzo(b)fluoranthene	ND	5.5	ug/kg
Benzo(ghi)perylene	ND	5.5	ug/kg
Benzo(k)fluoranthene	ND	5.5	ug/kg
Chrysene	ND	5.5	ug/kg
Dibenz(a,h)anthracene	ND	5.5	ug/kg
Fluoranthene	ND	5.5	ug/kg
Fluorene	ND	55	ug/kg
Indeno(1,2,3-cd)pyrene	ND	5.5	ug/kg
Naphthalene	ND	55	ug/kg
Phenanthrene	ND	55	ug/kg
Pyrene	ND	5.5	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	64	(17 - 115)

NOTE(S):
Results and reporting limits have been adjusted for dry weight.

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP007

Lab Sample ID: A0E030194 002

Matrix: (soil/water) SO
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g
Work Order: DCP18107
Dilution factor: 1

Date Received: 05/03/00
Date Extracted: 05/09/00
Date Analyzed: 05/10/00

QC Batch: 0130194

Client Sample Id: 4252-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
0743	Petroleum Range Organics (C8	10	J

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	83	(22 - 152)
o-Terphenyl	105	(45 - 143)

FORM I

TETRA TECH NUS, INC.

Client Sample ID: 4252-SS-SB11-05

HPLC

Lot-Sample #...: A0E030194-003 Work Order #...: DCP1J106 Matrix.....: SO
Date Sampled...: 05/02/00 13:00 Date Received..: 05/03/00
Prep Date.....: 05/09/00 Analysis Date..: 05/13/00
Prep Batch #...: 0130193
Dilution Factor: 1
% Moisture.....: 10 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Methylnaphthalene	ND	56	ug/kg
1-Methylnaphthalene	ND	56	ug/kg
Acenaphthene	ND	56	ug/kg
Acenaphthylene	ND	56	ug/kg
Anthracene	ND	56	ug/kg
Benzo(a)anthracene	ND	5.6	ug/kg
Benzo(a)pyrene	ND	5.6	ug/kg
Benzo(b)fluoranthene	ND	5.6	ug/kg
Benzo(ghi)perylene	ND	5.6	ug/kg
Benzo(k)fluoranthene	ND	5.6	ug/kg
Chrysene	ND	5.6	ug/kg
Dibenz(a,h)anthracene	ND	5.6	ug/kg
Fluoranthene	ND	5.6	ug/kg
Fluorene	ND	56	ug/kg
Indeno(1,2,3-cd)pyrene	ND	5.6	ug/kg
Naphthalene	ND	56	ug/kg
Phenanthrene	ND	56	ug/kg
Pyrene	ND	5.6	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	73	(17 - 115)

NOTE(S):
Results and reporting limits have been adjusted for dry weight.

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP007

Lab Sample ID: A0E030194 003

Matrix: (soil/water) SO
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g
Work Order: DCP1J107
Dilution factor: 1

Date Received: 05/03/00
Date Extracted: 05/09/00
Date Analyzed: 05/11/00

QC Batch: 0130194

Client Sample Id: 4252-SS-SB11-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q743	Petroleum Range Organics (C8	11	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	94	(22 - 152)
o-Terphenyl	96	(45 - 143)

FORM I

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP007

Matrix: (soil/water) SO Lab Sample ID: A0E050174 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/05/00
Work Order: DCT1D101 Date Extracted: 05/12/00
Dilution factor: 2.58 Date Analyzed: 05/12/00
Moisture %:

QC Batch: 0136257

Client Sample Id: 4252-SS-SB11-05

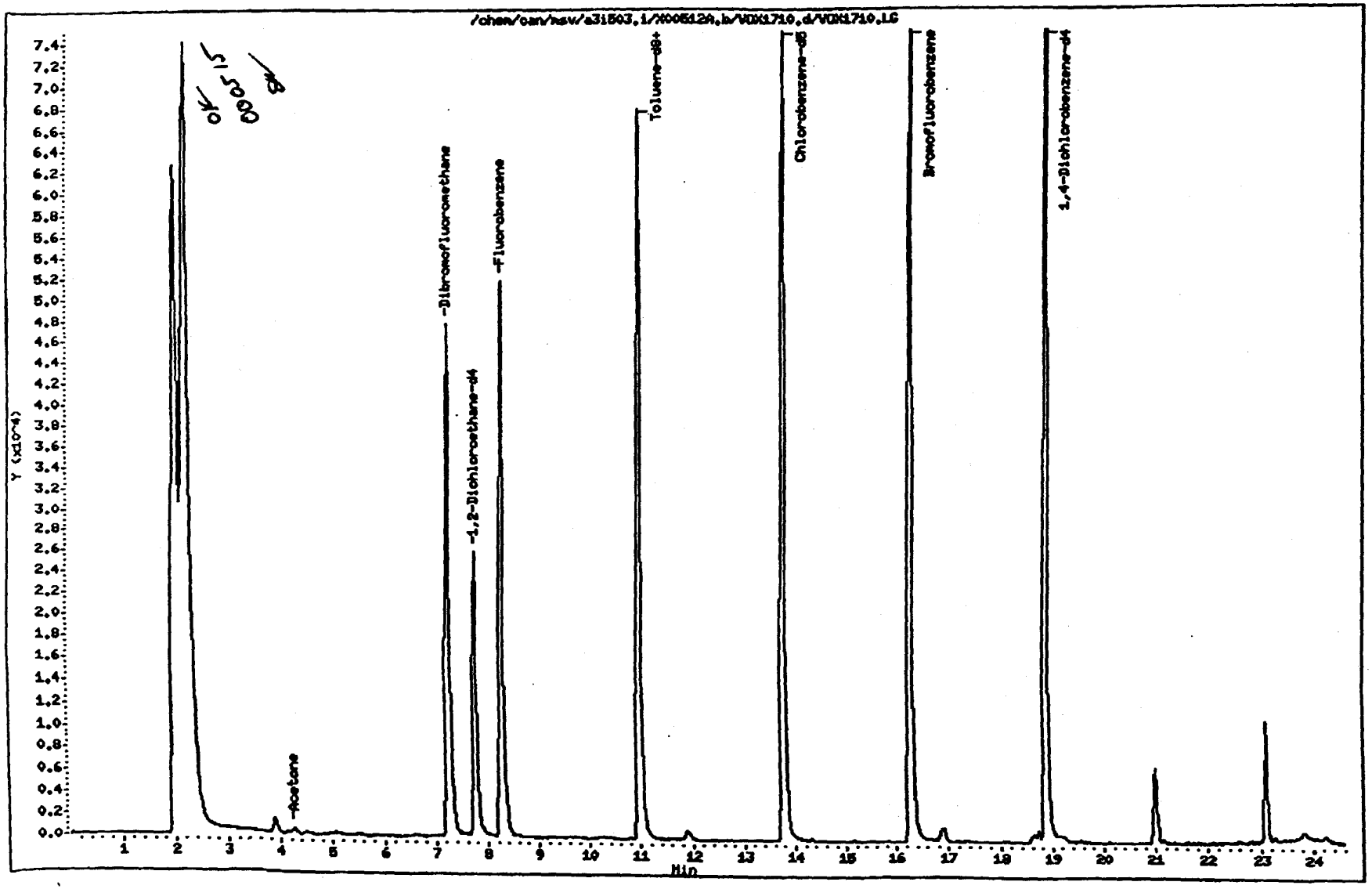
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
100-41-4	Ethylbenzene	13	U
97-63-2	Ethyl methacrylate	13	U
75-69-4	Trichlorofluoromethane	26	U
591-78-6	2-Hexanone	52	U
74-88-4	Iodomethane	13	U
78-83-1	Isobutyl alcohol	520	U
126-98-7	Methacrylonitrile	13	U
75-09-2	Methylene chloride	13	U
80-62-6	Methyl methacrylate	13	U
107-12-0	Propionitrile	52	U
100-42-5	Styrene	13	U
630-20-6	1,1,1,2-Tetrachloroethane	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
127-18-4	Tetrachloroethene	13	U
108-88-3	Toluene	1.3	J
71-55-6	1,1,1-Trichloroethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
79-01-6	Trichloroethene	13	U
96-18-4	1,2,3-Trichloropropane	13	U
108-05-4	Vinyl acetate	26	U
75-01-4	Vinyl chloride	26	U
1330-20-7	Xylenes (total)	26	U
106-93-4	1,2-Dibromoethane (EDB)	13	U
78-93-3	2-Butanone (MEK)	52	U
108-10-1	4-Methyl-2-pentanone (MIBK)	52	U

FORM I

Data File: /chem/can/msv/a31503.i/X005120.b/VOX1710.d
Date : 12-MAY-2000 13:22
Client ID: 4252-SS-SB11-05
Sample Info: DCT1B101,,1.94G/5ML
Purge Volume: 1.9
Column phase: DB624 75m

Instrument: a31503.i

Operator: 01819
Column diameter: 0.53



TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.13 / g Date Received: 05/03/00
Work Order: DCP1J109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:10

QC Batch: 0130139

Client Sample Id: 4252-SS-SB11-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	370	U
208-96-8	Acenaphthylene	370	U
98-86-2	Acetophenone	370	U
53-96-3	2-Acetylaminofluorene	3700	U
92-67-1	4-Aminobiphenyl	1800	U
62-53-3	Aniline	370	U
120-12-7	Anthracene	370	U
92-87-5	Benzidine	3700	U
56-55-3	Benzo(a)anthracene	370	U
205-99-2	Benzo(b)fluoranthene	370	U
207-08-9	Benzo(k)fluoranthene	370	U
191-24-2	Benzo(ghi)perylene	370	U
50-32-8	Benzo(a)pyrene	370	U
100-51-6	Benzyl alcohol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
111-44-4	bis(2-Chloroethyl) ether	370	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	370	U
117-81-7	bis(2-Ethylhexyl) phthalate	370	U
101-55-3	4-Bromophenyl phenyl ether	370	U
85-68-7	Butyl benzyl phthalate	370	U
106-47-8	4-Chloroaniline	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-58-7	2-Chloronaphthalene	370	U
95-57-8	2-Chlorophenol	370	U
7005-72-3	4-Chlorophenyl phenyl ether	370	U
218-01-9	Chrysene	370	U
2303-16-4	Diallate	730	U
53-70-3	Dibenz(a,h)anthracene	370	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.13 / g Date Received: 05/03/00
Work Order: DCP1J109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:10

QC Batch: 0130139

Client Sample Id: 4252-SS-SB11-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
132-64-9	Dibenzofuran	370	U
84-74-2	Di-n-butyl phthalate	370	U
95-50-1	1,2-Dichlorobenzene	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
120-83-2	2,4-Dichlorophenol	370	U
87-65-0	2,6-Dichlorophenol	370	U
84-66-2	Diethyl phthalate	370	U
60-11-7	p-Dimethylaminoazobenzene	730	U
57-97-6	7,12-Dimethylbenz(a)anthrace	730	U
119-93-7	3,3'-Dimethylbenzidine	1800	U
105-67-9	2,4-Dimethylphenol	370	U
131-11-3	Dimethyl phthalate	370	U
117-84-0	Di-n-octyl phthalate	370	U
99-65-0	1,3-Dinitrobenzene	370	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
51-28-5	2,4-Dinitrophenol	1800	U
121-14-2	2,4-Dinitrotoluene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	730	U
123-91-1	1,4-Dioxane	370	U
122-39-4	Diphenylamine	370	U
122-66-7	1,2-Diphenylhydrazine	370	U
62-50-0	Ethyl methanesulfonate	370	U
206-44-0	Fluoranthene	370	U
86-73-7	Fluorene	370	U
118-74-1	Hexachlorobenzene	370	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.13 / g Date Received: 05/03/00
Work Order: DCP1J109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:10

QC Batch: 0130139

Client Sample Id: 4252-SS-SB11-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
87-68-3	Hexachlorobutadiene	370	U
77-47-4	Hexachlorocyclopentadiene	1800	U
67-72-1	Hexachloroethane	370	U
1888-71-7	Hexachloropropene	3700	U
193-39-5	Indeno(1,2,3-cd)pyrene	370	U
78-59-1	Isophorone	370	U
120-58-1	Isosafrole	730	U
91-80-5	Methapyrilene	1800	U
95-53-4	o-Toluidine	730	U
56-49-5	3-Methylcholanthrene	730	U
66-27-3	Methyl methanesulfonate	370	U
91-57-6	2-Methylnaphthalene	370	U
95-48-7	2-Methylphenol	370	U
108-39-4	3-Methylphenol	370	U
106-44-5	4-Methylphenol	370	U
91-20-3	Naphthalene	370	U
130-15-4	1,4-Naphthoquinone	1800	U
134-32-7	1-Naphthylamine	370	U
91-59-8	2-Naphthylamine	370	U
88-74-4	2-Nitroaniline	1800	U
99-09-2	3-Nitroaniline	1800	U
100-01-6	4-Nitroaniline	1800	U
98-95-3	Nitrobenzene	370	U
88-75-5	2-Nitrophenol	370	U
100-02-7	4-Nitrophenol	1800	U
56-57-5	4-Nitroquinoline-1-oxide	3700	U
924-16-3	N-Nitrosodi-n-butylamine	370	U
55-18-5	N-Nitrosodiethylamine	370	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.13 / g Date Received: 05/03/00
Work Order: DCP1J109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:10

QC Batch: 0130139

Client Sample Id: 4252-SS-SB11-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
62-75-9	N-Nitrosodimethylamine	370	U
621-64-7	N-Nitrosodi-n-propylamine	370	U
86-30-6	N-Nitrosodiphenylamine	370	U
10595-95-6	N-Nitrosomethylethylamine	370	U
59-89-2	N-Nitrosomorpholine	370	U
100-75-4	N-Nitrosopiperidine	370	U
930-55-2	N-Nitrosopyrrolidine	370	U
99-55-8	5-Nitro-o-toluidine	730	U
608-93-5	Pentachlorobenzene	370	U
76-01-7	Pentachloroethane	1800	U
82-68-8	Pentachloronitrobenzene	1800	U
87-86-5	Pentachlorophenol	1800	U
62-44-2	Phenacetin	730	U
85-01-8	Phenanthrene	370	U
108-95-2	Phenol	370	U
106-50-3	p-Phenylene diamine	3700	U
109-06-8	2-Picoline	730	U
23950-58-5	Pronamide	730	U
129-00-0	Pyrene	370	U
110-86-1	Pyridine	730	U
94-59-7	Safrole	730	U
95-94-3	1,2,4,5-Tetrachlorobenzene	370	U
58-90-2	2,3,4,6-Tetrachlorophenol	1800	U
120-82-1	1,2,4-Trichlorobenzene	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
99-35-4	1,3,5-Trinitrobenzene	1800	U
86-74-8	Carbazole	370	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E030194 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.13 / g Date Received: 05/03/00
Work Order: DCP1J109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:10

QC Batch: 0130139

Client Sample Id: 4252-SS-SB11-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
510-15-6	Chlorobenzilate	370	U
122-09-8	a,a-Dimethylphenethylamine	1800	U
140-57-8	Aramite	730	U

FORM I

SDG NARRATIVE
MP007

The following report contains the analytical results for eleven water samples submitted to STL North Canton by Tetra Tech NUS, Inc. from the NS Mayport-CTO 123 Site. The samples were received May 3, 4 and 5, 2000, according to documented sample acceptance procedures.

STL North Canton utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the method reference page in accordance with the methods indicated.

Samples submitted for FOC, TPH FL-PRO and PAH were analyzed at the STL Tampa facility.

Please refer to individual analytical sections for laboratory specific narratives.

SAMPLE RECEIVING

The encore volatile container, TRPH and FOC containers for sample "4252-SS-SB11-05" received on May 3, 2000, was not received in the sample shipment. All the analyses were able to be perform except for the volatile analysis.

Insufficient sample was received due perform the Leachability on sample "4251-SS-SB05-05".

SAMPLE SUMMARY

A0E030194

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
DCP07	001	4252-SS-SB05-05	05/02/00	11:00
DCP18	002	4252-SS-SB04-05	05/02/00	08:45
DCP1J	003	4252-SS-SB11-05	05/02/00	13:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Chain of Custody Record

Quanterra

0.0°C

DUA-4124

Client	Project Manager	Date	Chain Of Custody Number
TETRA TECH NUS	RICK OFSANKO	5/2/00	59266
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	
794 S. MILITARY TRAIL	(954) 570-5885 ext 250		Page 1 of 1
City / State / Zip Code	**Site Contact**		
DEERFIELD BEACH / FL / 33442	GARY BRAGANZA		
Project Name	**Carrier/Waybill Number**		
NS MAYPORT	FED-EX		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOC	SVOC	PAH	TRPH	TOTAL LEAD	Ar, Cd + Cr	EDC
4252-SS-SB02-05	5/2/00	11:45	SOIL				NONE		✓	✓	✓	✓	✓	✓	
4252-SS-SB04-05	↓	8:45	↓				↓		✓	✓	✓	✓	✓	✓	
4252-SS-SB11-05	↓	13:00	↓				↓		✓	✓	✓	✓	✓	✓	✓

Analysis

Special Instructions

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☑ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time
1. Relinquished By: Gary Bragança	5/2/00	
2. Relinquished By		
3. Relinquished By		

	Date	Time
1. Received By		
2. Received By: S	5/3/00	9 05
3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

Chain of Custody Record

Quanterra

0.0°C

DUA-4124

Client	Project Manager	Date	Chain Of Custody Number
TETRA TECH	RICK OFSANKO	5/3/00	59269
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page _____ of _____
	(954) 570-5885 - ext 227		

City	State	Zip Code	Site Contact
DEERFIELD BCH	FL	33442	GB

Project Name: NS MAYPORT - CTO 123

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.:

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOC	SVOC	PAH	TRPH	Total Lead	As, Cd, Cr	FOC	Grain size	Leachability
4251-SS-SB05-05	5/3	8:03	SOIL	500 ml			NONE									✓	✓
436-SS-SB01-05	↓	13:00	↓				↓		✓	✓	✓	✓	✓	✓	✓	✓	✓
436-SS-SB04-05	↓	13:45	↓				↓		✓	✓	✓	✓	✓	✓			
436-SS-SB09-05	↓	14:40	↓				↓		✓	✓	✓	✓	✓	✓			

Special Instructions:

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☑ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify):

	Date	Time
1. Relinquished By: Gary Burgess	5/3/00	17:30
2. Relinquished By:		
3. Relinquished By:		

	Date	Time
1. Received By:		
2. Received By:	5/4/00	9:45
3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

16

Chain of Custody Record

Quanterra

QUA-4124

0.1°C

Client	TETRA TECH NUS
Address	794 S. MILITARY TRAIL
City	DEERFIELD BEACH
State	FL
Zip Code	33442
Project Name	NS MAYPORT - CTO 123
Contract/Purchase Order/Quote No.	
Project Manager	RICK OFSANKO
Telephone Number (Area Code)/Fax Number	(954) 570-5885 x250
Site Contact	GB
Carrier/Waybill Number	FED-Ex/815314453839
Date	5/4/00
Lab Number	
Chain Of Custody Number	59268
Page	of

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt	VOC	SVOC	PAH	TRPH	FOC	Grain Size + Landfill Pkg
4252-SS-SB11-05	5/4	8:00	SOIL						✓					
358-SS-SB01-04	5/4	11:00	SOIL						✓	✓	✓	✓		
358-SS-SB04-04	5/4	14:00	SOIL						✓	✓	✓	✓	✓	✓
358-SS-SB05-04	5/4	16:00	SOIL						✓	✓	✓	✓	✓	✓

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☐ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By: Barry Bragg	5/4/00	15:15	1. Received By: [illegible]	5-5-00	9:05A
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL North Canton

17

Quanterra® Cooler Receipt Form/Narrative
North Canton Facility

Client: TETRA TECH Project: _____ Quote#: 33136
Cooler Received on: 5/3/00 Opened on: 5/3/00 by: _____ (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐
Other: _____

Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____
Quanterra Shipper No#: H 105

1. Were custody seals on the outside of the cooler and intact? Yes ☐ No ☒
   If YES, Quantity _____ Location _____
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☒
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:
Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: _____
6. Cooler temperature upon receipt 0.0 °C (see back of form for multiple coolers/temp)
METHOD: Temperature Vial ☐ Coolant ☒ Against Bottles ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☐ No ☒
8. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☐ No ☒
10. Were samples at the correct pH? Yes ☐ No ☐ NA ☒
11. Were correct bottles used for the tests indicated? Yes ☐ No ☒
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
13. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐
Contacted PM DJP Date: 5-3-00 by: [illegible] via Voice Mail ☒ Verbal ☐ Other ☐
Concerning: discrep. on COC

Check √	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	Samples were received under proper custody procedures and without discrepancies.
√	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred: no Encores for SB-11, no TRPH Bottle, no FOC Bottle for SB-11
2. SAMPLE CONDITION		First SAMP SB05 bottle, SB02 on COC, use SB05 per DJP [illegible] 5-3-00
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
√	SR3A	The temperature of the cooler was _____ °C
	SR3C	Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving.
	SR3D	Sample(s) _____ were received incorrectly preserved and split off in sample receiving.
	SR3E	Samples (s) _____ were received incorrectly preserved and were unable to be analyzed.
	SR3F	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	N/A	See back for other anomalies

* Do not run VOC on SB-11 (lab)
- enough volume to run TRPH/FOC off lab

Quanterra ® Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

Quanterra® Cooler Receipt Form/Narrative
North Canton Facility

Client: TETRA TECH Project: _____ Quote#: 35126
Cooler Received on: 5/4/00 Opened on: 5/4/00 by: _____ (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐
Other: _____

Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____
Quanterra Shipper No#: 500

1. Were custody seals on the outside of the cooler and intact? Yes ☒ No ☐
   If YES, Quantity 1 Location outside
   Were the custody seals signed and dated? Yes ☐ No ☒ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:
Peanuts ☐ Bubble Wrap ☐ Vermiculite ☐ Foam ☐ None ☐ Other: _____
6. Cooler temperature upon receipt 0.0 °C (see back of form for multiple coolers/temp)
METHOD: Temperature Vial ☐ Coolant ☒ Against Bottles ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☐ No ☒
8. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☒ No ☐
10. Were samples at the correct pH? Yes ☐ No ☐ NA ☒
11. Were correct bottles used for the tests indicated? Yes ☒ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
13. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐
Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐
Concerning: _____

Check √	MACRO	MACRO
1. CHAIN OF CUSTODY		
√	SR1A	Samples were received under proper custody procedures and without discrepancies.
	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred _____
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
√	SR3A	The temperature of the cooler was _____ °C
	SR3C	Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving.
	SR3D	Sample(s) _____ were received incorrectly preserved and split off in sample receiving.
	SR3E	Samples (s) _____ were received incorrectly preserved and were unable to be analyzed.
	SR3F	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	N/A	See back for other anomalies

Quanterra ® Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

Quanterra Cooler Receipt Form/Narrative

North Canton Facility

Client: Tetra Tech Project: Mayport Quote#: 33126

Cooler Received on: 5-5-00 Opened on: 5-5-00 by: Jenny Guiard (Signature)

Fedx ☐ Client Drop Off ☐ UPS ☐ Airborne ☐ Other: _____

Cooler ☐ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____

Quanterra Shipper No#: J772

1. Were custody seals on the outside of the cooler and intact? Yes ☐ No ☐
   If YES, Quantity _____ Location _____
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☐ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☐ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☐ No ☐
5. Packing material used:

Peanuts ☐ Bubble Wrap ☐ Vermiculite ☐ Foam ☐ None ☐ Other: _____

6. Cooler temperature upon receipt 0.1 °C (see back of form for multiple coolers/temp)

METHOD: Temperature Vial ☐ Coolant ☒ Against Bottles ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ None ☐

7. Were all the bottles sealed in separate plastic bags? Yes ☐ No ☐
8. Did all bottles arrive in good condition (Unbroken)? Yes ☐ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☐ No ☐
10. Were samples at the correct pH? Yes ☐ No ☐ NA ☐
11. Were correct bottles used for the tests indicated? Yes ☐ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☐
13. Was a sufficient amount of sample sent in each bottle? Yes ☐ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐

Concerning: _____

Check √	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	Samples were received under proper custody procedures and without discrepancies.
	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred _____
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
√	SR3A	The temperature of the cooler was _____ °C
	SR3C	Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving.
	SR3D	Sample(s) _____ were received incorrectly preserved and split off in sample receiving.
	SR3E	Samples (s) _____ were received incorrectly preserved and were unable to be analyzed.
	SR3F	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	N/A	See back for other anomalies

Quanterra ® Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

CASE NARRATIVE
GC/MS VOLATILES
MP007

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

Sample "4252-SS-SB11-05" is reported on a wet weight due to insufficient sample to perform the total solid analysis.

Samples in this lot were preserved by freezing in water due to samples effervescing when preserved with sodium bisulfate.

Sample(s) which contain results between the MDL and the RL are flagged with "J". There is the possibility of false positive or misidentification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation will be performed only down to the standard reporting limit (SRL). The acceptance criteria for quality control criteria may not be met at these quantitation levels.

Holding Time Violation

All samples were prepared and analyzed within the method-specified holding time requirements.

Method Blank Contamination

Sample(s) which contain concentrations of target analyte(s) at a reportable level in the associated method blank(s) have been flagged with B. All target analytes in the method blank must be below the reporting limits (RL) or the associated sample(s) must be ND with the exception of Methylene chloride, Acetone, and 2-Butanone. These are common laboratory contaminants and may be present in concentrations up to five times the reporting limits.

MS/MSD/LCS/DCS and Surrogates Outside of QC Criteria

All spike recovery and RPD data met method-specific quality control criteria.

Calibrations

All calibrations and calibration verifications met method-specific quality control criteria.

BLANK WORKORDER NO.

DD70R101

SW846 8260B METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP007

Lab File ID: VOX1704.d

Lot Number: A0E050174

Date Analyzed: 05/12/00

Time Analyzed: 10:25

Matrix: SOLID

Date Extracted:05/12/00

GC Column: DB 624 ID: .75

Extraction Method: 5035

Instrument ID: 503

Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	INTRA-LAB QC	DCRG712F	VOX1718.d	05/12/00	17:36
02	LAB MS/MSD	DCRG712N S	VOX1719.d	05/12/00	18:10
03	LAB MS/MSD	DCRG712P D	VOX1720.d	05/12/00	18:44
04	4252-SS-SB11-05	DCT1D101	VOX1710.d	05/12/00	13:22
05	358-SS-SB04-04	DCT2H101	VOX1712.d	05/12/00	14:22
06	358-SS-SB05-04	DCT2P102	VOX1713.d	05/12/00	14:53
07	358-SS-SB01-04	DCT23101	VOX1711.d	05/12/00	13:52
08	CHECK SAMPLE	DD70R102 C	VOX1702.d	05/12/00	09:26
09	DUPLICATE CHECK	DD70R103 L	VOX1703.d	05/12/00	09:55
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IV

BLANK WORKORDER NO.

DD4J1101

SW846 8260B METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP007

Lab File ID: ux91750.d

Lot Number: A0E030194

Date Analyzed: 05/11/00

Time Analyzed: 10:57

Matrix: SOLID

Date Extracted:05/11/00

GC Column: DB 624 ID: .18

Extraction Method: 5035

Instrument ID: UX9

Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	4252-SS-SB05-05	DCP07105	ux91767.d	05/11/00	17:58
02	4252-SS-SB04-05	DCP18105	ux91768.d	05/11/00	18:23
03	INTRA-LAB QC	DCQAJ12F	ux91757.d	05/11/00	13:50
04	LAB MS/MSD	DCQAJ12N S	ux91758.d	05/11/00	14:15
05	LAB MS/MSD	DCQAJ12P D	ux91759.d	05/11/00	14:40
06	CHECK SAMPLE	DD4J1102 C	ux91748.d	05/11/00	10:08
07	DUPLICATE CHECK	DD4J1103 L	ux91749.d	05/11/00	10:32
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IV

BLANK WORKORDER NO.

DD4J1101

SW846 8260B METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP007

Lab File ID: ux91750.d

Lot Number: A0E040160

Date Analyzed: 05/11/00

Time Analyzed: 10:57

Matrix: SOLID

Date Extracted:05/11/00

GC Column: DB 624 ID: .18

Extraction Method: 5035

Instrument ID: UX9

Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	INTRA-LAB QC	DCQAJ12F	ux91757.d	05/11/00	13:50
02	LAB MS/MSD	DCQAJ12N S	ux91758.d	05/11/00	14:15
03	LAB MS/MSD	DCQAJ12P D	ux91759.d	05/11/00	14:40
04	436-SS-SB01-05	DCQ91105	ux91769.d	05/11/00	18:48
05	436-SS-SB04-05	DCQ95105	ux91770.d	05/11/00	19:12
06	436-SS-SB09-05	DCQ97105	ux91771.d	05/11/00	19:37
07	CHECK SAMPLE	DD4J1102 C	ux91748.d	05/11/00	10:08
08	DUPLICATE CHECK	DD4J1103 L	ux91749.d	05/11/00	10:32
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
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24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IV

APPENDIX H

MOBILE LABORATORY ANALYTICAL REPORTS FOR GROUNDWATER

TetraTech NUS

Analytical Data
Mayport NAS, Bldg 425
Jacksonville, FL
5/1/00 - 5/5/00

Method 8260 (ug/L)	4252-gw-tw07-01	4252-gw-tw04-01	4252-gw-tw01-01	4252-gw-tw08-01	4252-gw-tw05-01	4252-gw-tw02-01	4252-gw-fd02-01	4252-gw-tw03-01
MTBE	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	25	8.8	ND	5.5	24	25	2.9
Toluene	ND	99	34	ND	8.9	14	14	1
Ethylbenzene	ND	150	34	ND	100	80	86	20
m&p-Xylene	ND	65	42	ND	ND	43	51	3.3
o-Xylene	ND	320	63	ND	186	160	160	22
Naphthalene	ND	20	55	19	120	200	200	69
dilution factor	1x	10x	2x	1x	5x	5x	5x	1x

Method 8260 (ug/L)	4252-gw-tw06-01	4252-gw-tw10-01	4252-gw-tw09-01	4252-gw-tw13-01	4252-gw-tw11-01	4252-gw-tw12-01	4252-gw-tw14-01	
MTBE	ND	ND	ND	ND	ND	ND	ND	
Benzene	0.66	ND	ND	ND	ND	ND	ND	
Toluene	ND	ND	ND	4.2	ND	ND	ND	
Ethylbenzene	34	ND	ND	37	ND	ND	ND	
m&p-Xylene	ND	ND	ND	28	ND	ND	ND	
o-Xylene	2.5	ND	ND	74	ND	ND	ND	
Naphthalene	45	5.7	ND	11	ND	ND	ND	
dilution factor	1x	1x	1x	2x	1x	1x	1x	

Source: KB Labs, Inc.
May 2000

TetraTech NUS

Analytical Data
Mayport NAS, Bldg 425
Jacksonville, FL
5/1/00 - 5/5/00

Method 8260 (ug/L)	4251-gw-tw03-01	4251-gw-tw04-01	4251-gw-tw05-01	4251-gw-tw06-01	4251-gw-fd01-01			
MTBE	ND	ND	ND	ND	ND			
Benzene	ND	ND	ND	ND	ND			
Toluene	ND	ND	ND	ND	ND			
Ethylbenzene	ND	ND	ND	ND	ND			
m&p-Xylene	ND	ND	ND	ND	ND			
o-Xylene	ND	ND	ND	ND	ND			
Naphthalene	ND	ND	ND	ND	ND			
dilution factor	1x	1x	1x	1x	1x			

Method 8260 (ug/L)	4251-gw-tw07-01	4251-gw-tw08-01	4251-gw-tw02-01	4251-gw-tw01-01	4251-gw-tw09-01	4251-gw-tw10-01	4251-gw-tw11-01	
MTBE	ND	ND	ND	ND	ND	ND	ND	
Benzene	ND	ND	ND	ND	ND	ND	ND	
Toluene	ND	ND	ND	0.62	ND	ND	ND	
Ethylbenzene	ND	ND	ND	11	ND	ND	ND	
m&p-Xylene	ND	ND	ND	29	ND	ND	ND	
o-Xylene	ND	ND	ND	14	ND	ND	ND	
Naphthalene	ND	ND	ND	35	ND	ND	ND	
dilution factor	1x	1x	1x	2x	1x	1x	1x	

Source: KB Labs, Inc.
May 2000

APPENDIX I

LABORATORY ANALYTICAL REPORTS FOR GROUNDWATER

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQAX103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 425-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	1.3	J
75-05-8	Acetonitrile	20	U
107-02-8	Acrolein	10	U
107-13-1	Acrylonitrile	10	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	2.0	U
75-15-0	Carbon disulfide	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
126-99-8	Chloroprene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethyl vinyl ether	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
107-05-1	Allyl chloride	1.0	U
74-95-3	Dibromomethane	1.0	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
540-59-0	1,2-Dichloroethene (total)	1.0	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQAX103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 425-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
78-87-5	1,2-Dichloropropane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	1.0	U
97-63-2	Ethyl methacrylate	1.0	U
75-69-4	Trichlorofluoromethane	2.0	U
591-78-6	2-Hexanone	10	U
74-88-4	Iodomethane	1.0	U
78-83-1	Isobutyl alcohol	50	U
126-98-7	Methacrylonitrile	1.0	U
75-09-2	Methylene chloride	1.0	U
80-62-6	Methyl methacrylate	1.0	U
107-12-0	Propionitrile	4.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
108-05-4	Vinyl acetate	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes (total)	1.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
106-93-4	1,2-Dibromoethane (EDB)	1.0	U
78-93-3	2-Butanone (MEK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQAX103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 425-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQF6103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 425-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	1.6	J
75-05-8	Acetonitrile	20	U
107-02-8	Acrolein	10	U
107-13-1	Acrylonitrile	10	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	2.0	U
75-15-0	Carbon disulfide	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
126-99-8	Chloroprene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethyl vinyl ether	1.0	U
67-66-3	Chloroform	0.53	J
74-87-3	Chloromethane	1.0	U
107-05-1	Allyl chloride	1.0	U
74-95-3	Dibromomethane	1.0	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
540-59-0	1,2-Dichloroethene (total)	1.0	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQF6103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 425-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
78-87-5	1,2-Dichloropropane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	1.0	U
97-63-2	Ethyl methacrylate	1.0	U
75-69-4	Trichlorofluoromethane	2.0	U
591-78-6	2-Hexanone	10	U
74-88-4	Iodomethane	1.0	U
78-83-1	Isobutyl alcohol	50	U
126-98-7	Methacrylonitrile	1.0	U
75-09-2	Methylene chloride	1.0	U
80-62-6	Methyl methacrylate	1.0	U
107-12-0	Propionitrile	4.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
108-05-4	Vinyl acetate	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes (total)	1.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
106-93-4	1,2-Dibromoethane (EDB)	1.0	U
78-93-3	2-Butanone (MEK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQF6103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 425-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQFA103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 425-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	1.2	J
75-05-8	Acetonitrile	20	U
107-02-8	Acrolein	10	U
107-13-1	Acrylonitrile	10	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	2.0	U
75-15-0	Carbon disulfide	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
126-99-8	Chloroprene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethyl vinyl ether	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
107-05-1	Allyl chloride	1.0	U
74-95-3	Dibromomethane	1.0	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
540-59-0	1,2-Dichloroethene (total)	1.0	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQFA103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 425-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
78-87-5	1,2-Dichloropropane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	1.0	U
97-63-2	Ethyl methacrylate	1.0	U
75-69-4	Trichlorofluoromethane	2.0	U
591-78-6	2-Hexanone	10	U
74-88-4	Iodomethane	1.0	U
78-83-1	Isobutyl alcohol	50	U
126-98-7	Methacrylonitrile	1.0	U
75-09-2	Methylene chloride	1.0	U
80-62-6	Methyl methacrylate	1.0	U
107-12-0	Propionitrile	4.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
108-05-4	Vinyl acetate	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes (total)	1.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
106-93-4	1,2-Dibromoethane (EDB)	1.0	U
78-93-3	2-Butanone (MEK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQFA103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 425-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 004
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQG2103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 425-GW-MW5D-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	1.3	J
75-05-8	Acetonitrile	20	U
107-02-8	Acrolein	10	U
107-13-1	Acrylonitrile	10	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	2.0	U
75-15-0	Carbon disulfide	0.37	J
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
126-99-8	Chloroprene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethyl vinyl ether	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
107-05-1	Allyl chloride	1.0	U
74-95-3	Dibromomethane	1.0	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
540-59-0	1,2-Dichloroethene (total)	1.0	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 004
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQG2103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 425-GW-MW5D-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
78-87-5	1,2-Dichloropropane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	1.0	U
97-63-2	Ethyl methacrylate	1.0	U
75-69-4	Trichlorofluoromethane	2.0	U
591-78-6	2-Hexanone	10	U
74-88-4	Iodomethane	1.0	U
78-83-1	Isobutyl alcohol	50	U
126-98-7	Methacrylonitrile	1.0	U
75-09-2	Methylene chloride	1.0	U
80-62-6	Methyl methacrylate	1.0	U
107-12-0	Propionitrile	4.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
108-05-4	Vinyl acetate	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes (total)	1.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
106-93-4	1,2-Dibromoethane (EDB)	1.0	U
78-93-3	2-Butanone (MEK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 004
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQG2103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 425-GW-MW5D-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 005
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGC103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 4251-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	1.7	J
75-05-8	Acetonitrile	20	U
107-02-8	Acrolein	10	U
107-13-1	Acrylonitrile	10	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	2.0	U
75-15-0	Carbon disulfide	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
126-99-8	Chloroprene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethyl vinyl ether	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
107-05-1	Allyl chloride	1.0	U
74-95-3	Dibromomethane	1.0	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	0.14	J
156-59-2	cis-1,2-Dichloroethene	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
540-59-0	1,2-Dichloroethene (total)	1.0	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 005
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGC103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 4251-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
78-87-5	1,2-Dichloropropane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	1.0	U
97-63-2	Ethyl methacrylate	1.0	U
75-69-4	Trichlorofluoromethane	2.0	U
591-78-6	2-Hexanone	10	U
74-88-4	Iodomethane	1.0	U
78-83-1	Isobutyl alcohol	50	U
126-98-7	Methacrylonitrile	1.0	U
75-09-2	Methylene chloride	1.0	U
80-62-6	Methyl methacrylate	1.0	U
107-12-0	Propionitrile	4.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
108-05-4	Vinyl acetate	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes (total)	1.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
106-93-4	1,2-Dibromoethane (EDB)	1.0	U
78-93-3	2-Butanone (MEK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 005
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGC103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 4251-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 006
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGE103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 4251-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	1.2	J
75-05-8	Acetonitrile	20	U
107-02-8	Acrolein	10	U
107-13-1	Acrylonitrile	10	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	2.0	U
75-15-0	Carbon disulfide	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
126-99-8	Chloroprene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethyl vinyl ether	1.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	1.0	U
107-05-1	Allyl chloride	1.0	U
74-95-3	Dibromomethane	1.0	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
540-59-0	1,2-Dichloroethene (total)	1.0	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 006
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGE103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 4251-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
78-87-5	1,2-Dichloropropane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	1.0	U
97-63-2	Ethyl methacrylate	1.0	U
75-69-4	Trichlorofluoromethane	2.0	U
591-78-6	2-Hexanone	10	U
74-88-4	Iodomethane	1.0	U
78-83-1	Isobutyl alcohol	50	U
126-98-7	Methacrylonitrile	1.0	U
75-09-2	Methylene chloride	1.0	U
80-62-6	Methyl methacrylate	1.0	U
107-12-0	Propionitrile	4.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
108-05-4	Vinyl acetate	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes (total)	1.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
106-93-4	1,2-Dibromoethane (EDB)	1.0	U
78-93-3	2-Butanone (MEK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 006
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGE103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 4251-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 007
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGF103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 4251-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	1.4	J
75-05-8	Acetonitrile	20	U
107-02-8	Acrolein	10	U
107-13-1	Acrylonitrile	10	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	2.0	U
75-15-0	Carbon disulfide	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
126-99-8	Chloroprene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethyl vinyl ether	1.0	U
67-66-3	Chloroform	0.33	J B
74-87-3	Chloromethane	1.0	U
107-05-1	Allyl chloride	1.0	U
74-95-3	Dibromomethane	1.0	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
540-59-0	1,2-Dichloroethene (total)	1.0	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 007
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGF103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 4251-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
78-87-5	1,2-Dichloropropane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	1.0	U
97-63-2	Ethyl methacrylate	1.0	U
75-69-4	Trichlorofluoromethane	0.35	J
591-78-6	2-Hexanone	10	U
74-88-4	Iodomethane	1.0	U
78-83-1	Isobutyl alcohol	50	U
126-98-7	Methacrylonitrile	1.0	U
75-09-2	Methylene chloride	1.0	U
80-62-6	Methyl methacrylate	1.0	U
107-12-0	Propionitrile	4.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
108-05-4	Vinyl acetate	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes (total)	1.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
106-93-4	1,2-Dibromoethane (EDB)	1.0	U
78-93-3	2-Butanone (MEK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP012

Matrix: (soil/water) WG Lab Sample ID: A0F150214 007
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGF103 Date Extracted: 06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 4251-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 008
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGG103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 4251-GW-MW04-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	1.9	J
75-05-8	Acetonitrile	20	U
107-02-8	Acrolein	10	U
107-13-1	Acrylonitrile	10	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	2.0	U
75-15-0	Carbon disulfide	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
126-99-8	Chloroprene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
75-00-3	Chloroethane	1.0	U
110-75-8	2-Chloroethyl vinyl ether	1.0	U
67-66-3	Chloroform	1.3	B
74-87-3	Chloromethane	1.0	U
107-05-1	Allyl chloride	1.0	U
74-95-3	Dibromomethane	1.0	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
540-59-0	1,2-Dichloroethene (total)	1.0	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 008
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGG103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 4251-GW-MW04-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
78-87-5	1,2-Dichloropropane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
100-41-4	Ethylbenzene	0.13	J
97-63-2	Ethyl methacrylate	1.0	U
75-69-4	Trichlorofluoromethane	2.0	U
591-78-6	2-Hexanone	10	U
74-88-4	Iodomethane	1.0	U
78-83-1	Isobutyl alcohol	50	U
126-98-7	Methacrylonitrile	1.0	U
75-09-2	Methylene chloride	0.16	J B
80-62-6	Methyl methacrylate	1.0	U
107-12-0	Propionitrile	4.0	U
100-42-5	Styrene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
108-88-3	Toluene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
108-05-4	Vinyl acetate	1.0	U
75-01-4	Vinyl chloride	1.0	U
1330-20-7	Xylenes (total)	1.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
106-93-4	1,2-Dibromoethane (EDB)	1.0	U
78-93-3	2-Butanone (MEK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 008
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGG103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 4251-GW-MW04-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQAX104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
98-86-2	Acetophenone	10	U
53-96-3	2-Acetylaminofluorene	10	U
92-67-1	4-Aminobiphenyl	10	U
62-53-3	Aniline	10	U
120-12-7	Anthracene	10	U
92-87-5	Benzidine	100	U
56-55-3	Benzo(a)anthracene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
50-32-8	Benzo(a)pyrene	10	U
100-51-6	Benzyl alcohol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	5.0	U
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
2303-16-4	Diallate	20	U
53-70-3	Dibenz(a,h)anthracene	10	U

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQAX104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
132-64-9	Dibenzofuran	10	U
84-74-2	Di-n-butyl phthalate	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
120-83-2	2,4-Dichlorophenol	10	U
87-65-0	2,6-Dichlorophenol	10	U
84-66-2	Diethyl phthalate	10	U
60-11-7	p-Dimethylaminoazobenzene	10	U
57-97-6	7,12-Dimethylbenz(a)anthrace	10	U
119-93-7	3,3'-Dimethylbenzidine	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
99-65-0	1,3-Dinitrobenzene	10	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
51-28-5	2,4-Dinitrophenol	25	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	20	U
123-91-1	1,4-Dioxane	10	U
122-39-4	Diphenylamine	10	U
122-66-7	1,2-Diphenylhydrazine	10	U
62-50-0	Ethyl methanesulfonate	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQAX104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
67-72-1	Hexachloroethane	10	U
1888-71-7	Hexachloropropene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
78-59-1	Isophorone	10	U
120-58-1	Isosafrole	10	U
91-80-5	Methapyrilene	10	U
95-53-4	o-Toluidine	10	U
56-49-5	3-Methylcholanthrene	10	U
66-27-3	Methyl methanesulfonate	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
108-39-4	3-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
130-15-4	1,4-Naphthoquinone	10	U
134-32-7	1-Naphthylamine	10	U
91-59-8	2-Naphthylamine	10	U
88-74-4	2-Nitroaniline	25	U
99-09-2	3-Nitroaniline	25	U
100-01-6	4-Nitroaniline	25	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	25	U
56-57-5	4-Nitroquinoline-1-oxide	10	U
924-16-3	N-Nitrosodi-n-butylamine	10	U
55-18-5	N-Nitrosodiethylamine	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQAX104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
86-30-6	N-Nitrosodiphenylamine	10	U
10595-95-6	N-Nitrosomethylethylamine	10	U
59-89-2	N-Nitrosomorpholine	10	U
100-75-4	N-Nitrosopiperidine	10	U
930-55-2	N-Nitrosopyrrolidine	10	U
99-55-8	5-Nitro-o-toluidine	10	U
608-93-5	Pentachlorobenzene	10	U
76-01-7	Pentachloroethane	50	U
82-68-8	Pentachloronitrobenzene	10	U
87-86-5	Pentachlorophenol	10	U
62-44-2	Phenacetin	10	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	10	U
106-50-3	p-Phenylene diamine	10	U
109-06-8	2-Picoline	10	U
23950-58-5	Pronamide	10	U
129-00-0	Pyrene	10	U
110-86-1	Pyridine	10	U
94-59-7	Safrole	10	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10	U
58-90-2	2,3,4,6-Tetrachlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
99-35-4	1,3,5-Trinitrobenzene	10	U
86-74-8	Carbazole	10	U

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 001
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQAX104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
510-15-6	Chlorobenzilate	10	U
122-09-8	a,a-Dimethylphenethylamine	50	U
140-57-8	Aramite	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQF6104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
98-86-2	Acetophenone	10	U
53-96-3	2-Acetylaminofluorene	10	U
92-67-1	4-Aminobiphenyl	10	U
62-53-3	Aniline	10	U
120-12-7	Anthracene	10	U
92-87-5	Benzidine	100	U
56-55-3	Benzo(a)anthracene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
50-32-8	Benzo(a)pyrene	10	U
100-51-6	Benzyl alcohol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	3.1	J
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
2303-16-4	Diallate	20	U
53-70-3	Dibenz(a,h)anthracene	10	U

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQF6104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
132-64-9	Dibenzofuran	10	U
84-74-2	Di-n-butyl phthalate	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
120-83-2	2,4-Dichlorophenol	10	U
87-65-0	2,6-Dichlorophenol	10	U
84-66-2	Diethyl phthalate	10	U
60-11-7	p-Dimethylaminoazobenzene	10	U
57-97-6	7,12-Dimethylbenz(a)anthrace	10	U
119-93-7	3,3'-Dimethylbenzidine	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
99-65-0	1,3-Dinitrobenzene	10	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
51-28-5	2,4-Dinitrophenol	25	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	20	U
123-91-1	1,4-Dioxane	10	U
122-39-4	Diphenylamine	10	U
122-66-7	1,2-Diphenylhydrazine	10	U
62-50-0	Ethyl methanesulfonate	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQF6104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
67-72-1	Hexachloroethane	10	U
1888-71-7	Hexachloropropene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
78-59-1	Isophorone	10	U
120-58-1	Isosafrole	10	U
91-80-5	Methapyrilene	10	U
95-53-4	o-Toluidine	10	U
56-49-5	3-Methylcholanthrene	10	U
66-27-3	Methyl methanesulfonate	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
108-39-4	3-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
130-15-4	1,4-Naphthoquinone	10	U
134-32-7	1-Naphthylamine	10	U
91-59-8	2-Naphthylamine	10	U
88-74-4	2-Nitroaniline	25	U
99-09-2	3-Nitroaniline	25	U
100-01-6	4-Nitroaniline	25	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	25	U
56-57-5	4-Nitroquinoline-1-oxide	10	U
924-16-3	N-Nitrosodi-n-butylamine	10	U
55-18-5	N-Nitrosodiethylamine	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQF6104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
86-30-6	N-Nitrosodiphenylamine	10	U
10595-95-6	N-Nitrosomethylethylamine	10	U
59-89-2	N-Nitrosomorpholine	10	U
100-75-4	N-Nitrosopiperidine	10	U
930-55-2	N-Nitrosopyrrolidine	10	U
99-55-8	5-Nitro-o-toluidine	10	U
608-93-5	Pentachlorobenzene	10	U
76-01-7	Pentachloroethane	50	U
82-68-8	Pentachloronitrobenzene	10	U
87-86-5	Pentachlorophenol	10	U
62-44-2	Phenacetin	10	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	10	U
106-50-3	p-Phenylene diamine	10	U
109-06-8	2-Picoline	10	U
23950-58-5	Pronamide	10	U
129-00-0	Pyrene	10	U
110-86-1	Pyridine	10	U
94-59-7	Safrole	10	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10	U
58-90-2	2,3,4,6-Tetrachlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
99-35-4	1,3,5-Trinitrobenzene	10	U
86-74-8	Carbazole	10	U

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQF6104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
510-15-6	Chlorobenzilate	10	U
122-09-8	a,a-Dimethylphenethylamine	50	U
140-57-8	Aramite	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQFA104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
98-86-2	Acetophenone	10	U
53-96-3	2-Acetylaminofluorene	10	U
92-67-1	4-Aminobiphenyl	10	U
62-53-3	Aniline	10	U
120-12-7	Anthracene	10	U
92-87-5	Benzidine	100	U
56-55-3	Benzo(a)anthracene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
50-32-8	Benzo(a)pyrene	10	U
100-51-6	Benzyl alcohol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	5.0	U
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
2303-16-4	Diallate	20	U
53-70-3	Dibenz(a,h)anthracene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQFA104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
132-64-9	Dibenzofuran	10	U
84-74-2	Di-n-butyl phthalate	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
120-83-2	2,4-Dichlorophenol	10	U
87-65-0	2,6-Dichlorophenol	10	U
84-66-2	Diethyl phthalate	10	U
60-11-7	p-Dimethylaminoazobenzene	10	U
57-97-6	7,12-Dimethylbenz(a)anthrace	10	U
119-93-7	3,3'-Dimethylbenzidine	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
99-65-0	1,3-Dinitrobenzene	10	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
51-28-5	2,4-Dinitrophenol	25	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	20	U
123-91-1	1,4-Dioxane	10	U
122-39-4	Diphenylamine	10	U
122-66-7	1,2-Diphenylhydrazine	10	U
62-50-0	Ethyl methanesulfonate	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQFA104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
67-72-1	Hexachloroethane	10	U
1888-71-7	Hexachloropropene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
78-59-1	Isophorone	10	U
120-58-1	Isosafrole	10	U
91-80-5	Methapyrilene	10	U
95-53-4	o-Toluidine	10	U
56-49-5	3-Methylcholanthrene	10	U
66-27-3	Methyl methanesulfonate	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
108-39-4	3-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
130-15-4	1,4-Naphthoquinone	10	U
134-32-7	1-Naphthylamine	10	U
91-59-8	2-Naphthylamine	10	U
88-74-4	2-Nitroaniline	25	U
99-09-2	3-Nitroaniline	25	U
100-01-6	4-Nitroaniline	25	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	25	U
56-57-5	4-Nitroquinoline-1-oxide	10	U
924-16-3	N-Nitrosodi-n-butylamine	10	U
55-18-5	N-Nitrosodiethylamine	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP012

Matrix: (soil/water) WG Lab Sample ID: A0F150214 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQFA104 Date Extracted: 06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
86-30-6	N-Nitrosodiphenylamine	10	U
10595-95-6	N-Nitrosomethylethylamine	10	U
59-89-2	N-Nitrosomorpholine	10	U
100-75-4	N-Nitrosopiperidine	10	U
930-55-2	N-Nitrosopyrrolidine	10	U
99-55-8	5-Nitro-o-toluidine	10	U
608-93-5	Pentachlorobenzene	10	U
76-01-7	Pentachloroethane	50	U
82-68-8	Pentachloronitrobenzene	10	U
87-86-5	Pentachlorophenol	10	U
62-44-2	Phenacetin	10	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	1.9	J
106-50-3	p-Phenylene diamine	10	U
109-06-8	2-Picoline	10	U
23950-58-5	Pronamide	10	U
129-00-0	Pyrene	10	U
110-86-1	Pyridine	10	U
94-59-7	Safrole	10	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10	U
58-90-2	2,3,4,6-Tetrachlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
99-35-4	1,3,5-Trinitrobenzene	10	U
86-74-8	Carbazole	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQFA104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/03/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
510-15-6	Chlorobenzilate	10	U
122-09-8	a,a-Dimethylphenethylamine	50	U
140-57-8	Aramite	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 005
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGC104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
98-86-2	Acetophenone	10	U
53-96-3	2-Acetylaminofluorene	10	U
92-67-1	4-Aminobiphenyl	10	U
62-53-3	Aniline	10	U
120-12-7	Anthracene	10	U
92-87-5	Benzidine	100	U
56-55-3	Benzo(a)anthracene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
50-32-8	Benzo(a)pyrene	10	U
100-51-6	Benzyl alcohol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	4.9	J
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
2303-16-4	Diallate	20	U
53-70-3	Dibenz(a,h)anthracene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 005
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGC104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
132-64-9	Dibenzofuran	10	U
84-74-2	Di-n-butyl phthalate	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
120-83-2	2,4-Dichlorophenol	10	U
87-65-0	2,6-Dichlorophenol	10	U
84-66-2	Diethyl phthalate	10	U
60-11-7	p-Dimethylaminoazobenzene	10	U
57-97-6	7,12-Dimethylbenz(a)anthrace	10	U
119-93-7	3,3'-Dimethylbenzidine	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
99-65-0	1,3-Dinitrobenzene	10	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
51-28-5	2,4-Dinitrophenol	25	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	20	U
123-91-1	1,4-Dioxane	10	U
122-39-4	Diphenylamine	10	U
122-66-7	1,2-Diphenylhydrazine	10	U
62-50-0	Ethyl methanesulfonate	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 005
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGC104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
67-72-1	Hexachloroethane	10	U
1888-71-7	Hexachloropropene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
78-59-1	Isophorone	10	U
120-58-1	Isosafrole	10	U
91-80-5	Methapyrilene	10	U
95-53-4	o-Toluidine	10	U
56-49-5	3-Methylcholanthrene	10	U
66-27-3	Methyl methanesulfonate	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
108-39-4	3-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
130-15-4	1,4-Naphthoquinone	10	U
134-32-7	1-Naphthylamine	10	U
91-59-8	2-Naphthylamine	10	U
88-74-4	2-Nitroaniline	25	U
99-09-2	3-Nitroaniline	25	U
100-01-6	4-Nitroaniline	25	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	25	U
56-57-5	4-Nitroquinoline-1-oxide	10	U
924-16-3	N-Nitrosodi-n-butylamine	10	U
55-18-5	N-Nitrosodiethylamine	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 005
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGC104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
86-30-6	N-Nitrosodiphenylamine	10	U
10595-95-6	N-Nitrosomethylethylamine	10	U
59-89-2	N-Nitrosomorpholine	10	U
100-75-4	N-Nitrosopiperidine	10	U
930-55-2	N-Nitrosopyrrolidine	10	U
99-55-8	5-Nitro-o-toluidine	10	U
608-93-5	Pentachlorobenzene	10	U
76-01-7	Pentachloroethane	50	U
82-68-8	Pentachloronitrobenzene	10	U
87-86-5	Pentachlorophenol	10	U
62-44-2	Phenacetin	10	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	1.8	J
106-50-3	p-Phenylene diamine	10	U
109-06-8	2-Picoline	10	U
23950-58-5	Pronamide	10	U
129-00-0	Pyrene	10	U
110-86-1	Pyridine	10	U
94-59-7	Safrole	10	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10	U
58-90-2	2,3,4,6-Tetrachlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
99-35-4	1,3,5-Trinitrobenzene	10	U
86-74-8	Carbazole	10	U

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 005
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGC104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
510-15-6	Chlorobenzilate	10	U
122-09-8	a,a-Dimethylphenethylamine	50	U
140-57-8	Aramite	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 006
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGE104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
98-86-2	Acetophenone	10	U
53-96-3	2-Acetylaminofluorene	10	U
92-67-1	4-Aminobiphenyl	10	U
62-53-3	Aniline	10	U
120-12-7	Anthracene	10	U
92-87-5	Benzidine	100	U
56-55-3	Benzo(a)anthracene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
50-32-8	Benzo(a)pyrene	10	U
100-51-6	Benzyl alcohol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	3.5	J
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
2303-16-4	Diallate	20	U
53-70-3	Dibenz(a,h)anthracene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 006
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGE104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
132-64-9	Dibenzofuran	10	U
84-74-2	Di-n-butyl phthalate	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
120-83-2	2,4-Dichlorophenol	10	U
87-65-0	2,6-Dichlorophenol	10	U
84-66-2	Diethyl phthalate	10	U
60-11-7	p-Dimethylaminoazobenzene	10	U
57-97-6	7,12-Dimethylbenz(a)anthrace	10	U
119-93-7	3,3'-Dimethylbenzidine	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
99-65-0	1,3-Dinitrobenzene	10	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
51-28-5	2,4-Dinitrophenol	25	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	20	U
123-91-1	1,4-Dioxane	10	U
122-39-4	Diphenylamine	10	U
122-66-7	1,2-Diphenylhydrazine	10	U
62-50-0	Ethyl methanesulfonate	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 006
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGE104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
67-72-1	Hexachloroethane	10	U
1888-71-7	Hexachloropropene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
78-59-1	Isophorone	10	U
120-58-1	Isosafrole	10	U
91-80-5	Methapyrilene	10	U
95-53-4	o-Toluidine	10	U
56-49-5	3-Methylcholanthrene	10	U
66-27-3	Methyl methanesulfonate	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
108-39-4	3-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
130-15-4	1,4-Naphthoquinone	10	U
134-32-7	1-Naphthylamine	10	U
91-59-8	2-Naphthylamine	10	U
88-74-4	2-Nitroaniline	25	U
99-09-2	3-Nitroaniline	25	U
100-01-6	4-Nitroaniline	25	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	25	U
56-57-5	4-Nitroquinoline-1-oxide	10	U
924-16-3	N-Nitrosodi-n-butylamine	10	U
55-18-5	N-Nitrosodiethylamine	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 006
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGE104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
86-30-6	N-Nitrosodiphenylamine	10	U
10595-95-6	N-Nitrosomethylethylamine	10	U
59-89-2	N-Nitrosomorpholine	10	U
100-75-4	N-Nitrosopiperidine	10	U
930-55-2	N-Nitrosopyrrolidine	10	U
99-55-8	5-Nitro-o-toluidine	10	U
608-93-5	Pentachlorobenzene	10	U
76-01-7	Pentachloroethane	50	U
82-68-8	Pentachloronitrobenzene	10	U
87-86-5	Pentachlorophenol	10	U
62-44-2	Phenacetin	10	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	2.3	J
106-50-3	p-Phenylene diamine	10	U
109-06-8	2-Picoline	10	U
23950-58-5	Pronamide	10	U
129-00-0	Pyrene	10	U
110-86-1	Pyridine	10	U
94-59-7	Safrole	10	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10	U
58-90-2	2,3,4,6-Tetrachlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
99-35-4	1,3,5-Trinitrobenzene	10	U
86-74-8	Carbazole	10	U

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 006
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGE104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
510-15-6	Chlorobenzilate	10	U
122-09-8	a,a-Dimethylphenethylamine	50	U
140-57-8	Aramite	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 007
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGF104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
98-86-2	Acetophenone	10	U
53-96-3	2-Acetylaminofluorene	10	U
92-67-1	4-Aminobiphenyl	10	U
62-53-3	Aniline	10	U
120-12-7	Anthracene	10	U
92-87-5	Benzidine	100	U
56-55-3	Benzo(a)anthracene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
50-32-8	Benzo(a)pyrene	10	U
100-51-6	Benzyl alcohol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	5.0	U
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
2303-16-4	Diallate	20	U
53-70-3	Dibenz(a,h)anthracene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 007
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGF104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
132-64-9	Dibenzofuran	10	U
84-74-2	Di-n-butyl phthalate	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
120-83-2	2,4-Dichlorophenol	10	U
87-65-0	2,6-Dichlorophenol	10	U
84-66-2	Diethyl phthalate	10	U
60-11-7	p-Dimethylaminoazobenzene	10	U
57-97-6	7,12-Dimethylbenz(a)anthrace	10	U
119-93-7	3,3'-Dimethylbenzidine	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
99-65-0	1,3-Dinitrobenzene	10	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
51-28-5	2,4-Dinitrophenol	25	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	20	U
123-91-1	1,4-Dioxane	10	U
122-39-4	Diphenylamine	10	U
122-66-7	1,2-Diphenylhydrazine	10	U
62-50-0	Ethyl methanesulfonate	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 007
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGF104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
67-72-1	Hexachloroethane	10	U
1888-71-7	Hexachloropropene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
78-59-1	Isophorone	10	U
120-58-1	Isosafrole	10	U
91-80-5	Methapyrilene	10	U
95-53-4	o-Toluidine	10	U
56-49-5	3-Methylcholanthrene	10	U
66-27-3	Methyl methanesulfonate	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
108-39-4	3-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
130-15-4	1,4-Naphthoquinone	10	U
134-32-7	1-Naphthylamine	10	U
91-59-8	2-Naphthylamine	10	U
88-74-4	2-Nitroaniline	25	U
99-09-2	3-Nitroaniline	25	U
100-01-6	4-Nitroaniline	25	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	25	U
56-57-5	4-Nitroquinoline-1-oxide	10	U
924-16-3	N-Nitrosodi-n-butylamine	10	U
55-18-5	N-Nitrosodiethylamine	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 007
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGF104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
86-30-6	N-Nitrosodiphenylamine	10	U
10595-95-6	N-Nitrosomethylethylamine	10	U
59-89-2	N-Nitrosomorpholine	10	U
100-75-4	N-Nitrosopiperidine	10	U
930-55-2	N-Nitrosopyrrolidine	10	U
99-55-8	5-Nitro-o-toluidine	10	U
608-93-5	Pentachlorobenzene	10	U
76-01-7	Pentachloroethane	50	U
82-68-8	Pentachloronitrobenzene	10	U
87-86-5	Pentachlorophenol	10	U
62-44-2	Phenacetin	10	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	2.1	J
106-50-3	p-Phenylene diamine	10	U
109-06-8	2-Picoline	10	U
23950-58-5	Pronamide	10	U
129-00-0	Pyrene	10	U
110-86-1	Pyridine	10	U
94-59-7	Safrole	10	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10	U
58-90-2	2,3,4,6-Tetrachlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
99-35-4	1,3,5-Trinitrobenzene	10	U
86-74-8	Carbazole	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 007
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGF104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
510-15-6	Chlorobenzilate	10	U
122-09-8	a,a-Dimethylphenethylamine	50	U
140-57-8	Aramite	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 008
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGG104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW04-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
98-86-2	Acetophenone	10	U
53-96-3	2-Acetylaminofluorene	10	U
92-67-1	4-Aminobiphenyl	10	U
62-53-3	Aniline	10	U
120-12-7	Anthracene	10	U
92-87-5	Benzidine	100	U
56-55-3	Benzo(a)anthracene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
50-32-8	Benzo(a)pyrene	10	U
100-51-6	Benzyl alcohol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	2.2	J
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
2303-16-4	Diallate	20	U
53-70-3	Dibenz(a,h)anthracene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 008
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGG104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW04-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
132-64-9	Dibenzofuran	10	U
84-74-2	Di-n-butyl phthalate	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
120-83-2	2,4-Dichlorophenol	10	U
87-65-0	2,6-Dichlorophenol	10	U
84-66-2	Diethyl phthalate	10	U
60-11-7	p-Dimethylaminoazobenzene	10	U
57-97-6	7,12-Dimethylbenz(a)anthrace	10	U
119-93-7	3,3'-Dimethylbenzidine	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
99-65-0	1,3-Dinitrobenzene	10	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
51-28-5	2,4-Dinitrophenol	25	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	20	U
123-91-1	1,4-Dioxane	10	U
122-39-4	Diphenylamine	10	U
122-66-7	1,2-Diphenylhydrazine	10	U
62-50-0	Ethyl methanesulfonate	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 008
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGG104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW04-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
67-72-1	Hexachloroethane	10	U
1888-71-7	Hexachloropropene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
78-59-1	Isophorone	10	U
120-58-1	Isosafrole	10	U
91-80-5	Methapyrilene	10	U
95-53-4	o-Toluidine	10	U
56-49-5	3-Methylcholanthrene	10	U
66-27-3	Methyl methanesulfonate	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
108-39-4	3-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
130-15-4	1,4-Naphthoquinone	10	U
134-32-7	1-Naphthylamine	10	U
91-59-8	2-Naphthylamine	10	U
88-74-4	2-Nitroaniline	25	U
99-09-2	3-Nitroaniline	25	U
100-01-6	4-Nitroaniline	25	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	25	U
56-57-5	4-Nitroquinoline-1-oxide	10	U
924-16-3	N-Nitrosodi-n-butylamine	10	U
55-18-5	N-Nitrosodiethylamine	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 008
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGG104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW04-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
86-30-6	N-Nitrosodiphenylamine	10	U
10595-95-6	N-Nitrosomethylethylamine	10	U
59-89-2	N-Nitrosomorpholine	10	U
100-75-4	N-Nitrosopiperidine	10	U
930-55-2	N-Nitrosopyrrolidine	10	U
99-55-8	5-Nitro-o-toluidine	10	U
608-93-5	Pentachlorobenzene	10	U
76-01-7	Pentachloroethane	50	U
82-68-8	Pentachloronitrobenzene	10	U
87-86-5	Pentachlorophenol	10	U
62-44-2	Phenacetin	10	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	1.3	J
106-50-3	p-Phenylene diamine	10	U
109-06-8	2-Picoline	10	U
23950-58-5	Pronamide	10	U
129-00-0	Pyrene	10	U
110-86-1	Pyridine	10	U
94-59-7	Safrole	10	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10	U
58-90-2	2,3,4,6-Tetrachlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
99-35-4	1,3,5-Trinitrobenzene	10	U
86-74-8	Carbazole	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP012

Matrix: (soil/water) WG Lab Sample ID: A0F150214 008
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGG104 Date Extracted: 06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 4251-GW-MW04-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
510-15-6	Chlorobenzilate	10	U
122-09-8	a,a-Dimethylphenethylamine	50	U
140-57-8	Aramite	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQG2104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW5D-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	10	U
208-96-8	Acenaphthylene	10	U
98-86-2	Acetophenone	10	U
53-96-3	2-Acetylaminofluorene	10	U
92-67-1	4-Aminobiphenyl	10	U
62-53-3	Aniline	10	U
120-12-7	Anthracene	10	U
92-87-5	Benzidine	100	U
56-55-3	Benzo(a)anthracene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
191-24-2	Benzo(ghi)perylene	10	U
50-32-8	Benzo(a)pyrene	10	U
100-51-6	Benzyl alcohol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
111-44-4	bis(2-Chloroethyl) ether	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
117-81-7	bis(2-Ethylhexyl) phthalate	2.9	J
101-55-3	4-Bromophenyl phenyl ether	10	U
85-68-7	Butyl benzyl phthalate	10	U
106-47-8	4-Chloroaniline	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-58-7	2-Chloronaphthalene	10	U
95-57-8	2-Chlorophenol	10	U
7005-72-3	4-Chlorophenyl phenyl ether	10	U
218-01-9	Chrysene	10	U
2303-16-4	Diallate	20	U
53-70-3	Dibenz(a,h)anthracene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQG2104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW5D-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
132-64-9	Dibenzofuran	10	U
84-74-2	Di-n-butyl phthalate	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
120-83-2	2,4-Dichlorophenol	10	U
87-65-0	2,6-Dichlorophenol	10	U
84-66-2	Diethyl phthalate	10	U
60-11-7	p-Dimethylaminoazobenzene	10	U
57-97-6	7,12-Dimethylbenz(a)anthrace	10	U
119-93-7	3,3'-Dimethylbenzidine	10	U
105-67-9	2,4-Dimethylphenol	10	U
131-11-3	Dimethyl phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
99-65-0	1,3-Dinitrobenzene	10	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
51-28-5	2,4-Dinitrophenol	25	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	20	U
123-91-1	1,4-Dioxane	10	U
122-39-4	Diphenylamine	10	U
122-66-7	1,2-Diphenylhydrazine	10	U
62-50-0	Ethyl methanesulfonate	10	U
206-44-0	Fluoranthene	10	U
86-73-7	Fluorene	10	U
118-74-1	Hexachlorobenzene	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQG2104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW5D-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
87-68-3	Hexachlorobutadiene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
67-72-1	Hexachloroethane	10	U
1888-71-7	Hexachloropropene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
78-59-1	Isophorone	10	U
120-58-1	Isosafrole	10	U
91-80-5	Methapyrilene	10	U
95-53-4	o-Toluidine	10	U
56-49-5	3-Methylcholanthrene	10	U
66-27-3	Methyl methanesulfonate	10	U
91-57-6	2-Methylnaphthalene	10	U
95-48-7	2-Methylphenol	10	U
108-39-4	3-Methylphenol	10	U
106-44-5	4-Methylphenol	10	U
91-20-3	Naphthalene	10	U
130-15-4	1,4-Naphthoquinone	10	U
134-32-7	1-Naphthylamine	10	U
91-59-8	2-Naphthylamine	10	U
88-74-4	2-Nitroaniline	25	U
99-09-2	3-Nitroaniline	25	U
100-01-6	4-Nitroaniline	25	U
98-95-3	Nitrobenzene	10	U
88-75-5	2-Nitrophenol	10	U
100-02-7	4-Nitrophenol	25	U
56-57-5	4-Nitroquinoline-1-oxide	10	U
924-16-3	N-Nitrosodi-n-butylamine	10	U
55-18-5	N-Nitrosodiethylamine	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQG2104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW5D-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
62-75-9	N-Nitrosodimethylamine	10	U
621-64-7	N-Nitrosodi-n-propylamine	10	U
86-30-6	N-Nitrosodiphenylamine	10	U
10595-95-6	N-Nitrosomethylethylamine	10	U
59-89-2	N-Nitrosomorpholine	10	U
100-75-4	N-Nitrosopiperidine	10	U
930-55-2	N-Nitrosopyrrolidine	10	U
99-55-8	5-Nitro-o-toluidine	10	U
608-93-5	Pentachlorobenzene	10	U
76-01-7	Pentachloroethane	50	U
82-68-8	Pentachloronitrobenzene	10	U
87-86-5	Pentachlorophenol	10	U
62-44-2	Phenacetin	10	U
85-01-8	Phenanthrene	10	U
108-95-2	Phenol	10	U
106-50-3	p-Phenylene diamine	10	U
109-06-8	2-Picoline	10	U
23950-58-5	Pronamide	10	U
129-00-0	Pyrene	10	U
110-86-1	Pyridine	10	U
94-59-7	Safrole	10	U
95-94-3	1,2,4,5-Tetrachlorobenzene	10	U
58-90-2	2,3,4,6-Tetrachlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
99-35-4	1,3,5-Trinitrobenzene	10	U
86-74-8	Carbazole	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQG2104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 425-GW-MW5D-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
510-15-6	Chlorobenzilate	10	U
122-09-8	a,a-Dimethylphenethylamine	50	U
140-57-8	Aramite	10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 002
Method: SW846 8310
Hydrocarbons, Polynuclear Aromatic (HPLC - 8310)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQF6105 Date Extracted:06/16/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0167453

Client Sample Id: 425-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	1.0	U
208-96-8	Acenaphthylene	1.0	U
120-12-7	Anthracene	2.0	U
56-55-3	Benzo(a)anthracene	0.10	U
50-32-8	Benzo(a)pyrene	0.10	U
205-99-2	Benzo(b)fluoranthene	0.10	U
191-24-2	Benzo(ghi)perylene	0.10	U
207-08-9	Benzo(k)fluoranthene	0.10	U
218-01-9	Chrysene	0.10	U
53-70-3	Dibenz(a,h)anthracene	0.10	U
206-44-0	Fluoranthene	0.10	U
86-73-7	Fluorene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	U
90-12-0	1-Methylnaphthalene	2.0	U
91-57-6	2-Methylnaphthalene	2.0	U
91-20-3	Naphthalene	2.0	U
85-01-8	Phenanthrene	1.0	U
129-00-0	Pyrene	0.10	U

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 003
Method: SW846 8310
Hydrocarbons, Polynuclear Aromatic (HPLC - 8310)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQFA106 Date Extracted:06/16/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:
QC Batch: 0167453

Client Sample Id: 425-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	1.0	U
208-96-8	Acenaphthylene	1.0	U
120-12-7	Anthracene	2.0	U
56-55-3	Benzo(a)anthracene	0.10	U
50-32-8	Benzo(a)pyrene	0.10	U
205-99-2	Benzo(b)fluoranthene	0.10	U
191-24-2	Benzo(ghi)perylene	0.10	U
207-08-9	Benzo(k)fluoranthene	0.10	U
218-01-9	Chrysene	0.10	U
53-70-3	Dibenz(a,h)anthracene	0.10	U
206-44-0	Fluoranthene	0.10	U
86-73-7	Fluorene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	U
90-12-0	1-Methylnaphthalene	2.0	U
91-57-6	2-Methylnaphthalene	2.0	U
91-20-3	Naphthalene	2.0	U
85-01-8	Phenanthrene	0.11	J
129-00-0	Pyrene	0.10	U

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 004
Method: SW846 8310
Hydrocarbons, Polynuclear Aromatic (HPLC - 8310)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQG2105 Date Extracted:06/16/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:
QC Batch: 0167453

Client Sample Id: 425-GW-MW5D-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	1.0	U
208-96-8	Acenaphthylene	1.0	U
120-12-7	Anthracene	2.0	U
56-55-3	Benzo(a)anthracene	0.10	U
50-32-8	Benzo(a)pyrene	0.10	U
205-99-2	Benzo(b)fluoranthene	0.10	U
191-24-2	Benzo(ghi)perylene	0.10	U
207-08-9	Benzo(k)fluoranthene	0.10	U
218-01-9	Chrysene	0.10	U
53-70-3	Dibenz(a,h)anthracene	0.10	U
206-44-0	Fluoranthene	0.10	U
86-73-7	Fluorene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	U
90-12-0	1-Methylnaphthalene	2.0	U
91-57-6	2-Methylnaphthalene	2.0	U
91-20-3	Naphthalene	2.0	U
85-01-8	Phenanthrene	1.0	U
129-00-0	Pyrene	0.10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 005
Method: SW846 8310
Hydrocarbons, Polynuclear Aromatic (HPLC - 8310)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGC105 Date Extracted:06/16/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:
QC Batch: 0167453

Client Sample Id: 4251-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	1.0	U
208-96-8	Acenaphthylene	1.0	U
120-12-7	Anthracene	2.0	U
56-55-3	Benzo(a)anthracene	0.10	U
50-32-8	Benzo(a)pyrene	0.10	U
205-99-2	Benzo(b)fluoranthene	0.10	U
191-24-2	Benzo(ghi)perylene	0.10	U
207-08-9	Benzo(k)fluoranthene	0.10	U
218-01-9	Chrysene	0.10	U
53-70-3	Dibenz(a,h)anthracene	0.10	U
206-44-0	Fluoranthene	0.10	U
86-73-7	Fluorene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	U
90-12-0	1-Methylnaphthalene	2.0	U
91-57-6	2-Methylnaphthalene	2.0	U
91-20-3	Naphthalene	2.0	U
85-01-8	Phenanthrene	0.12	J
129-00-0	Pyrene	0.10	U

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 006
Method: SW846 8310
Hydrocarbons, Polynuclear Aromatic (HPLC - 8310)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGE105 Date Extracted:06/16/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:
QC Batch: 0167453

Client Sample Id: 4251-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	1.0	U
208-96-8	Acenaphthylene	1.0	U
120-12-7	Anthracene	2.0	U
56-55-3	Benzo(a)anthracene	0.10	U
50-32-8	Benzo(a)pyrene	0.10	U
205-99-2	Benzo(b)fluoranthene	0.10	U
191-24-2	Benzo(ghi)perylene	0.10	U
207-08-9	Benzo(k)fluoranthene	0.10	U
218-01-9	Chrysene	0.10	U
53-70-3	Dibenz(a,h)anthracene	0.10	U
206-44-0	Fluoranthene	0.10	U
86-73-7	Fluorene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	U
90-12-0	1-Methylnaphthalene	2.0	U
91-57-6	2-Methylnaphthalene	2.0	U
91-20-3	Naphthalene	2.0	U
85-01-8	Phenanthrene	1.0	U
129-00-0	Pyrene	0.10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 007
Method: SW846 8310
Hydrocarbons, Polynuclear Aromatic (HPLC - 8310)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGF105 Date Extracted:06/16/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0167453

Client Sample Id: 4251-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	1.0	U
208-96-8	Acenaphthylene	1.0	U
120-12-7	Anthracene	2.0	U
56-55-3	Benzo(a)anthracene	0.10	U
50-32-8	Benzo(a)pyrene	0.10	U
205-99-2	Benzo(b)fluoranthene	0.10	U
191-24-2	Benzo(ghi)perylene	0.10	U
207-08-9	Benzo(k)fluoranthene	0.10	U
218-01-9	Chrysene	0.10	U
53-70-3	Dibenz(a,h)anthracene	0.10	U
206-44-0	Fluoranthene	0.10	U
86-73-7	Fluorene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	U
90-12-0	1-Methylnaphthalene	2.0	U
91-57-6	2-Methylnaphthalene	2.0	U
91-20-3	Naphthalene	2.0	U
85-01-8	Phenanthrene	1.0	U
129-00-0	Pyrene	0.10	U

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP012

Matrix: (soil/water) WG Lab Sample ID: A0F150214 008
Method: SW846 8310
Hydrocarbons, Polynuclear Aromatic (HPLC - 8310)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGG105 Date Extracted: 06/16/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0167453

Client Sample Id: 4251-GW-MW04-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
83-32-9	Acenaphthene	1.0	U
208-96-8	Acenaphthylene	1.0	U
120-12-7	Anthracene	2.0	U
56-55-3	Benzo(a)anthracene	0.10	U
50-32-8	Benzo(a)pyrene	0.10	U
205-99-2	Benzo(b)fluoranthene	0.10	U
191-24-2	Benzo(ghi)perylene	0.10	U
207-08-9	Benzo(k)fluoranthene	0.10	U
218-01-9	Chrysene	0.10	U
53-70-3	Dibenz(a,h)anthracene	0.10	U
206-44-0	Fluoranthene	0.10	U
86-73-7	Fluorene	1.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	U
90-12-0	1-Methylnaphthalene	2.0	U
91-57-6	2-Methylnaphthalene	2.0	U
91-20-3	Naphthalene	2.0	U
85-01-8	Phenanthrene	1.0	U
129-00-0	Pyrene	0.10	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 003
Method: RSK SOP-175
Dissolved Gases in Water mg/L

Sample WT/Vol: 40 / mL Date Received: 06/15/00
Work Order: DEQFA105 Date Extracted:06/27/00
Dilution factor: 1 Date Analyzed: 06/27/00
Moisture %:

QC Batch: 0182470

Client Sample Id: 425-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
74-84-0	Ethane	0.50	U
74-85-1	Ethene	0.093	J
74-82-8	Methane	0.30	J B

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP012

Matrix: (soil/water) WG Lab Sample ID: A0F150214 003
Method: RSK SOP-175
Dissolved Gases in Water mg/L

Sample WT/Vol: 40 / mL Date Received: 06/15/00
Work Order: DEQFA105 Date Extracted: 06/27/00
Dilution factor: 1 Date Analyzed: 06/27/00
Moisture %:

QC Batch: 0182470

Client Sample Id: 425-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
74-84-0	Ethane	0.50	U
74-85-1	Ethene	0.093	J
74-82-8	Methane	0.30	J B

Commited To *Your* Success

CASE NARRATIVE

Date:	June 27, 2000
STL Order Number:	C006458
Project Name:	A0F150214-NS MAYPORT
Project Location:	OHIO
Methods:	Petroleum Hydrocarbons (FL-PRO)

STL Sample ID	***Client Sample ID***
C006458-1	425-GW-MW01-001
C006458-2	425-GW-MW02-001
C006458-3	425-GW-MW03-001
C006458-4	425-GW-MW5D-001
C006458-5	4251-GW-MW01-001
C006458-6	4251-GW-MW02-001
C006458-7	4251-GW-MW03-001
C006458-8	4251-GW-MW04-001
C006458-9	358-GW-MW01-001
C006458-10	358-GW-MW02-001
C006458-11	358-GW-MW03-001
C006458-12	358-GW-DUP1-001

The samples listed above were received at the laboratory on 16-JUN-00 in good condition at a temperature of 4°C.

There were no problems associated with the analysis of these samples.

Lance W. Larson
STL-Fl Project Manager

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DEQGG **Client ID:** 4251-GW-MW04-001

Matrix: Water **Units:** ug/L **Prep Date:** 6/16/00 **Prep Batch:** 0168103

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Lead	220.35	1.7	3.0	1.7	U	1	ICPST	6/28/00	18:29

Comments: Lot #: A0F150214 Sample #: 8

Version 3.63.6 Beta

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

Committed To Your Success

LOG NO: C0-06458
Received: 16 JUN 00
Reported: 26 JUN 00

Ms. DENISE POHL
STL Ohio
4101 Shuffel Drive
North Canton, OH 44720

Client PO. No.: SR023926

Project: A0F150214-NS MAYPORT
Sampled By: Client
Code: 102100630

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06458-1	425-GW-MW01-001	06-13-00
06458-2	425-GW-MW02-001	06-13-00
06458-3	425-GW-MW03-001	06-13-00
06458-4	425-GW-MW5D-001	06-13-00
06458-5	4251-GW-MW01-001	06-13-00

PARAMETER	06458-1	06458-2	06458-3	06458-4	06458-5
Petroleum Hydrocarbons (FL-PRO)					
Petroleum Range Organics (FL-PRO), ug/l	<100	<100	<100	<100	<100
Surrogate - o-Terphenyl	74 %	81 %	74 %	74 %	70 %
Surrogate - Nonatriacontane (C39)	62 %	65 %	69 %	77 %	64 %
Analyst	KA	KA	KA	KA	KA
Prep Date	06.20.00	06.20.00	06.20.00	06.20.00	06.20.00
Analysis Date	06.22.00	06.22.00	06.22.00	06.22.00	06.22.00
Batch ID	FLW087	FLW087	FLW087	FLW087	FLW087
Prep Method	3510	3510	3510	3510	3510
Dilution Factor	1	1	1	1	1

Commited To Your Success

LOG NO: C0-06458
Received: 16 JUN 00
Reported: 26 JUN 00

Ms. DENISE POHL
STL Ohio
4101 Shuffel Drive
North Canton, OH 44720

Client PO. No.: SR023926

Project: A0F150214-NS MAYPORT
Sampled By: Client
Code: 102100630

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06458-6	4251-GW-MW02-001	06-13-00
06458-7	4251-GW-MW03-001	06-13-00
06458-8	4251-GW-MW04-001	06-13-00
06458-9	358-GW-MW01-001	06-14-00
06458-10	358-GW-MW02-001	06-14-00

PARAMETER	06458-6	06458-7	06458-8	06458-9	06458-10
Petroleum Hydrocarbons (FL-PRO)					
Petroleum Range Organics (FL-PRO), ug/l	<100	<100	<100	<100	<100
Surrogate - o-Terphenyl	59 %	69 %	67 %	80 %	90 %
Surrogate - Nonatriacontane (C39)	60 %	62 %	63 %	69 %	74 %
Analyst	KA	KA	KA	KA	KA
Prep Date	06.20.00	06.20.00	06.20.00	06.20.00	06.20.00
Analysis Date	06.22.00	06.22.00	06.22.00	06.22.00	06.22.00
Batch ID	FLW087	FLW087	FLW087	FLW087	FLW087
Prep Method	3510	3510	3510	3510	3510
Dilution Factor	1	1	1	1	1

Committed To Your Success

LOG NO: C0-06458
Received: 16 JUN 00
Reported: 26 JUN 00

Ms. DENISE POHL
STL Ohio
4101 Shuffel Drive
North Canton, OH 44720

Client PO. No.: SR023926

Project: A0F150214-NS MAYPORT
Sampled By: Client
Code: 102100630

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06458-11	358-GW-MW03-001	06-14-00
06458-12	358-GW-DUP1-001	06-14-00

PARAMETER	06458-11	06458-12
Petroleum Hydrocarbons (FL-PRO)		
Petroleum Range Organics (FL-PRO), ug/l	<100	<100
Surrogate - o-Terphenyl	70 %	68 %
Surrogate - Nonatriacontane (C39)	62 %	53 %
Analyst	KA	KA
Prep Date	06.20.00	06.20.00
Analysis Date	06.22.00	06.22.00
Batch ID	FLW087	FLW087
Prep Method	3510	3510
Dilution Factor	1	1

STL
Committed To Your Success

LOG NO: C0-06458
Received: 16 JUN 00
Reported: 26 JUN 00

Ms. DENISE POHL
STL Ohio
4101 Shuffel Drive
North Canton, OH 44720

Client PO. No.: SR023926

Project: A0F150214-NS MAYPORT
Sampled By: Client
Code: 102100630
Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06458-13	Method Blank	
06458-14	Lab Control Standard % Recovery	
06458-15	Matrix Spike % Recovery	
06458-16	Matrix Spike Duplicate % Recovery	

PARAMETER	06458-13	06458-14	06458-15	06458-16
Petroleum Hydrocarbons (FL-PRO)				
Petroleum Range Organics (FL-PRO), ug/l	<100	96 %	NoMS	NoMS
Surrogate - o-Terphenyl	72 %	85 %	---	---
Surrogate - Nonatriacontane (C39)	60 %	100 %	---	---
Analyst	KA	KA	---	---
Prep Date	06.20.00	06.20.00	---	---
Analysis Date	06.22.00	06.22.00	---	---
Batch ID	FLW087	FLW087	---	---
Prep Method	3510	3510	---	---
Dilution Factor	1	1	---	---

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

Lance Larson, Project Manager

Final Page Of Report

3355 McLemore Drive, Pensacola FL 32514
Tel: (850) 474-1001 • Fax: (850) 478-2671
a part of
Severn Trent Services Inc.

TETRA TECH NUS, INC.

Client Sample ID: 425-GW-MW03-001

General Chemistry

Lot-Sample #...: A0F150214-003 **Work Order #...:** DEQFA **Matrix.....:** WG
Date Sampled...: 06/13/00 13:15 **Date Received..:** 06/15/00

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate	**1.9**	**1.6**	**mg/L**	**MCAWW 353.2**	**06/16/00**	**0174170**
	Dilution Factor: 20					
Nitrite	ND	0.1	mg/L	MCAWW 353.2	06/16/00	0174169
	Dilution Factor: 1					
Sulfate	**87**	**20**	**mg/L**	**MCAWW 375.4**	**06/29/00**	**0181373**
	Dilution Factor: 4					
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	06/19/00	0171415
	Dilution Factor: 1					

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DEQAX **Client ID:** 425-GW-MW01-001

Matrix: Water **Units:** ug/L **Prep Date:** 6/16/00 **Prep Batch:** 0168103

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Lead	220.35	1.7	3.0	1.7	U	1	ICPST	6/28/00	17:26

Comments: Lot #: A0F150214 Sample #: 1

Version 3.63.6 Beta

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DEQF6 **Client ID:** 425-GW-MW02-001

Matrix: Water **Units:** ug/L **Prep Date:** 6/16/00 **Prep Batch:** 0168103

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Lead	220.35	1.7	3.0	1.7	U	1	ICPST	6/28/00	17:46

Comments: Lot #: A0F150214 Sample #: 2

Version 3.63.6 Beta

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DEQFA **Client ID:** 425-GW-MW03-001

Matrix: Water **Units:** ug/L **Prep Date:** 6/16/00 **Prep Batch:** 0168103

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Lead	220.35	1.7	3.0	1.7	U	1	ICPST	6/28/00	17:51

Comments: Lot #: A0F150214 Sample #: 3

Version 3.63.6 Beta

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DEQG2 **Client ID:** 425-GW-MW5D-001

Matrix: Water **Units:** ug/L **Prep Date:** 6/16/00 **Prep Batch:** 0168103

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Lead	220.35	1.7	3.0	1.7	U	1	ICPST	6/28/00	17:57

Comments: Lot #: A0F150214 Sample #: 4

Version 3.63.6 Beta

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DEQGC **Client ID:** 4251-GW-MW01-001

Matrix: Water **Units:** ug/L **Prep Date:** 6/16/00 **Prep Batch:** 0168103

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Lead	220.35	1.7	3.0	1.7	U	1	ICPST	6/28/00	18:02

Comments: Lot #: A0F150214 Sample #: 5

Version 3.63.6 Beta

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DEQGE **Client ID:** 4251-GW-MW02-001

Matrix: Water **Units:** ug/L **Prep Date:** 6/16/00 **Prep Batch:** 0168103

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Lead	220.35	1.7	3.0	1.7	U	1	ICPST	6/28/00	18:07

Comments: Lot #: A0F150214 Sample #: 6

Version 3.63.6 Beta

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DEQGF **Client ID:** 4251-GW-MW03-001

Matrix: Water **Units:** ug/L **Prep Date:** 6/16/00 **Prep Batch:** 0168103

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Lead	220.35	1.7	3.0	1.7	U	1	ICPST	6/28/00	18:12

Comments: Lot #: A0F150214 Sample #: 7

Version 3.63.6 Beta

U Result is less than the IDL
B Result is between IDL and RL

Form 1 Equivalent