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SITE ASSESSMENT REPORT FOR SITE 358 NS MAYPORT FL
12/1/2000
TETRA TECH NUS

Site Assessment Report
for
Site 358

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-FY01-0019

SITE ASSESSMENT REPORT
FOR
SITE 358

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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North Charleston, South Carolina 29406

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CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0123

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PROFESSIONAL CERTIFICATION

Site Assessment Report
Site 358
Naval Station, Mayport, Florida

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

Mark Peterson, P.G.
Florida License No. PG-0001852

12/8/00
Date

EXECUTIVE SUMMARY

Tetra Tech NUS (TtNUS) has completed a Site Assessment (SA) for Site 358 at the Naval Station, Mayport, Florida. The SA was conducted in general accordance with the requirements of Chapter 62-770, Florida Administrative Code (FAC). The assessment report is being 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 a direct-push investigation which included the installation of 10 soil borings to collect soil for Organic Vapor Analyzer (OVA) 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 confirmatory soil samples from selected soil borings for fixed-base laboratory analysis of the Kerosene Analytical Group (KAG) parameters 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 three shallow monitoring wells to approximately 15 feet below land surface (bls).
- Collected groundwater samples from each site monitoring well for laboratory analysis for KAG parameters. The KAG parameters for groundwater include BTEX and MTBE, 1-methylnaphthalene, 2-methylnaphthalene, 16 PAHs listed in 62-770 FAC Table A, 1-2, dichloroethane and other listed Priority Pollutant Volatile Organic Halocarbons, 1,2-dibromoethane (EDB), total lead and TRPHs.
- 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 from Table II from Chapter 62-777, FAC.

Laboratory analytical results from groundwater samples indicate that all KAG constituents did not exceed GCTLs. In addition, field screening data and laboratory analytical results from soil samples indicate that

"excessively contaminated" soil, as defined by Chapter 62-770.200 FAC, was not detected during the investigation. Soil results also indicate that KAG constituents did not exceed the Soil Cleanup Target Levels (SCTLs) or leachability standards for groundwater protection as established in Chapter 62-777, FAC (Table I). As a result, it is recommended that the site be approved for “No Further Action” status under 62-770 FAC.

TABLE OF CONTENTS

SECTION **PAGE**

EXECUTIVE SUMMARY **ES-1**

ACRONYMS ..... **iii**

1.0 INTRODUCTION **1-1**
1.1 PURPOSE AND SCOPE 1-1
1.2 SITE DESCRIPTION AND SETTING 1-2
1.2.1 Location 1-2
1.2.2 Site Description 1-2
1.2.3 Topography and Drainage 1-2
1.2.4 Regional Hydrogeology 1-2
1.2.5 Land Use 1-6
1.2.6 Potable Water Well Survey 1-6
1.3 SITE HISTORY 1-8

2.0 SUBSURFACE INVESTIGATION METHODS **2-1**
2.1 QUALITY ASSURANCE 2-1
2.2 SOIL INVESTIGATON 2-1
2.2.1 Soil Boring Installation 2-1
2.3 GROUNDWATER INVESTIGATION 2-2
2.3.1 Direct-Push Well Borings 2-2
2.3.2 Monitoring Well Installation 2-2
2.4 MEDIA SAMPLING METHODOLOGY 2-4
2.4.1 Lithologic Sampling 2-4
2.4.2 Soil Vapor Screening 2-4
2.4.3 Soil Analytical Sampling 2-5
2.4.4 Groundwater Mobile Lab Screening 2-5
2.4.5 Groundwater Analytical Sampling 2-5
2.4.6 Free Product Sampling 2-6
2.5 HYDROLOGIC INVESTIGATION 2-6
2.5.1 Water Level Measurements 2-6
2.5.2 Aquifer Characteristics 2-8

3.0 RESULTS OF INVESTIGATION **3-1**
3.1 SITE-SPECIFIC HYDROGEOLOGY 3-1
3.1.1 Lithology 3-1
3.1.2 Aquifer Classification 3-1
3.2 SOIL QUALITY 3-1
3.2.1 Soil Boring Investigation 3-1
3.2.2 Soil Analytical Sampling Results 3-3
3.3 WATER QUALITY 3-3
3.3.1 Temporary Well Point Sampling 3-3
3.3.2 Monitoring Well Sampling 3-3

4.0 DISCUSSION **4-1**

5.0 CONCLUSIONS AND RECOMMENDATION **5-1**

REFERENCES **R-1**

TABLE OF CONTENTS (CONT'D)

APPENDICES **PAGE**

A CAR SUMMARY SHEET A-1
B IDW RECORDS B-1
C SOIL BORING LOGS C-1
D MONITORING WELL COMPLETION LOGS D-1
E LABORATORY ANALYTICAL RESULTS FOR SOIL E-1
F MOBILE LABORATORY ANALYTICAL REPORTS FOR GROUNDWATER F-1
G GROUNDWATER SAMPLE LOG SHEETS G-1
H LABORATORY ANALYTICAL REPORTS FOR GROUNDWATER H-1
I U.S. GEOLOGICAL REPORT 97-4262 ..... I-1

TABLES

NUMBER **PAGE**

1-1 Potable Water Well Survey Summary 1-7
2-1 Well Construction Details 2-3
3-1 Water Table Elevation and Monitoring Well Construction Data 3-2
3-2 Soil Vapor Screening Summary 3-5
3-3 Soil Analytical Summary – Fixed Based Laboratory 3-7
3-4 Groundwater Analytical Results – Fixed Based Laboratory 3-8

FIGURES

NUMBER **PAGE**

1-1 Regional Map 1-3
1-2 Potable Water Well Locations 1-4
1-3 Site Map 1-5
3-1 Groundwater Elevation Contour Map 3-3
3-2 Soil Boring/temporary Well Location Map 3-6

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
FL-PRO	Florida Petroleum Range Organics
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
OVA	Organic Vapor Analyzer
PAH	Polynuclear Aromatic Hydrocarbons
PE	Polyethylene
PVC	Poly Vinyl 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
TtNUS	Tetra Tech NUS, Inc.

ACRONYMS (Cont'd)

USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
VOA	Volatile Organic Aromatic

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

A 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 Site 358 (the site) located at the Naval Station (NS) Mayport, Duval County, Florida. 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 Site 358 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 Site 358.
- Survey of potential receptors in the vicinity of Site 358, including public and private water supplies and surface water bodies.
- Completion of a soil vapor survey and soil investigation, as well as an initial groundwater screening, using direct push technology (DPT).
- Mobile laboratory screening of and groundwater samples for BTEX and naphthalene to aid in determining the optimum number and location of permanent monitoring wells.
- Installation of shallow monitoring wells to assess the groundwater at the site.
- Collection of soil and groundwater samples for laboratory analysis for constituents of the KAG.
- Determination of groundwater flow direction, hydraulic conductivity, hydraulic gradient, and transmissivity.

A CAR (Contamination Assessment Report) 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, 1982) Quadrangle (7.5 Minute Series) presented in Figure 1-1.

1.2.2 Site Description

Site 358 located within the northeastern section of NS Mayport and is adjacent to the fire fighting training facility. The source area for assessment activities is located west of the site and is enclosed within a fenced area. A water tank and shed are located east of the site, while two 10,000-gallon propane tanks are located west. The propane tanks are not operational. The location of Site 358 is depicted within NS Mayport and is shown on Figure 1-2. The site map is included as Figure 1-3.

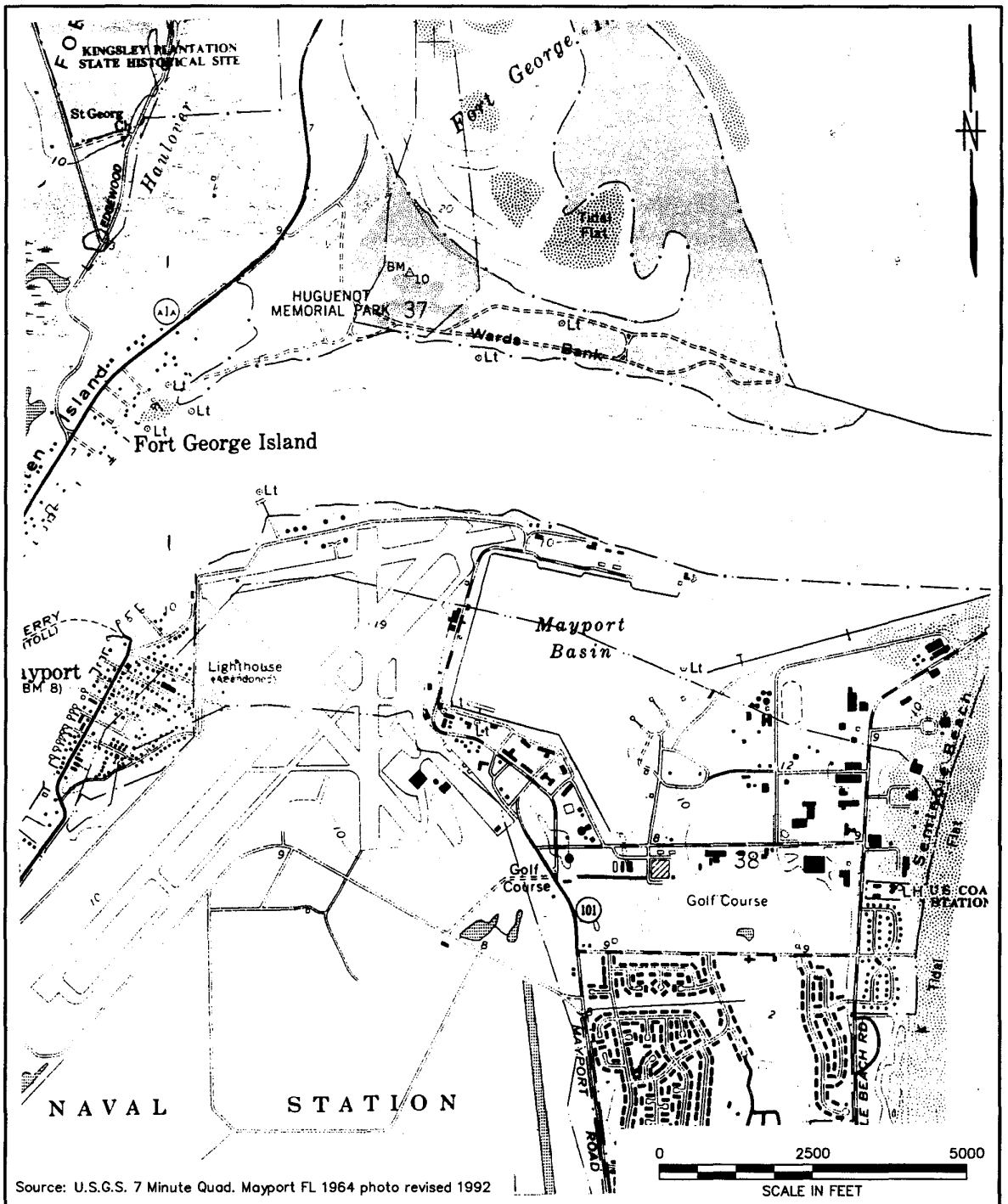
1.2.3 Topography and Drainage

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).

Site 358 is located on the north side of the base and bound by the St. John's River to the west and north. Site surface drainage is dictated by the St. John's River, and the Atlantic Ocean to the east. The entire surface of the assessment area is covered with concrete. Due to the low relief over much of the area, drainage is considered to be sluggish, and not well defined. A site map is shown in Figure 1-3.

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



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

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COST/SCHED-AREA			APPROVED BY DATE
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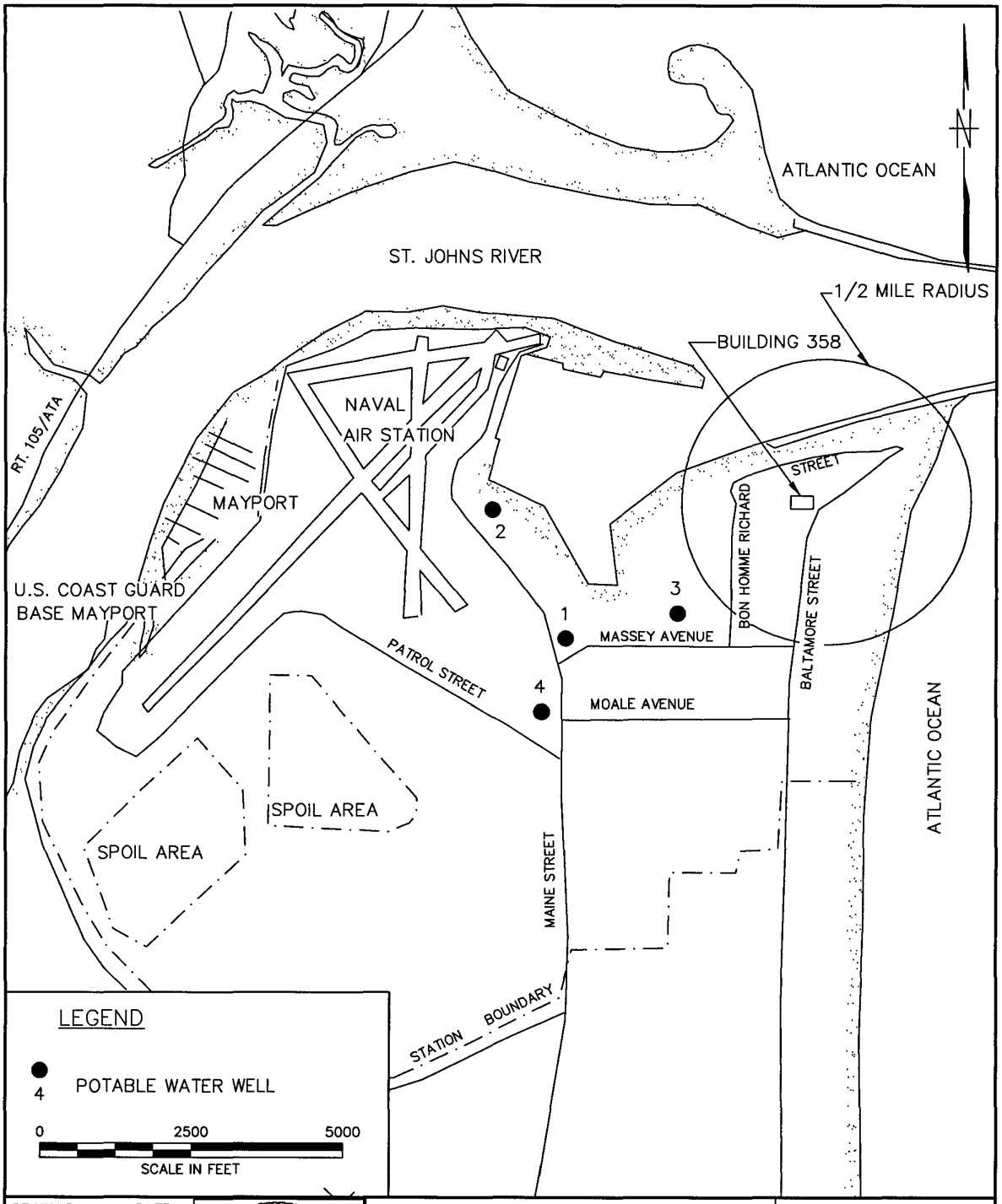

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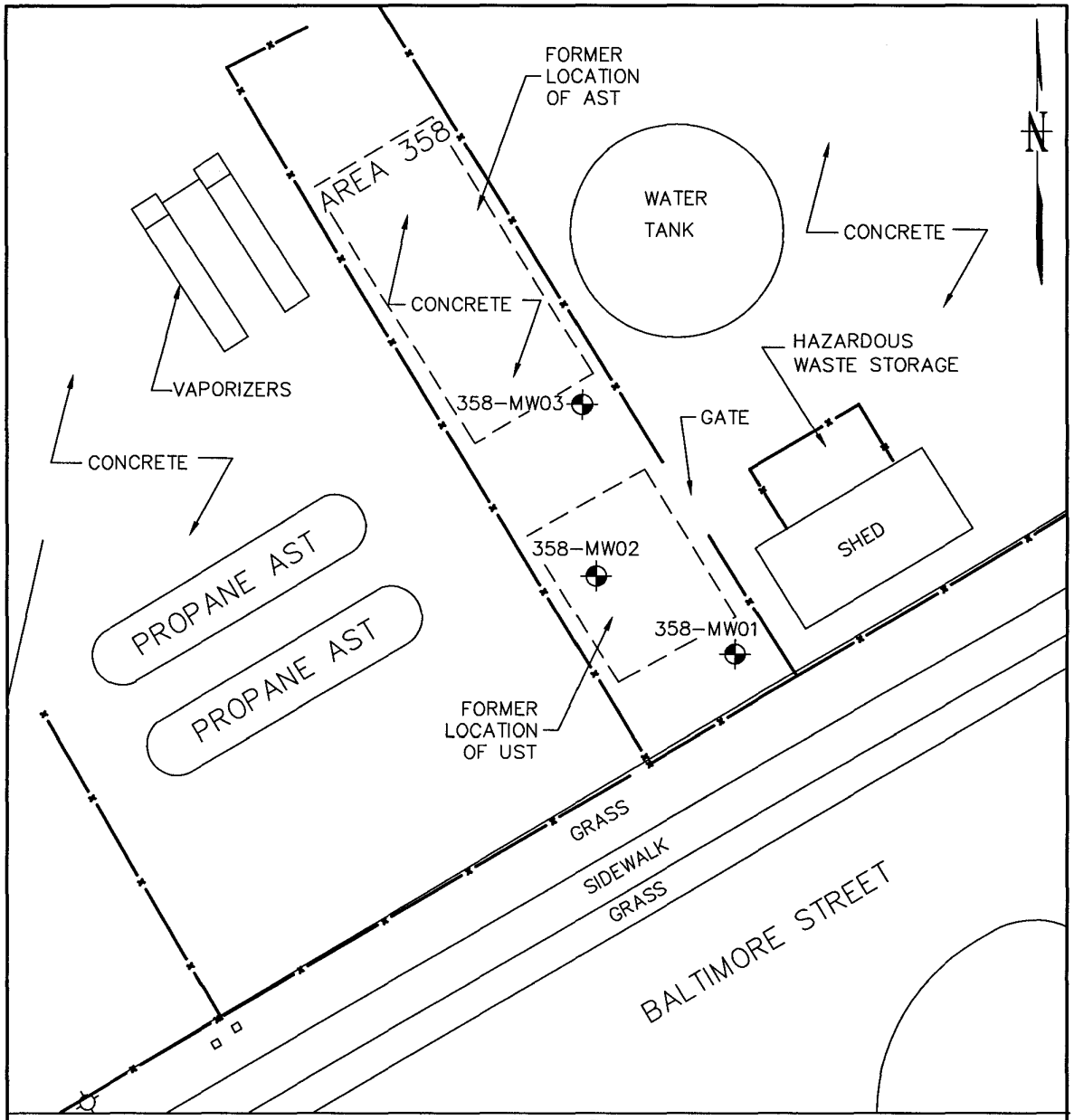

LEGEND

MONITORING WELL
LIGHTPOLE
FENCE — x —
ELECTRIC OR COMM. BOX

0 10 20
APPROXIMATE SCALE in FEET

DRAWN BY CW DATE 8/22/00	DEPARTMENT OF THE NAVY SOUTHERN DIV FACILITIES ENGINEERING COMD	SITE MAP SITE 358 JULY 14, 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 1-3 REV. 0

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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 potable water supply wells are currently producing water from this aquifer system. A fourth well is inactive. 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 Floridan aquifer system.

1.2.5 Land Use

The site is located close to the mouth of the St. John's River. The Atlantic Ocean is due east of the site. The area south and adjoining the site across Baltimore Street is the fire training facility. A road (Baltimore Street) is located south of the site beyond which are various storage and office buildings.

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 that was 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 Site 358
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

Site 358 refers to an area which previously contained a 10,000 gallon above ground storage tank (AST) and a 500 gallon underground storage tank (UST). During the removal of both tanks, petroleum impacted soil was encountered in the vicinity of the tanks. The soils were screened around the tanks with an OVA. Elevated levels of hydrocarbon vapors were detected in the samples collected. However, laboratory analysis of the soil samples did not confirm the presence of petroleum impacted soils at concentrations above SCTLs.

2.0 SUBSURFACE INVESTIGATION METHODS

2.1 QUALITY ASSURANCE

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

2.2 SOIL INVESTIGATON

2.2.1 Soil Boring Installation

Soil borings at Site 358 were installed using two advancement methods: DPT and hollow stem augers (HSA). Prior to breaking ground, TtNUS reviewed utility drawings provided by the NS Mayport public works department, and requested utility mark-outs from Lon Coleman Jones, the on-site contractor.

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

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

2.2.1.1 Direct-Push Soil Borings

TtNUS conducted a soil vapor assessment at Site 358 on May 4 and 5, 2000. DPT soil borings were advanced for the purpose of collecting soil and groundwater samples. Ten soil borings (358-TW01 through 358-TW-10) were advanced in the area of the former AST and UST. The borings were advanced and soil samples were collected at two-foot intervals from each boring for the purpose of organic vapor screening and for lithologic description.

2.2.1.2 HSA Soil Borings

On May 23, 2000, three soil borings were drilled by US Drilling using HSA drilling techniques. HSA soil borings were advanced for the installation of groundwater monitoring wells. Soil cuttings were used to characterize the site lithology and/or provide additional assessment data.

2.3 GROUNDWATER INVESTIGATION

2.3.1 Direct-Push Well Borings

During the DPT investigation, soil borings were advanced approximately 5 feet into the water table and groundwater samples were collected from the surficial aquifer. The samples were collected at a total 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 2.2.1.2. 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 to ensure that the screened interval was intersected by the surface of the water table. Monitoring well placements were selected to provide spatial coverage around the area of the release. Results of the sampling were used to determine if the groundwater in the area of the former tanks had been impacted by petroleum products.

The monitoring wells were installed with a truck mounted drill rig using 4.25-inch inside diameter (ID) hollow stem augers. Each well was constructed of 2-inch diameter, flush-threaded, schedule 40 poly vinyl 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 one 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 was secured with a locking, watertight cap within a steel, 8-inch diameter steel manhole. The manhole was 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 logs are provided in Appendix D.

Table 2-1
Well Construction Details

Site Assessment Report for Site 358
Naval Station Mayport
Mayport, Florida

Well No.	Date Installed	Installation Method	Top of Casing Elevation	A/G Riser Length if Applicable	Total Well Depth (Feet)	Screened Interval (FBLS)	Well Diameter (inches)	LITHOLOGY OF SCREENED INTERVAL
358-MW01	24-May-00	HSA	8.82	N/A	15.00	5-15	2.00	Medium to fine sand
358-MW02	24-May-00	HSA	8.53	N/A	15.00	5-15	2.00	Medium to fine sand
358-MW03	24-May-00	HSA	8.30	N/A	15.00	5-15	2.00	Medium to fine sand

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

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 U.S. Environmental Protection Agency (USEPA) Standard Operating Procedures (SOP) (1997) which specifies the following criteria: temperature +/-05°C, pH +/-0.1 unit, and specific conductance +/-10 umhos/cm. A TtNUS geologist supervised all monitoring well development. Development water was containerized as liquid IDW.

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 the Site 358. 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. The assessment consisted of both visual inspection for petroleum staining and soil vapor screening with an OVA equipped with a flame ionization detector (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 FDEP temperature range.

The samples were screened with a Heath Porta FID II OVA equipped an FID. Prior to each days activities, the OVA was field calibrated with 100 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 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. Carbon absorbs petroleum hydrocarbons and thus the filtered reading is assumed to represent naturally occurring organic vapors.

Upon completion of the screening exercise, 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 are considered as contaminated, though not excessively contaminated.

2.4.3 Soil Analytical Sampling

To further assess the vadose zone at the site, soil samples were collected from three borings (358-SS-SB01-05, 358-SS-SB04-05, and 358-SS-SB05-05) during DPT installation for laboratory analysis. The three soil sample were selected from soil borings with the highest OVA readings for laboratory analysis for KAG parameters. These locations correspond to the temporary well location 358-TW01, 358-TW04, and 358-TW05. The KAG parameters include BTEX and MTBE, 1-methylnaphthalene, 2-methylnaphthalene, 16 PAHs listed in 62-770 FAC Table A, and TRPHs. In addition, one soil sample (358-SS-SB04-05) was analyzed for total organic carbon and one sample (358-SS-SB05-05) for leachability. Laboratory Data Sheets are provided in Appendix E

2.4.4 Groundwater Mobile Lab Screening

During the DPT portion of the field investigation, each soil boring was continued 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 encased in the lead probe tube. After this groundwater sampler was advanced into the water bearing zone, the probe tube was withdrawn 24 inches to allow the retractable screen open contact with the formation. 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. After sufficient purging, groundwater samples were collected by pumping directly into 40-milliliter (mL) vials. These samples were immediately taken to the on-site mobile laboratory and screened for BTEX and naphthalene. Purge water was placed in 55-gallon drums and stored on site for later sampling and disposal. The mobile laboratory screening results are presented in Appendix F.

2.4.5 Groundwater Analytical Sampling

Groundwater samples were collected from site monitoring wells to determine if the groundwater in the vicinity of the former UST had been impacted by petroleum products. TtNUS personnel collected groundwater samples from site monitoring wells on June 14, 2000. Groundwater samples collected from each monitoring well were analyzed using USEPA Method 8021 for VOAs and SVOCs, USEPA Method 8260B for EDB, USEPA Method 8310 for PAHs, USEPA Method 6010 for lead (unfiltered), and Florida Petroleum Range Organics (FL-PRO) for TRPH. The analytical methods used include all KAG

parameters for groundwater. The KAG parameters are: BTEX and MTBE, 1-methylnaphthalene, 2-methylnaphthalene, sixteen PAH's (listed in 62-770 FAC Table A), 1-2-dichloroethane, listed Priority Pollutant Volatile Organic Halocarbons, EDB, total lead and TRPHs. In addition one well was sampled for Anions, Sulfide and Methane to support NA evaluation. The groundwater samples were collected using the low-flow quiescent purging and sampling method using new Teflon™ tubing and a peristaltic pump. Approximately five well volumes of groundwater were removed from each well using the peristaltic pump and Teflon™ tubing. Temperature, pH, specific conductance, turbidity measurements, and well purge volumes were recorded at the time of sample collection. Groundwater samples were placed on ice and shipped to Severn Trent Laboratories, Inc. in North Canton, Ohio. Groundwater sample log sheets are provided in Appendix G. Laboratory analytical reports are provided in Appendix H.

Sampling activities were performed in 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 a laboratory with an approved CompQAP (Severn Trent Laboratories). 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 approved 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 recovery systems (ORS) oil/water interface probe. No free product was encountered during this investigation.

2.5 HYDROLOGIC INVESTIGATION

2.5.1 Water Level Measurements

The depths to groundwater in site monitoring wells were collected on June 14, 2000. Measurements were collected from the north rim of the top of well casings using an electronic water level indicator. The water level measurements were collected to determine the depth to water in the surficial aquifer.

The elevation of the north rim for each top of well casing was surveyed by Donald Garrett & Associates, Inc., 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 casing elevation.

The horizontal groundwater gradient across the site was evaluated from the average of water level measurements collected on June 14, 2000. The groundwater gradient was from 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

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. A figure from the USGS report depicting lateral hydraulic conductivity across NS Mayport is provided in Appendix I.

3.0 RESULTS OF INVESTIGATION

3.1 SITE-SPECIFIC HYDROGEOLOGY

3.1.1 Lithology

The site is underlain by fill material to approximately three feet below surface. The fill material was composed of pebbles and cobbles varying in size in a matrix of poorly sorted sand. Beneath the fill material was a mix of brown to dark brown fine sand, which was well sorted and moderately to well consolidated. This lithology extends to at least 15 feet bls, which was the maximum depth drilled during the investigation. Due to the homogeneity of the subsurface, no lithologic cross-section was constructed. 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 14, 2000, the depth to the shallow aquifer across the study area is approximately 4 to 5 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 0.001 feet/foot to the northwest was calculated from the data collected on June 14, 2000. The groundwater flow direction is depicted in Figure 3-1.

Lithologic data and available literature indicate the effective porosity of the lithology comprising the surficial aquifer is approximately 0.30 or 30%(USGS, 1997).

Using a hydraulic conductivity of 4.34 feet/day, the hydraulic gradient of 0.0005 feet/foot, an inferred effective porosity value of 0.30, and Darcy's Equation as stated in Section 2.5.3, the groundwater seepage velocity across the site was calculated at 0.007 feet/day or 2.55 feet/year in a northwest direction.

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 vapor analysis performed during the direct-push investigation and monitoring well installation as

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

Site Assessment Report for Site 358
Naval Station Mayport
Mayport, Florida

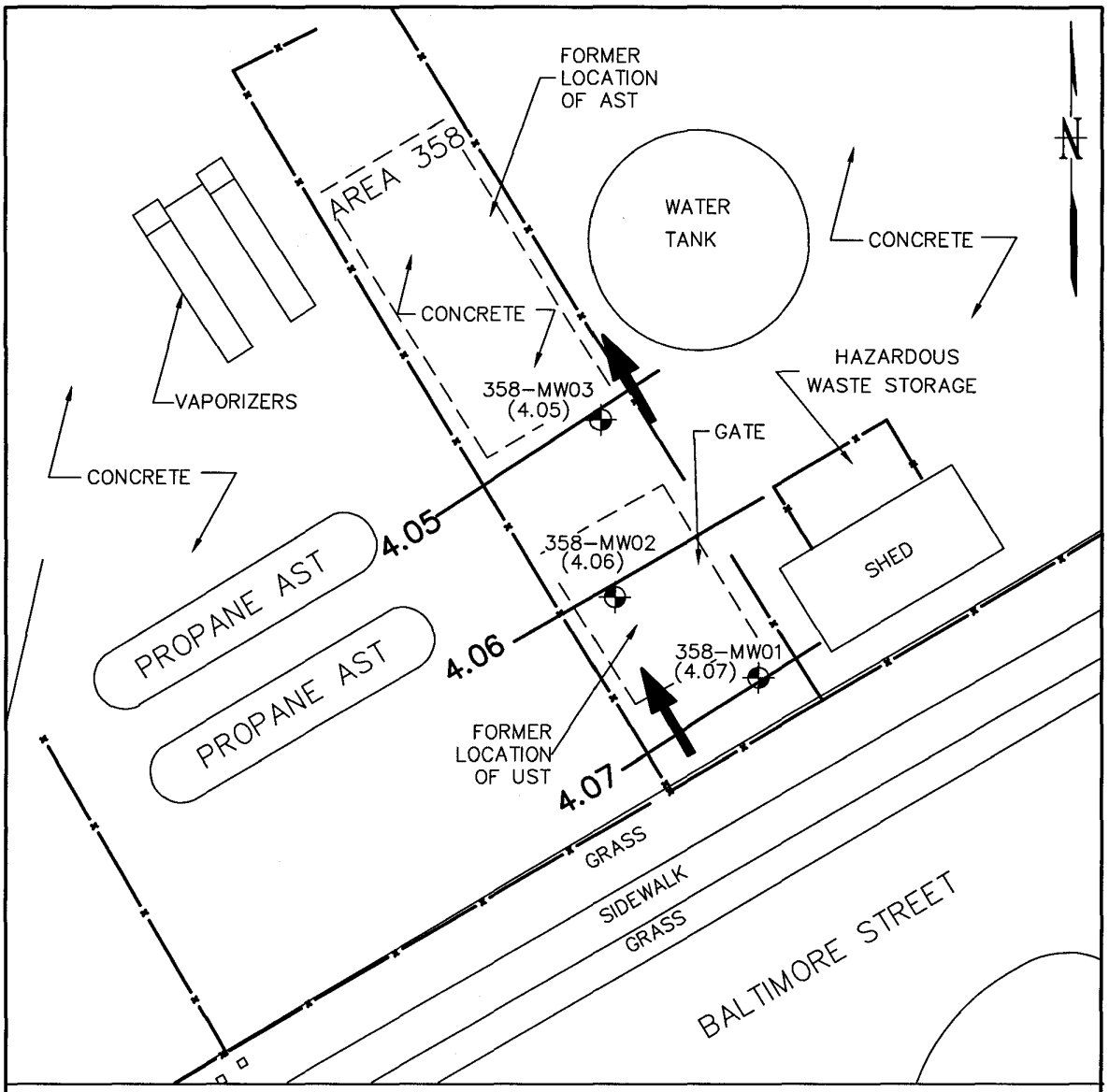
Well Number	Total Well Depth (feet, bls)	Screened Interval (bls)	Top of Casing Elevation (feet msl)	June 14, 2000	
				Depth to Water below Top of Casing (feet)	Water Elevation (feet msl)
Building 358					
358-MW01	15.00	5-15*	8.82	4.75	4.07
358-MW02	15.00	5-15*	8.53	4.47	4.06
358-MW03	15.00	5-15*	8.3	4.25	4.05

Notes:

bls - below land surface.

msl - mean sea level.

* - screen interval measured from ground surface, not a surveyed elevation. It is estimated the screen elevation is approximately 4.5 feet below top of casing.



LEGEND

MONITORING WELL

WATER TABLE ELEVATION (FT MSL) (4.05)

EQUIPOTENTIAL LINE (FT MSL) 4.07'

INFERRED DIRECTION OF GROUNDWATER FLOW

ELECTRIC OR COMM. BOX

FENCE

0 10 20
APPROXIMATE SCALE in FEET

DRAWN BY CW DATE 8/22/00	DEPARTMENT OF THE NAVY SOUTHERN DIV FACILITIES ENGINEERING COMD	GROUNDWATER ELEVATION CONTOUR MAP SITE 358 JUNE 14, 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 3-1 REV. 0

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

described in Section 2.0 of this report. Soils exhibiting an OVA response of greater than 50 ppm were not encountered in any of the borings across the site. These data indicate that "excessively contaminated" soil (greater than 50 ppm OVA response as defined by Chapter 62-770.200, FAC) is not present at the site. Soil vapor screening results are presented in Table 3-2. Soil boring locations and vapor readings are depicted on Figure 3-2.

3.2.2 Soil Analytical Sampling Results

The analytical data for the confirmatory laboratory sample indicated that all KAG parameters were not detected above SCTLs. A summary of analytical results are presented in Table 3-3. Laboratory analytical reports can be found in Appendix E.

3.3 WATER QUALITY

3.3.1 Temporary Well Point Sampling

TtNUS personnel collected groundwater samples from each soil boring during the DPT investigation. Ten (10) groundwater samples were collected between May 4 and 5, 2000. The samples were analyzed for BTEX, MTBE and naphthalene by the mobile analytical laboratory. None of the constituents tested for were detected in any of the borings sampled. Temporary well point locations can be found on Figure 3-2. The mobile laboratory analytical results for groundwater are presented in Appendix F.

3.3.2 Monitoring Well Sampling

TtNUS personnel collected groundwater samples from three monitoring wells on June 14, 2000. KAG parameters were not detected in any of the groundwater samples collected above GCTLs. A summary of analytical results are presented in Table 3-4. Laboratory analytical reports can be found in Appendix H.

Table 3-2
Soil Vapor Screening Summary

Site Assessment Report for Site 358
Naval Station Mayport
Mayport, Florida

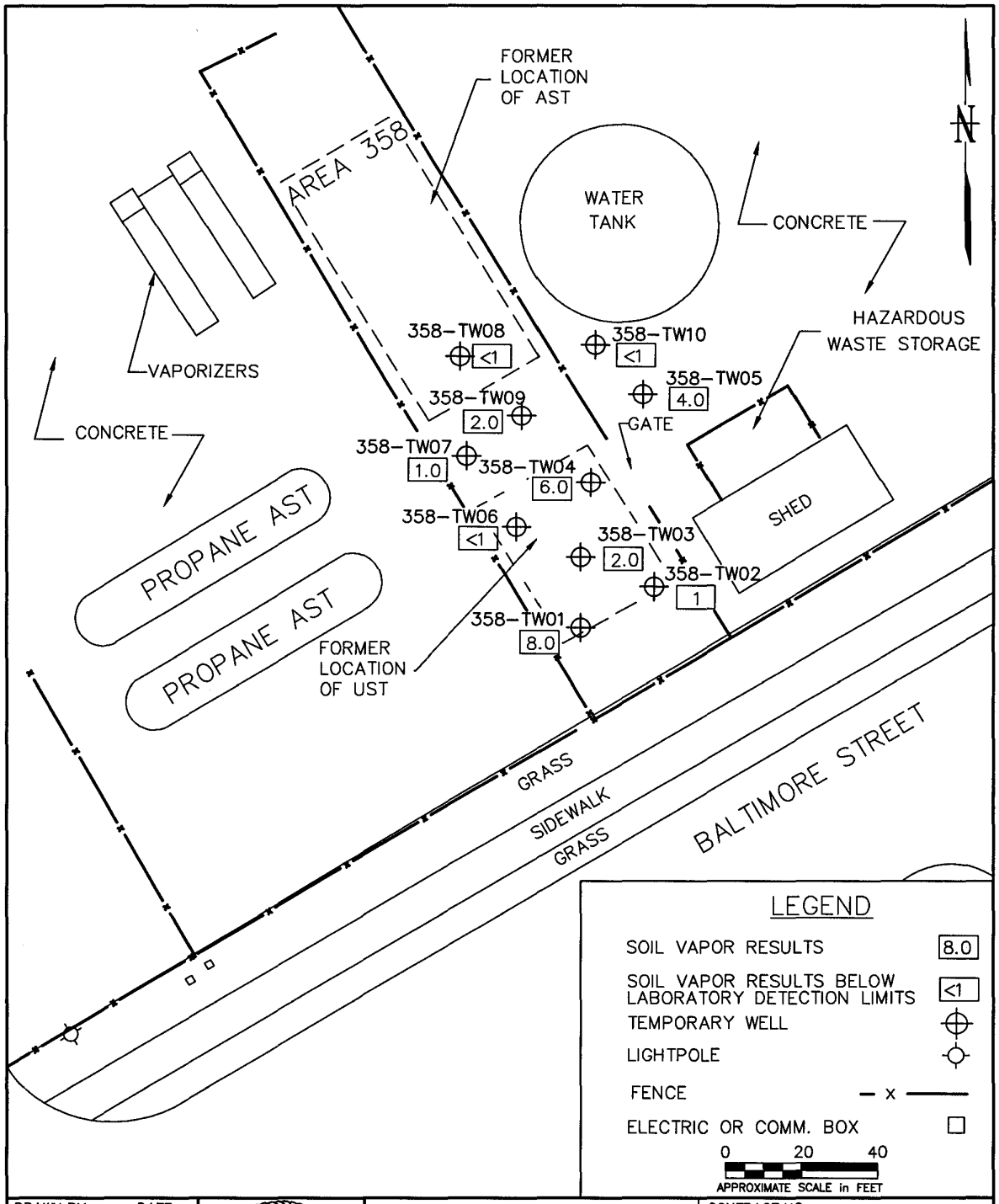
Sample		OVA Headspace results in ppm		
Location	**Date**	**Unfiltered**	**Filtered**	**Total**
358-TW01	5/4/00	8.00	<1	8.00
358-TW02	5/4/00	<1	<1	<1
358-TW03	5/4/00	2.00	<1	2.00
358-TW04	5/4/00	6.00	<1	6.00
358-TW05	5/4/00	4.00	<1	4.00
358-TW06	5/4/00	<1	<1	<1
358-TW07	5/4/00	<1	<1	<1
358-TW08	5/4/00	<1	<1	<1
358-TW09	5/4/00	2.00	<1	2.00
358-TW10	5/4/00	<1	<1	<1
358-TW11	5/4/00	<1	<1	<1

Notes:

All samples collected from 5 feet, or just above the water table.

ppm = parts per million

Analytical Results = ppm



DRAWN BY CW DATE 8/24/00	SOIL VAPOR RESULTS AND TEMPORARY WELL LOCATION MAP SITE 358	CONTRACT NO. 0506	
CHECKED BY DATE		APPROVED BY DATE	
COST/SCHED-AREA	U.S. NAVAL STATION MAYPORT MAYPORT, FLORIDA	APPROVED BY DATE	
SCALE AS NOTED		DRAWING NO. FIGURE 3-2	REV. 0

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

Table 3-3
Soil Analytical Summary - Fixed Based Laboratory

Site Assessment Report for Site 358
Naval Station Mayport
Mayport, Florida

Compound	SCTLs[1] (Residential)	Leachability Standards for Groundwater Protection	358-SS-SB01	358-SS-SB04	358-SS-SB05
			5/4/00	5/4/00	5/4/00
Volatile Organic Aromatics USEPA Method 8260B (µg/kg)					
Benzene	1,100	7.0	<7.4	<7.4	<7.4
Toluene	380,000	500	0.65J	0.54J	ND
Ethylbenzene	1,100,000	600	<7.4	<7.4	<7.4
4-methyl-2-pentanone	220,000	2,600	<7.4	<7.4	2.8J
1,1-dichloroethene	90	60	<7.4	1.9J	2.3J
Polynuclear Aromatic Hydrocarbons USEPA Method 8310 (µg/kg)					
1-methylnaphthalene	68,000	2,200	<57	<55	<61
2-methylnaphthalene	80,000	6,100	<57	<55	<61
OTHER (mg/kg)					
TRPH- FL PRO	340	340	1.3J	<11	<11
TOC	NA	NA	NS	0	NS

Notes:

358-SS-SB01, -SB04, and -SB05 correspond to 358-TW01, -TW04, and -TW05.

[1] -Soil Cleanup Target Levels.

All samples collected from the 4 to 5 feet depth immediately above the water table.

< = below laboratory detection limit

Analytical Results = µg/kg

NA = not applicable

NS = not sampled

J = estimated below practical quantitation limit

Table 3-4
Groundwater Analytical Results - Fixed Based Laboratory

Site Assessment Report for Site 358
Naval Station Mayport
Jacksonville, Florida

Compound	GCTLs[1]	358-MW-01	358-MW-02	358-MW-03
		6/14/00	6/14/00	6/14/00
Detected Volatile Organic Aromatics (USEPA Method 8260B)(µg/L)				
Acetone	**700**	1.5J	1.3J	1.5J
Toluene	**40**	<1	0.044J	0.055J
Semivolatile Organic Compounds (USEPA Method 8270B)(µg/L)				
Bis(2-ethylhexyl)phthalate	**6**	2.3J	ND	ND
Phenol	**10**	1.8J	2.1J	1.3J
Polynuclear Aromatic Hydrocarbons(µg/L)				
1- Methylnaphthalene	**20**	<10	<10	<10
2- Methylnaphthalene	**20**	<10	<10	<10
Inorganics (µg/L)				
Lead	**15**	<1.7	<1.7	<1.7
Total Recoverable Petroleum Hydrocarbons(µg/L)				
TRPH - FL Pro	**5000**	<100	<100	<100
Natural Attenuation Parameters (mg/kg)				
Nitrate/Nitrite	NA	NS	<1	NS
Sulfate	NA	NS	43	NS
Sulfide	NA	NS	<1	NS
Methane	NA	NS	18	NS

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

4.0 DISCUSSION

Elevated hydrocarbon vapors were detected in the soil in the vicinity of a 500 gallon UST and 10,000-gallon AST during excavation. Laboratory results of the soil samples, however did not confirm the presence of petroleum impacted soils at concentrations above target levels.

Analytical and headspace readings during the DPT phase of the assessment did not reveal the presence of “Excessively contaminated” soil, as defined by Chapter 62-770.200 FAC. Confirmatory soil samples indicated that KAG constituents were below residential leachability SCTLs for groundwater protection. Groundwater samples, collected from DPT borings analyzed by the on-site mobile lab, did not contain the presence of hydrocarbon concentrations above GCTLs. Three shallow monitoring wells were installed and sampled in June 2000 following the DPT investigation. These sample results indicated that none of the wells sampled had KAG constituents above GCTLs. No free product was encountered during the groundwater sampling events.

5.0 CONCLUSIONS AND RECOMMENDATION

The results of the site assessment performed by TtNUS at Site 358 are summarized as follows:

- The site is underlain by a surficial aquifer comprised of fill material and sand. No confining layers were encountered within the upper 15 feet of the surficial aquifer.
- The surficial aquifer qualifies as a G-II aquifer.
- The direction of groundwater flow is to the north-northwest and the surficial aquifer flows at a calculated velocity of 0.007 feet/day.
- Free product was not found at the site during the course of this assessment.
- 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.
- KAG constituents in soil were not detected above and residential, or leachability SCTLs.
- KAG constituents in groundwater were not detected above GCTL values.

Based upon the hydrogeological and chemical data presented in this SAR and supported by the criteria sited in Chapter 62-770.680 FAC, it is recommended that No Further Action status be approved for the site.

REFERENCES

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

Florida Department of Environmental Protection, October 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, 76 p.

U.S. Geological Survey. Ankona, FLA. Quadrangle 1982. 7.5 Minute Series, Topographic Quadrangle Maps of Florida: scale 1:24,000.

U.S. Geological Survey, 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.

U.S. Army Corps of Engineers, May 1992, Contamination Assessment Report, Site 1330, NS Mayport

APPENDIX A

CAR SUMMARY SHEET

CONTAMINATION ASSESSMENT REPORT SUMMARY SHEET

Facility Name: Site 358, 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: Leaking UST 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	
☐ Undetermined		☐ Unknown	

(3) Description of IRA: Soil from tank excavation removed.

☐ Free product Removal: _____ (gals)
☑ Soil Removal: 12 yd^3 (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 grained sand. No significant lithologic variations across site.

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

Highest current soil concentration (OVA: 3 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: 6/14/00 Date of last soil sampling: 5/4/00

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

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

(12) Average depth to groundwater: 4.5 (ft)

(13) Observed range of seasonal groundwater fluctuations: @ 1 _____ (ft) (Based on water level data collected during the CAR investigation)

(14) Estimated rate of groundwater flow: 0.007 (ft/day)

(15) Hydraulic gradient across site: 0.0005 (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 RECORDS

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)	44	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: 904 270 130

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: IAN B BOVIER | Signature: Ian B Bovier | Month 1 | Day 28 | Year 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

COPY

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.: 358-MW1
DATE: 5/23
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**
							Concrete						
							sand + gravel			0ppm			
							very coarse, fill						
							material						
		5					↓			0ppm			
							sand, grey brown						
							coarse to med						
							grained, poorly						
		10					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: US Drilling
DRILLING RIG:

BORING No.: 358-MW2
DATE: 5/23
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**
							Concrete.						
							sand + gravel			0 ppm			
							fill material						
							↓						
		5								1 ppm			
							sand, gray-brown						
							to brown, med						
							to coarse grained						
							↓						
		10											
		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.: 358-MW3
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**
							Concrete						
							sand, some gravel			0 ppm			
							cobbles + boulders						
							poorly sorted						
		5					↓			0 ppm			
							sand, gray brown						
							med to coarse						
							grained, well						
							sorted, angular						
		10											
		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

MONITORING WELL COMPLETION LOGS

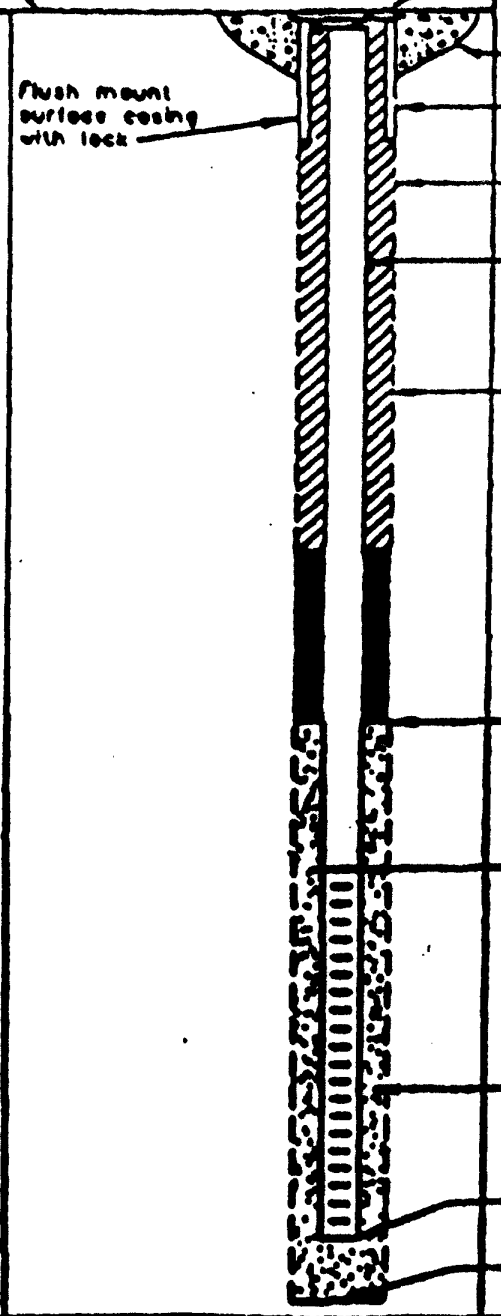
BORING NO.: _____

MONITORING WELL SHEET

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

LOCATION: Building 358
BORING: MW-1
DATE: 5/23/00

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



ELEVATION TOP OF RISER: N/A

TYPE OF SURFACE SEAL: Grout Cement

TYPE OF PROTECTIVE CASING: 8" diameter manhole

I.D. OF PROTECTIVE CASING: _____

DIAMETER OF HOLE: 10"

TYPE OF RISER PIPE: 2" inch PVC

RISER PIPE I.D.: _____

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

DEPTH/ELEVATION TOP OF SAND: 3'

DEPTH/ELEVATION TOP OF SCREEN: 5'

TYPE OF SCREEN: 2" inch 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'

DEPTH/ELEVATION BOTTOM OF SAND: N/A

DEPTH/ELEVATION BOTTOM OF HOLE: N/A

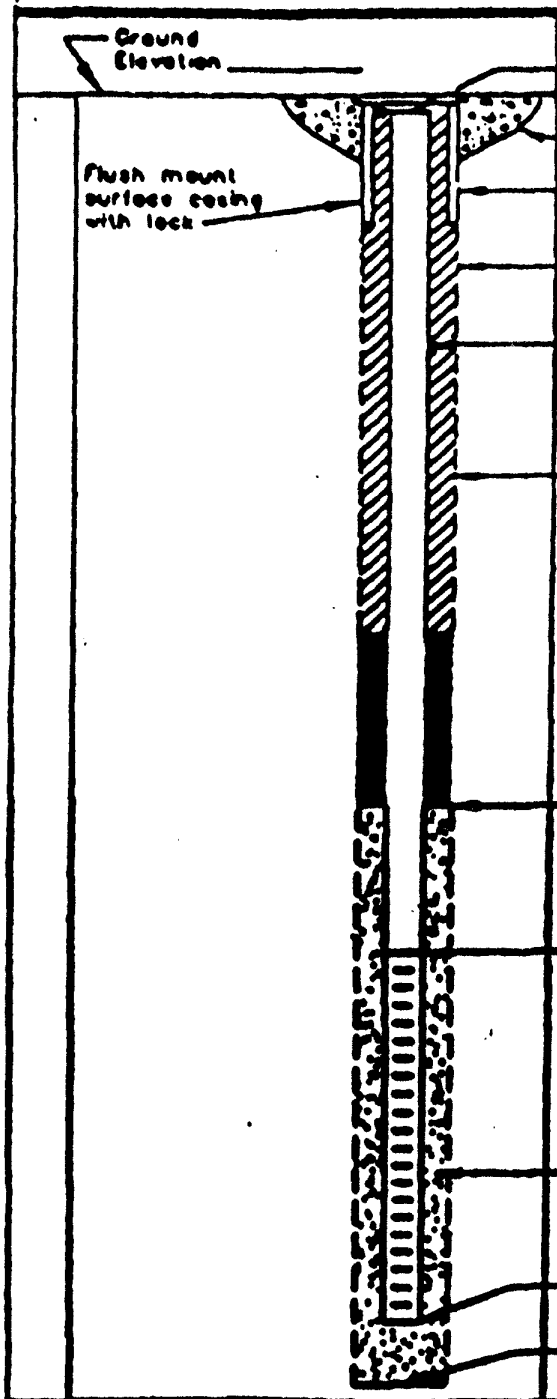
BACKFILL MATERIAL BELOW SAND: N/A

MONITORING WELL SHEET

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

LOCATION: Building 358
BORING: MW-2
DATE: 5/23/90

DRILLER: US Drilling
DRILLING METHOD: HSA
DEVELOPMENT METHOD: Centrifugal pump



ELEVATION TOP OF RISER: N/A

TYPE OF SURFACE SEAL: Grout cement

TYPE OF PROTECTIVE CASING: 8" diameter manhole.

I.D. OF PROTECTIVE CASING: N/A

DIAMETER OF HOLE: 10"

TYPE OF RISER PIPE: 2" inch PVC

RISER PIPE I.D.:

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

DEPTH/ELEVATION TOP OF SAND: 3'

DEPTH/ELEVATION TOP OF SCREEN: 5'

TYPE OF SCREEN: 2" inch 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'

DEPTH/ELEVATION BOTTOM OF SAND: N/A

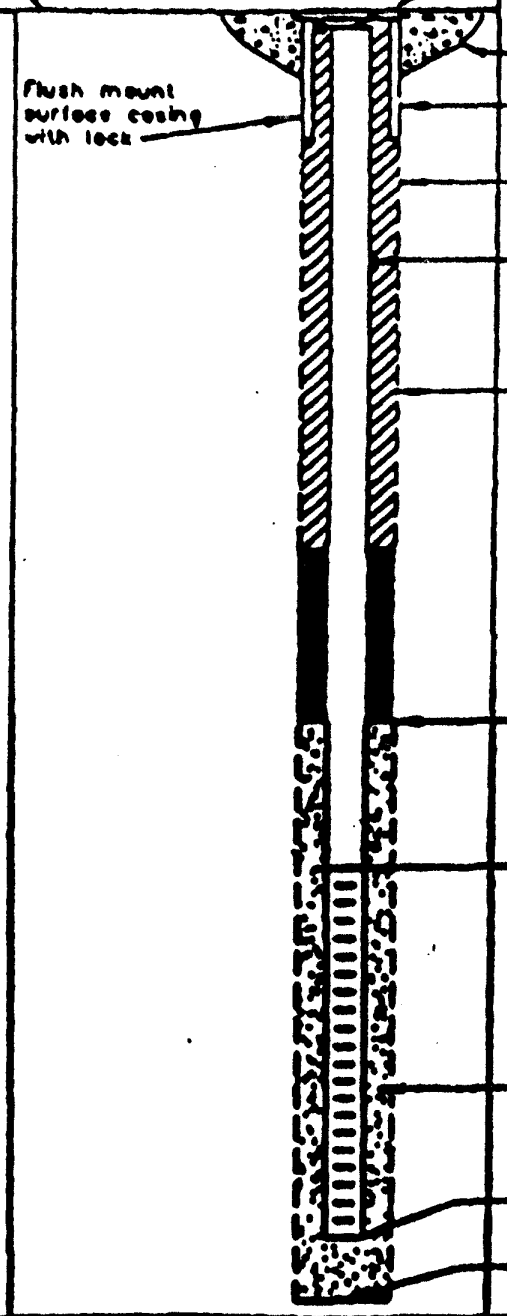
DEPTH/ELEVATION BOTTOM OF HOLE: N/A

BACKFILL MATERIAL BELOW SAND: N/A

BORING NO.: _____

MONITORING WELL SHEET

PROJECT: NS Mayport	LOCATION: Building 358	DRILLER: US Drilling
PROJECT NO.: 0506	BORING: MW-03	DRILLING METHOD: HSA
ELEVATION: N/A	DATE: 5/23/92	DEVELOPMENT METHOD: Centrifugal pump
FIELD GEOLOGIST: GB & AP		



ELEVATION TOP OF RISER: N/A

TYPE OF SURFACE SEAL: Grout cement

TYPE OF PROTECTIVE CASING: 8" diameter manhole

I.D. OF PROTECTIVE CASING: N/A

DIAMETER OF HOLE: 10"

TYPE OF RISER PIPE: 2" inch PVC

RISER PIPE I.D.: _____

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

DEPTH/ELEVATION TOP OF SAND: 3'

DEPTH/ELEVATION TOP OF SCREEN: 5'

TYPE OF SCREEN: 2" inch 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'

DEPTH/ELEVATION BOTTOM OF SAND: NA

DEPTH/ELEVATION BOTTOM OF HOLE: N/A

BACKFILL MATERIAL BELOW SAND: N/A

APPENDIX E

LABORATORY ANALYTICAL RESULTS 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	%	MCANW 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: DCT2PT **Client ID:** 358-SS-SB05-04

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	3.7	B	1	ICPST	5/16/00	11:21
Barium	493.41	0.3	10000	40.4	B	1	ICPST	5/16/00	11:21
Cadmium	226.50	0.3	100	0.4	B	1	ICPST	5/16/00	11:21
Chromium	267.72	0.8	500	4.3	B	1	ICPST	5/16/00	11:21
Lead	220.35	1.3	500	6.3	B	1	ICPST	5/16/00	11:21
Mercury	253.7	0.037	2	0.66	B	1	CVAA	5/16/00	15:17
Selenium	196.03	4.9	250	4.9	U	1	ICPST	5/16/00	11:21
Silver	328.07	1	500	1	U	1	ICPST	5/16/00	11:21

Comments:

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

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: 358-SS-SB05-04

General Chemistry

Lot-Sample #...: A0E050174-004 Work Order #...: DCT2P Matrix.....: SO
Date Sampled...: 05/04/00 16:00 Date Received..: 05/05/00
% Moisture.....: 18

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	82.1	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.

TETRA TECH NUS, INC.

Client Sample ID: 351-SS-SB02-05

General Chemistry

Lot-Sample #...: A0E230114-001 Work Order #...: DDJL1 Matrix.....: SO
Date Sampled...: 05/05/00 08:00 Date Received..: 05/08/00
% Moisture.....: 5.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	95.0	0.10	%	MCANW 160.3 MOD	05/24-05/25/00	0145340

Dilution Factor: 1

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

TETRA TECH NUS, INC.

Client Sample ID: 358-SS-SB04-04

General Chemistry

Lot-Sample #...: A0E050174-003 Work Order #...: DCT2H Matrix.....: SO
Date Sampled...: 05/04/00 14:00 Date Received..: 05/05/00
% Moisture.....: 8.7

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	91.3	0.10	%	MCAWW 160.3 MOD	05/09-05/10/00	0130303
	Dilution Factor: 1					
Total Organic Carbon	0.45	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.

TETRA TECH NUS, INC.

Client Sample ID: 358-SS-SB01-04

General Chemistry

Lot-Sample #...: A0E050174-002 Work Order #...: DCT23 Matrix.....: SO
Date Sampled...: 05/04/00 11:00 Date Received..: 05/05/00
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	87.4	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.

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.

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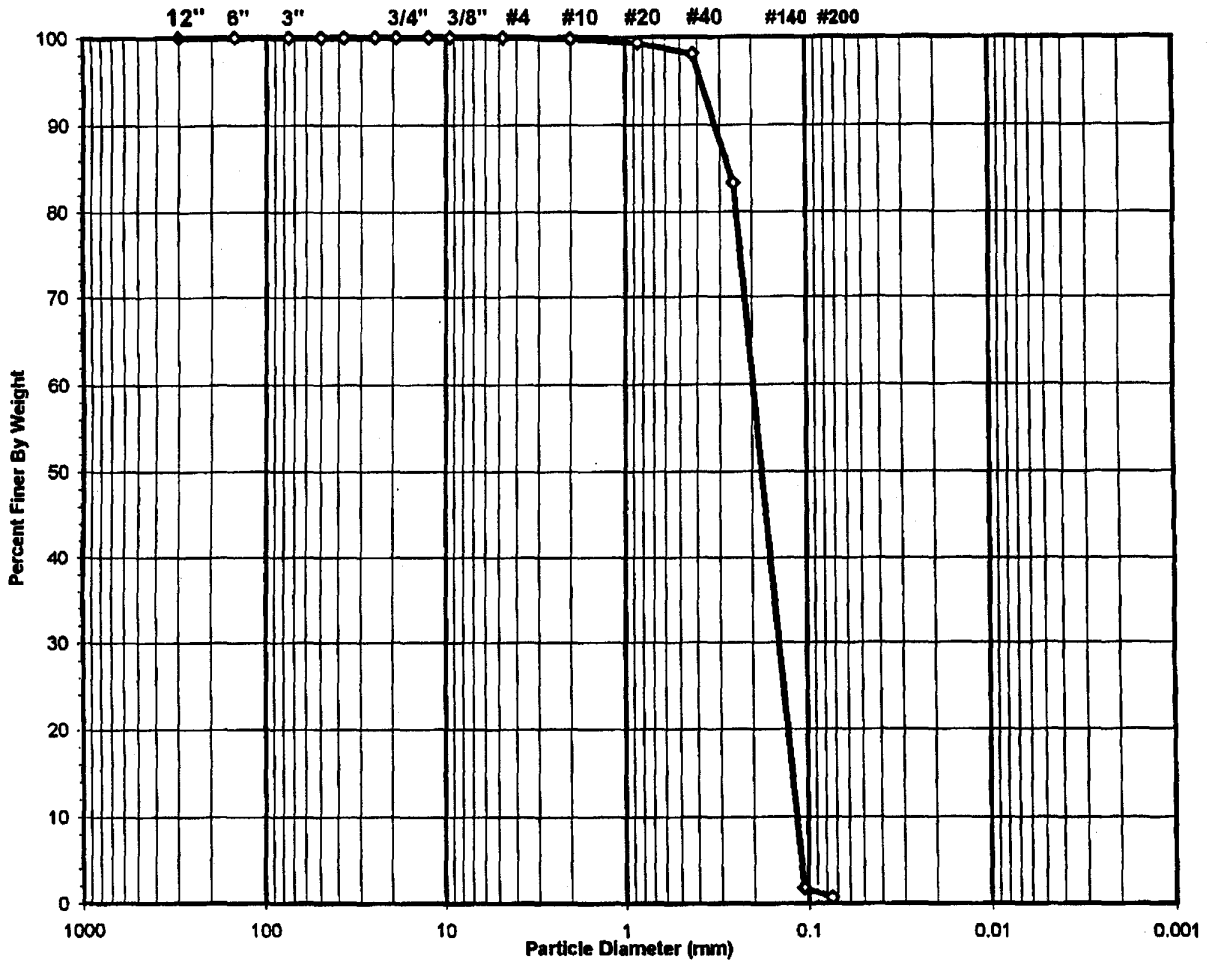
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	STL-NORTH CANTON	Boring No.	A0E040160-001
Client Reference	TETRA TECH	Depth (ft)	NA
Project No.	00125-01	Sample No.	DCQ8T-001
Lab ID	00125-01.001	Soil Color	**GRAYISH BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol	*sp, ASSUMED*	D60 =	0.2	CC =	0.9
USCS Classification	*POORLY GRADED SAND*	D30 =	0.1	CU =	1.7
	UNABLE TO RUN HYDRO				
		D10 =	0.1		

Tested By TO Date 5/16/00 Checked By LB Date 5-19-00

page 1 of 2 DCN: CT-S3C DATE 6-25-98 REVISION: 2 *C:\MY DOCUMENTS\PrintQ\[D56.xls]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	STL-NORTH CANTON	Boring No.	A0E040160-001
Client Reference	TETRA TECH	Depth (ft)	NA
Project No.	00125-01	Sample No.	DCQ8T-001
Lab ID	00125-01.001	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1621	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	723.60	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	699.90	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	101.01	Weight of Tare (gm)	NA
Weight of Water (gm)	23.70	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	598.89	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**4.0**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	598.89
Dry Weight - 3/4" Sample (gm)	595.1	Weight of minus #200 material (gm)	3.84
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	595.05
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	0.19	0.03	0.03	99.97	**99.97**
#10	2.00	0.81	0.14	0.17	99.83	**99.83**
#20	0.850	2.80	0.47	0.63	99.37	**99.37**
#40	0.425	7.66	1.28	1.91	98.09	**98.09**
#60	0.250	88.49	14.78	16.69	83.31	**83.31**
#140	0.106	488.00	81.48	98.17	1.83	**1.83**
#200	0.075	7.10	1.19	99.36	0.64	**0.64**
Pan	-	3.84	0.64	100.00	-	-

Tested By TO Date 5/16/00 Checked By LB Date 5-19-00

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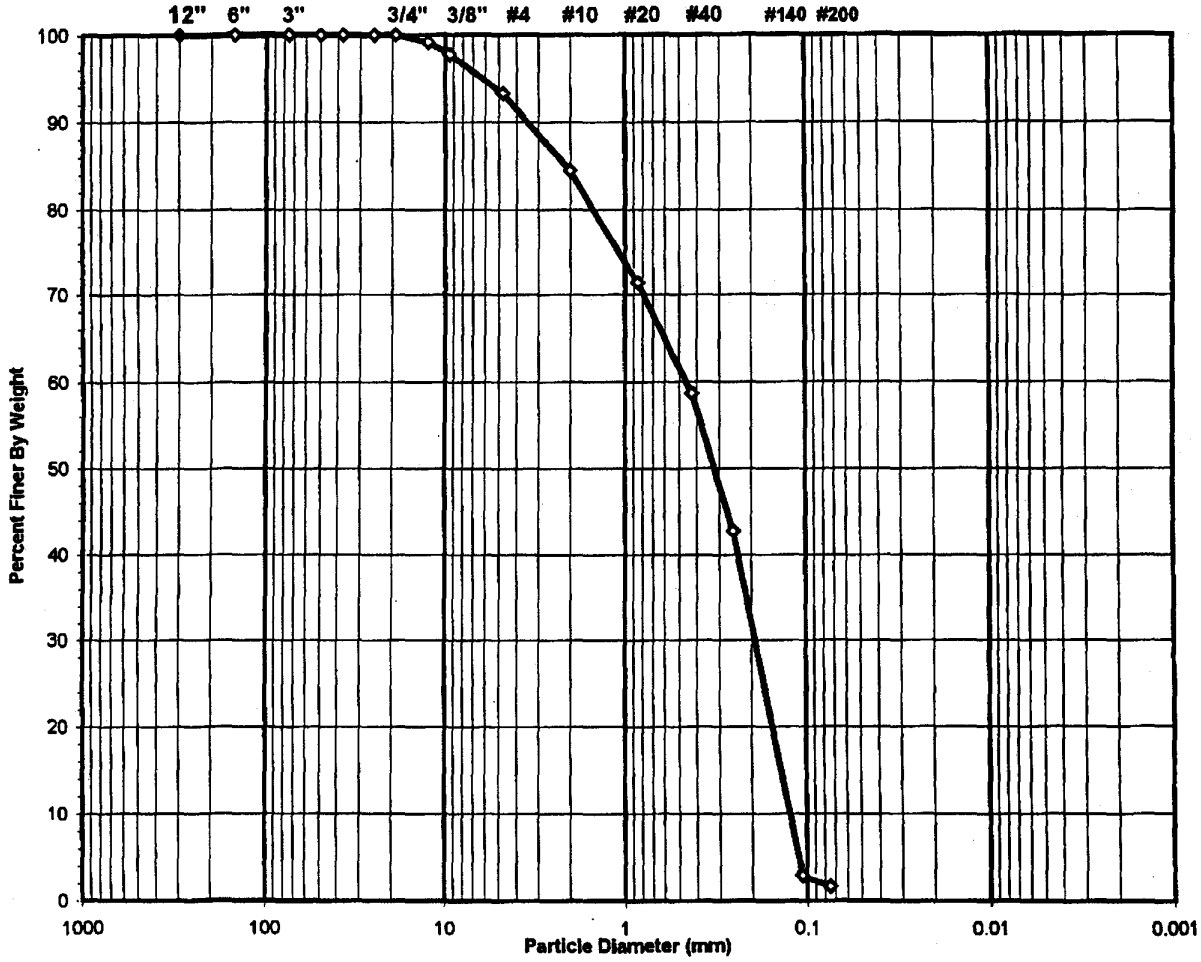
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	STL-NORTH CANTON	Boring No.	A0E040160-002
Client Reference	TETRA TECH	Depth (ft)	NA
Project No.	00125-01	Sample No.	DCQ91-010
Lab ID	00125-01.002	Soil Color	**BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol	***sp, ASSUMED***	**D60 =**	**0.5**	**CC =**	**0.6**
USCS Classification	***POORLY GRADED SAND***	**D30 =**	**0.2**	**CU =**	**3.7**
	UNABLE TO RUN HYDRO				
		D10 =	**0.1**		

Tested By TO Date 5/16/00 Checked By LB Date 5-19-00

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	STL-NORTH CANTON	Boring No.	A0E040160-002
Client Reference	TETRA TECH	Depth (ft)	NA
Project No.	00125-01	Sample No.	DCQ91-010
Lab ID	00125-01.002	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1631	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	649.90	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	625.10	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	95.00	Weight of Tare (gm)	NA
Weight of Water (gm)	24.80	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	530.10	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**4.7**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	530.10
Dry Weight - 3/4" Sample (gm)	521.3	Weight of minus #200 material (gm)	8.82
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	521.28
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	0.00	0.00	0.00	100.00	100.00
2"	50	0.00	0.00	0.00	100.00	100.00
1 1/2"	37.5	0.00	0.00	0.00	100.00	100.00
1"	25.0	0.00	0.00	0.00	100.00	100.00
3/4"	19.0	0.00	0.00	0.00	100.00	100.00
1/2"	12.50	4.72	0.89	0.89	99.11	99.11
3/8"	9.50	7.40	1.40	2.29	97.71	97.71
#4	4.75	23.56	4.44	6.73	93.27	93.27
#10	2.00	46.79	8.83	15.56	84.44	84.44
#20	0.850	68.97	13.01	28.57	71.43	71.43
#40	0.425	67.68	12.77	41.34	58.66	58.66
#60	0.250	84.24	15.89	57.23	42.77	42.77
#140	0.106	211.15	39.83	97.06	2.94	2.94
#200	0.075	6.77	1.28	98.34	1.66	1.66
Pan	-	8.82	1.66	100.00	-	-

Tested By TO Date 5/16/00 Checked By LB Date 5-19-00

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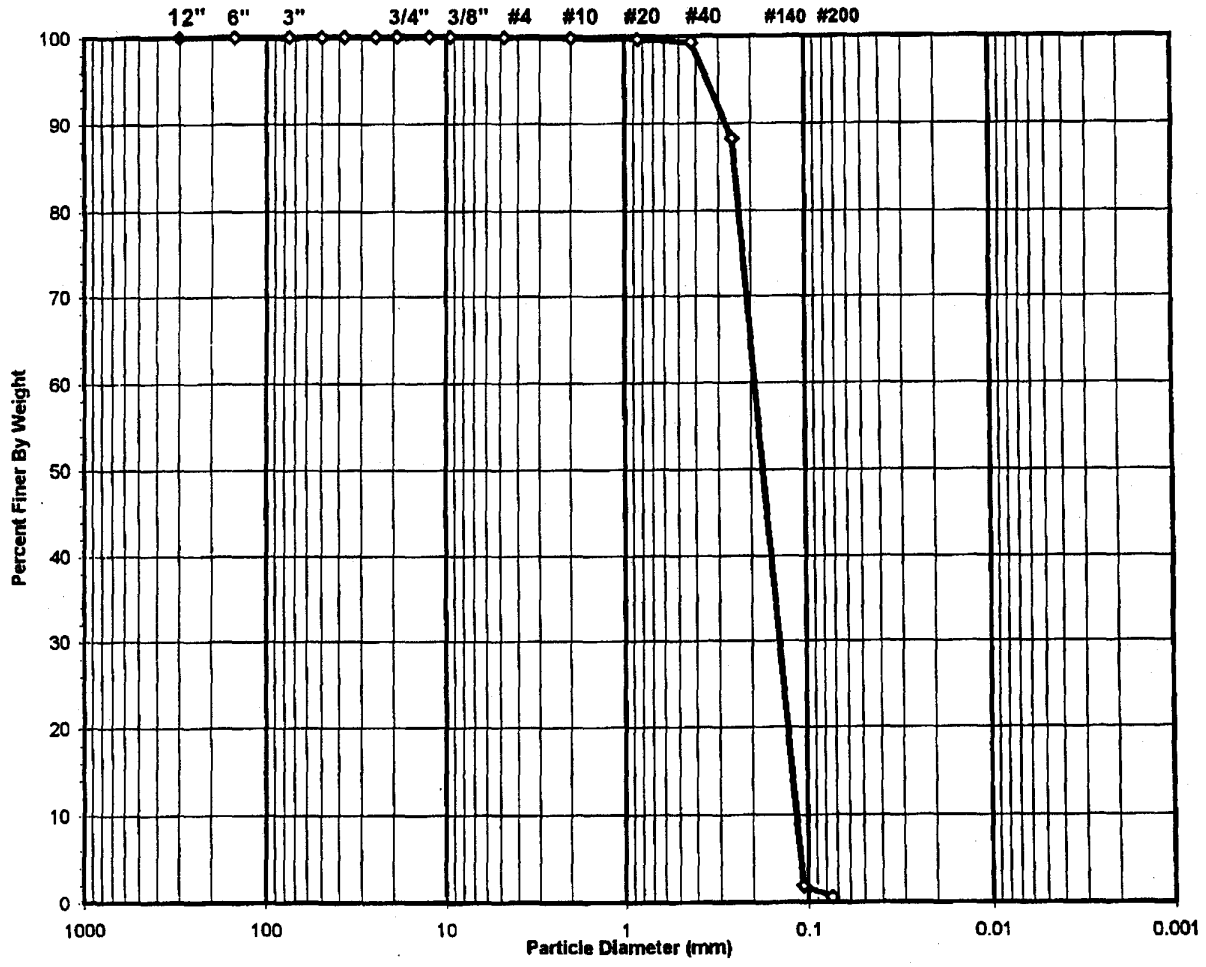
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	STL-NORTH CANTON	Boring No.	A0E050174-004
Client Reference	TETRA TECH	Depth (ft)	NA
Project No.	00125-02	Sample No.	DCZP-001+2
Lab ID	00125-02.001	Soil Color	**BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol ***sp, ASSUMED*** **D60 = 0.2** **CC = 0.9**

USCS Classification ***POORLY GRADED SAND*** **D30 = 0.1** **CU = 1.6**

UNABLE TO RUN HYDRO

D10 = 0.1

Tested By TO Date 5/16/00 Checked By LB Date 5-19-00

page 1 of 2 DCN: CT-S3C DATE 6-25-98 REVISION: 2 *C:\MY DOCUMENTS\PrintQ\[D58.xls]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	STL-NORTH CANTON	Boring No.	A0E050174-004
Client Reference	TETRA TECH	Depth (ft)	NA
Project No.	00125-02	Sample No.	DCZP-001+2
Lab ID	00125-02.001	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1655	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	1406.50	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	1233.90	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	96.10	Weight of Tare (gm)	NA
Weight of Water (gm)	172.60	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	1137.80	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**15.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	1137.80
Dry Weight - 3/4" Sample (gm)	1131.8	Weight of minus #200 material (gm)	6.05
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	1131.75
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	**100.00**
6"	150	0.00	0.00	0.00	100.00	**100.00**
3"	75	0.00	0.00	0.00	100.00	**100.00**
2"	50	0.00	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00	0.00	0.00	100.00	**100.00**
1"	25.0	0.00	0.00	0.00	100.00	**100.00**
3/4"	19.0	0.00	0.00	0.00	100.00	**100.00**
1/2"	12.50	0.00	0.00	0.00	100.00	**100.00**
3/8"	9.50	0.00	0.00	0.00	100.00	**100.00**
#4	4.75	0.63	0.06	0.06	99.94	**99.94**
#10	2.00	1.49	0.13	0.19	99.81	**99.81**
#20	0.850	1.91	0.17	0.35	99.65	**99.65**
#40	0.425	4.14	0.36	0.72	99.28	**99.28**
#60	0.250	125.64	11.04	11.76	88.24	**88.24**
#140	0.106	983.10	86.40	98.16	1.84	**1.84**
#200	0.075	14.84	1.30	99.47	0.53	**0.53**
Pan	-	6.05	0.53	100.00	-	-

Tested By TO Date 5/16/00 Checked By LB Date 5-19-00

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CASE NARRATIVE
METALS
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.

Samples which contain results between the Instrument Detection Limit (IDL) and the Reporting Limit (RL) are flagged with "B". There is the possibility of false positive results at these quantitation levels. The acceptance criteria for ICB, CCB, and Method Blank is ± the RL.

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 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.

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.

geotechnics

LABORATORY TEST REPORT

May 22, 2000

Project No. 00125-01

Mr. Denise Pohl
STL North Canton
41015 Huffel Drive NW
North Canton, Ohio 44720

RE: Soils Testing - Tetra Tech

Transmitted herein are the results of the soils testing performed for the above referenced project verified on the Project Verification Form, submitted May 5, 2000. The testing was performed in general accordance with the ASTM methods listed on the enclosed data sheets. Due to insufficient fines we unable to run the hydrometer analysis that was requested. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

Disclaimer

The test results are believed to be representative of the samples submitted but are indicative only of the specimens which were evaluated. Geotechnics has no direct knowledge of the origin of the samples, implies no position with regard to the disposition of the test results, i.e. pass/fail, and makes no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization of the Client and Geotechnics. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please do not hesitate to contact our office.

Respectively submitted,

David R. Backstrom
Laboratory Director

544 Braddock Avenue • East Pittsburgh, PA 15112 • Phone (412) 823-7600 • Fax (412) 823-8999

geotechnics

LABORATORY TEST REPORT

May 22, 2000

Project No. 00125-02

Mr. Denise Pohl
STL North Canton
41015 Huffel Drive NW
North Canton, Ohio 44720

RE: Soils Testing - Tetra Tech

Transmitted herein are the results of the soils testing performed for the above referenced project verified on the Project Verification Form, submitted May 8, 2000. The testing was performed in general accordance with the ASTM methods listed on the enclosed data sheets. Due to insufficient fines we unable to run the hydrometer analysis that was requested. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

Disclaimer

The test results are believed to be representative of the samples submitted but are indicative only of the specimens which were evaluated. Geotechnics has no direct knowledge of the origin of the samples, implies no position with regard to the disposition of the test results, i.e. pass/fail, and makes no claims as to the suitability of the material for its intended use.

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We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please do not hesitate to contact our office.

Respectively submitted,

David R. Backstrom
Laboratory Director

544 Braddock Avenue • East Pittsburgh, PA 15112 • Phone (412) 823-7600 • Fax (412) 823-8999

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

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		[illegible]	[illegible]	
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:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
VOLATILES												
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:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
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	

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												
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	

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												
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	

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												
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	

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												
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	

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												
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	

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												
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:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
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		1.6	J							

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	P
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	P

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										

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/05/00
Work Order: DCT23101 Date Extracted:05/12/00
Dilution factor: 1.3 Date Analyzed: 05/12/00
Moisture %:13

QC Batch: 0136257

Client Sample Id: 358-SS-SB01-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
67-64-1	Acetone	30	U
75-05-8	Acetonitrile	150	U
107-02-8	Acrolein	150	U
107-13-1	Acrylonitrile	150	U
71-43-2	Benzene	7.4	U
75-27-4	Bromodichloromethane	7.4	U
75-25-2	Bromoform	7.4	U
74-83-9	Bromomethane	15	U
75-15-0	Carbon disulfide	7.4	U
56-23-5	Carbon tetrachloride	7.4	U
108-90-7	Chlorobenzene	7.4	U
126-99-8	Chloroprene	7.4	U
124-48-1	Dibromochloromethane	7.4	U
96-12-8	1,2-Dibromo-3-chloropropane	15	U
75-00-3	Chloroethane	15	U
110-75-8	2-Chloroethyl vinyl ether	74	U
67-66-3	Chloroform	7.4	U
74-87-3	Chloromethane	15	U
107-05-1	Allyl chloride	15	U
74-95-3	Dibromomethane	7.4	U
110-57-6	trans-1,4-Dichloro-2-butene	7.4	U
75-71-8	Dichlorodifluoromethane	15	U
75-34-3	1,1-Dichloroethane	7.4	U
107-06-2	1,2-Dichloroethane	7.4	U
75-35-4	1,1-Dichloroethene	7.4	U
156-59-2	cis-1,2-Dichloroethene	3.7	U
156-60-5	trans-1,2-Dichloroethene	3.7	U
540-59-0	1,2-Dichloroethene (total)	7.4	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/05/00
Work Order: DCT23101 Date Extracted:05/12/00
Dilution factor: 1.3 Date Analyzed: 05/12/00
Moisture %:13

QC Batch: 0136257

Client Sample Id: 358-SS-SB01-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
78-87-5	1,2-Dichloropropane	7.4	U
10061-01-5	cis-1,3-Dichloropropene	7.4	U
10061-02-6	trans-1,3-Dichloropropene	7.4	U
100-41-4	Ethylbenzene	7.4	U
97-63-2	Ethyl methacrylate	7.4	U
75-69-4	Trichlorofluoromethane	15	U
591-78-6	2-Hexanone	30	U
74-88-4	Iodomethane	7.4	U
78-83-1	Isobutyl alcohol	300	U
126-98-7	Methacrylonitrile	7.4	U
75-09-2	Methylene chloride	7.4	U
80-62-6	Methyl methacrylate	7.4	U
107-12-0	Propionitrile	30	U
100-42-5	Styrene	7.4	U
630-20-6	1,1,1,2-Tetrachloroethane	7.4	U
79-34-5	1,1,2,2-Tetrachloroethane	7.4	U
127-18-4	Tetrachloroethene	7.4	U
108-88-3	Toluene	0.65	J
71-55-6	1,1,1-Trichloroethane	7.4	U
79-00-5	1,1,2-Trichloroethane	7.4	U
79-01-6	Trichloroethene	7.4	U
96-18-4	1,2,3-Trichloropropane	7.4	U
108-05-4	Vinyl acetate	15	U
75-01-4	Vinyl chloride	15	U
1330-20-7	Xylenes (total)	15	U
106-93-4	1,2-Dibromoethane (EDB)	7.4	U
78-93-3	2-Butanone (MEK)	30	U
108-10-1	4-Methyl-2-pentanone (MIBK)	30	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.1 / g Date Received: 05/05/00
Work Order: DCT23105 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:13

QC Batch: 0130139

Client Sample Id: 358-SS-SB01-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	380	U
208-96-8	Acenaphthylene	380	U
98-86-2	Acetophenone	380	U
53-96-3	2-Acetylaminofluorene	3800	U
92-67-1	4-Aminobiphenyl	1800	U
62-53-3	Aniline	380	U
120-12-7	Anthracene	380	U
92-87-5	Benzidine	3800	U
56-55-3	Benzo(a)anthracene	380	U
205-99-2	Benzo(b)fluoranthene	380	U
207-08-9	Benzo(k)fluoranthene	380	U
191-24-2	Benzo(ghi)perylene	380	U
50-32-8	Benzo(a)pyrene	380	U
100-51-6	Benzyl alcohol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
111-44-4	bis(2-Chloroethyl) ether	380	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	380	U
117-81-7	bis(2-Ethylhexyl) phthalate	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
85-68-7	Butyl benzyl phthalate	380	U
106-47-8	4-Chloroaniline	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-58-7	2-Chloronaphthalene	380	U
95-57-8	2-Chlorophenol	380	U
7005-72-3	4-Chlorophenyl phenyl ether	380	U
218-01-9	Chrysene	380	U
2303-16-4	Diallate	750	U
53-70-3	Dibenz(a,h)anthracene	380	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.1 / g Date Received: 05/05/00
Work Order: DCT23105 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:13

QC Batch: 0130139

Client Sample Id: 358-SS-SB01-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
132-64-9	Dibenzofuran	380	U
84-74-2	Di-n-butyl phthalate	380	U
95-50-1	1,2-Dichlorobenzene	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
91-94-1	3,3'-Dichlorobenzidine	1800	U
120-83-2	2,4-Dichlorophenol	380	U
87-65-0	2,6-Dichlorophenol	380	U
84-66-2	Diethyl phthalate	380	U
60-11-7	p-Dimethylaminoazobenzene	750	U
57-97-6	7,12-Dimethylbenz(a)anthrace	750	U
119-93-7	3,3'-Dimethylbenzidine	1800	U
105-67-9	2,4-Dimethylphenol	380	U
131-11-3	Dimethyl phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
99-65-0	1,3-Dinitrobenzene	380	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	380	U
606-20-2	2,6-Dinitrotoluene	380	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	750	U
123-91-1	1,4-Dioxane	380	U
122-39-4	Diphenylamine	380	U
122-66-7	1,2-Diphenylhydrazine	380	U
62-50-0	Ethyl methanesulfonate	380	U
206-44-0	Fluoranthene	380	U
86-73-7	Fluorene	380	U
118-74-1	Hexachlorobenzene	380	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.1 / g Date Received: 05/05/00
Work Order: DCT23105 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:13

QC Batch: 0130139

Client Sample Id: 358-SS-SB01-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
87-68-3	Hexachlorobutadiene	380	U
77-47-4	Hexachlorocyclopentadiene	1800	U
67-72-1	Hexachloroethane	380	U
1888-71-7	Hexachloropropene	3800	U
193-39-5	Indeno(1,2,3-cd)pyrene	380	U
78-59-1	Isophorone	380	U
120-58-1	Isosafrole	750	U
91-80-5	Methapyrilene	1800	U
95-53-4	o-Toluidine	750	U
56-49-5	3-Methylcholanthrene	750	U
66-27-3	Methyl methanesulfonate	380	U
91-57-6	2-Methylnaphthalene	380	U
95-48-7	2-Methylphenol	380	U
108-39-4	3-Methylphenol	380	U
106-44-5	4-Methylphenol	380	U
91-20-3	Naphthalene	380	U
130-15-4	1,4-Naphthoquinone	1800	U
134-32-7	1-Naphthylamine	380	U
91-59-8	2-Naphthylamine	380	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	380	U
88-75-5	2-Nitrophenol	380	U
100-02-7	4-Nitrophenol	1800	U
56-57-5	4-Nitroquinoline-1-oxide	3800	U
924-16-3	N-Nitrosodi-n-butylamine	380	U
55-18-5	N-Nitrosodiethylamine	380	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.1 / g Date Received: 05/05/00
Work Order: DCT23105 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:13

QC Batch: 0130139

Client Sample Id: 358-SS-SB01-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
62-75-9	N-Nitrosodimethylamine	380	U
621-64-7	N-Nitrosodi-n-propylamine	380	U
86-30-6	N-Nitrosodiphenylamine	380	U
10595-95-6	N-Nitrosomethylethylamine	380	U
59-89-2	N-Nitrosomorpholine	380	U
100-75-4	N-Nitrosopiperidine	380	U
930-55-2	N-Nitrosopyrrolidine	380	U
99-55-8	5-Nitro-o-toluidine	750	U
608-93-5	Pentachlorobenzene	380	U
76-01-7	Pentachloroethane	1800	U
82-68-8	Pentachloronitrobenzene	1800	U
87-86-5	Pentachlorophenol	1800	U
62-44-2	Phenacetin	750	U
85-01-8	Phenanthrene	380	U
108-95-2	Phenol	380	U
106-50-3	p-Phenylene diamine	3800	U
109-06-8	2-Picoline	750	U
23950-58-5	Pronamide	750	U
129-00-0	Pyrene	380	U
110-86-1	Pyridine	750	U
94-59-7	Safrole	750	U
95-94-3	1,2,4,5-Tetrachlorobenzene	380	U
58-90-2	2,3,4,6-Tetrachlorophenol	1800	U
120-82-1	1,2,4-Trichlorobenzene	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
99-35-4	1,3,5-Trinitrobenzene	1800	U
86-74-8	Carbazole	380	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.1 / g Date Received: 05/05/00
Work Order: DCT23105 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:13

QC Batch: 0130139

Client Sample Id: 358-SS-SB01-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
510-15-6	Chlorobenzilate	380	U
122-09-8	a,a-Dimethylphenethylamine	1800	U
140-57-8	Aramite	750	U

FORM I

TETRA TECH NUS, INC.

Client Sample ID: 358-SS-SB01-04

HPLC

Lot-Sample #...: A0E050174-002 Work Order #...: DCT23102 Matrix.....: SO
Date Sampled...: 05/04/00 11:00 Date Received..: 05/05/00
Prep Date.....: 05/09/00 Analysis Date..: 05/11/00
Prep Batch #...: 0130193
Dilution Factor: 1
% Moisture.....: 13 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Methylnaphthalene	ND	57	ug/kg
1-Methylnaphthalene	ND	57	ug/kg
Acenaphthene	ND	57	ug/kg
Acenaphthylene	ND	57	ug/kg
Anthracene	ND	57	ug/kg
Benzo(a)anthracene	ND	5.7	ug/kg
Benzo(a)pyrene	ND	5.7	ug/kg
Benzo(b)fluoranthene	ND	5.7	ug/kg
Benzo(ghi)perylene	ND	5.7	ug/kg
Benzo(k)fluoranthene	ND	5.7	ug/kg
Chrysene	ND	5.7	ug/kg
Dibenz(a,h)anthracene	ND	5.7	ug/kg
Fluoranthene	ND	5.7	ug/kg
Fluorene	ND	57	ug/kg
Indeno(1,2,3-cd)pyrene	ND	5.7	ug/kg
Naphthalene	ND	57	ug/kg
Phenanthrene	ND	57	ug/kg
Pyrene	ND	5.7	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	75	(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

Matrix: (soil/water) SO Lab Sample ID:A0E050174 002
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g Date Received: 05/05/00
Work Order: DCT23103 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/11/00

QC Batch: 0130194

Client Sample Id: 358-SS-SB01-04

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	83	(22 - 152)
o-Terphenyl	89	(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 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/05/00
Work Order: DCT2H101 Date Extracted:05/12/00
Dilution factor: 1.29 Date Analyzed: 05/12/00
Moisture %:8.7

QC Batch: 0136257

Client Sample Id: 358-SS-SB04-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
67-64-1	Acetone	28	U
75-05-8	Acetonitrile	140	U
107-02-8	Acrolein	140	U
107-13-1	Acrylonitrile	140	U
71-43-2	Benzene	7.1	U
75-27-4	Bromodichloromethane	7.1	U
75-25-2	Bromoform	7.1	U
74-83-9	Bromomethane	14	U
75-15-0	Carbon disulfide	7.1	U
56-23-5	Carbon tetrachloride	7.1	U
108-90-7	Chlorobenzene	7.1	U
110-54-3	n-Hexane	7.1	U
126-99-8	Chloroprene	7.1	U
124-48-1	Dibromochloromethane	7.1	U
96-12-8	1,2-Dibromo-3-chloropropane	14	U
75-00-3	Chloroethane	14	U
110-75-8	2-Chloroethyl vinyl ether	71	U
67-66-3	Chloroform	7.1	U
74-87-3	Chloromethane	14	U
107-05-1	Allyl chloride	14	U
74-95-3	Dibromomethane	7.1	U
110-57-6	trans-1,4-Dichloro-2-butene	7.1	U
75-71-8	Dichlorodifluoromethane	14	U
75-34-3	1,1-Dichloroethane	7.1	U
107-06-2	1,2-Dichloroethane	7.1	U
75-35-4	1,1-Dichloroethene	1.9	J
156-59-2	cis-1,2-Dichloroethene	3.5	U
156-60-5	trans-1,2-Dichloroethene	3.5	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/05/00
Work Order: DCT2H101 Date Extracted:05/12/00
Dilution factor: 1.29 Date Analyzed: 05/12/00
Moisture %:8.7

QC Batch: 0136257

Client Sample Id: 358-SS-SB04-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
540-59-0	1,2-Dichloroethene (total)	7.1	U
78-87-5	1,2-Dichloropropane	7.1	U
10061-01-5	cis-1,3-Dichloropropene	7.1	U
10061-02-6	trans-1,3-Dichloropropene	7.1	U
100-41-4	Ethylbenzene	7.1	U
97-63-2	Ethyl methacrylate	7.1	U
75-69-4	Trichlorofluoromethane	14	U
591-78-6	2-Hexanone	28	U
74-88-4	Iodomethane	7.1	U
78-83-1	Isobutyl alcohol	280	U
126-98-7	Methacrylonitrile	7.1	U
75-09-2	Methylene chloride	7.1	U
80-62-6	Methyl methacrylate	7.1	U
107-12-0	Propionitrile	28	U
100-42-5	Styrene	7.1	U
630-20-6	1,1,1,2-Tetrachloroethane	7.1	U
79-34-5	1,1,2,2-Tetrachloroethane	7.1	U
127-18-4	Tetrachloroethene	7.1	U
108-88-3	Toluene	0.54	J
71-55-6	1,1,1-Trichloroethane	7.1	U
79-00-5	1,1,2-Trichloroethane	7.1	U
79-01-6	Trichloroethene	7.1	U
96-18-4	1,2,3-Trichloropropane	7.1	U
108-05-4	Vinyl acetate	14	U
75-01-4	Vinyl chloride	14	U
1330-20-7	Xylenes (total)	14	U
106-93-4	1,2-Dibromoethane (EDB)	7.1	U
78-93-3	2-Butanone (MEK)	28	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/05/00
Work Order: DCT2H101 Date Extracted:05/12/00
Dilution factor: 1.29 Date Analyzed: 05/12/00
Moisture %:8.7

QC Batch: 0136257

Client Sample Id: 358-SS-SB04-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	28	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.16 / g Date Received: 05/05/00
Work Order: DCT2H10F Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:8.7

QC Batch: 0130139

Client Sample Id: 358-SS-SB04-04

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	1800	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	720	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:A0E050174 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.16 / g Date Received: 05/05/00
Work Order: DCT2H10F Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:8.7

QC Batch: 0130139

Client Sample Id: 358-SS-SB04-04

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	1800	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	720	U
57-97-6	7,12-Dimethylbenz(a)anthrace	720	U
119-93-7	3,3'-Dimethylbenzidine	1800	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	1800	U
51-28-5	2,4-Dinitrophenol	1800	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	720	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:A0E050174 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.16 / g Date Received: 05/05/00
Work Order: DCT2H10F Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:8.7

QC Batch: 0130139

Client Sample Id: 358-SS-SB04-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
87-68-3	Hexachlorobutadiene	360	U
77-47-4	Hexachlorocyclopentadiene	1800	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	720	U
91-80-5	Methapyrilene	1800	U
95-53-4	o-Toluidine	720	U
56-49-5	3-Methylcholanthrene	720	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	1800	U
134-32-7	1-Naphthylamine	360	U
91-59-8	2-Naphthylamine	360	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	360	U
88-75-5	2-Nitrophenol	360	U
100-02-7	4-Nitrophenol	1800	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.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.16 / g Date Received: 05/05/00
Work Order: DCT2H10F Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:8.7

QC Batch: 0130139

Client Sample Id: 358-SS-SB04-04

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	720	U
608-93-5	Pentachlorobenzene	360	U
76-01-7	Pentachloroethane	1800	U
82-68-8	Pentachloronitrobenzene	1800	U
87-86-5	Pentachlorophenol	1800	U
62-44-2	Phenacetin	720	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	720	U
23950-58-5	Pronamide	720	U
129-00-0	Pyrene	360	U
110-86-1	Pyridine	720	U
94-59-7	Safrole	720	U
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U
58-90-2	2,3,4,6-Tetrachlorophenol	1800	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	1800	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:A0E050174 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.16 / g Date Received: 05/05/00
Work Order: DCT2H10F Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:8.7

QC Batch: 0130139

Client Sample Id: 358-SS-SB04-04

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	1800	U
140-57-8	Aramite	720	U

FORM I

TETRA TECH NUS, INC.

Client Sample ID: 358-SS-SB04-04

HPLC

Lot-Sample #...: A0E050174-003 Work Order #...: DCT2H107 Matrix.....: SO
Date Sampled...: 05/04/00 14:00 Date Received..: 05/05/00
Prep Date.....: 05/09/00 Analysis Date..: 05/11/00
Prep Batch #...: 0130193
Dilution Factor: 1
% Moisture.....: 8.7 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	24	(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:A0E050174 003

Matrix: (soil/water) SO
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g
Work Order: DCT2H10A
Dilution factor: 1

Date Received: 05/05/00
Date Extracted:05/09/00
Date Analyzed: 05/11/00

QC Batch: 0130194

Client Sample Id: 358-SS-SB04-04

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	100	(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 004
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/05/00
Work Order: DCT2P102 Date Extracted:05/12/00
Dilution factor: 1.15 Date Analyzed: 05/12/00
Moisture %:18

QC Batch: 0136257

Client Sample Id: 358-SS-SB05-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
67-64-1	Acetone	28	U
75-05-8	Acetonitrile	140	U
107-02-8	Acrolein	140	U
107-13-1	Acrylonitrile	140	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
75-15-0	Carbon disulfide	7.0	U
56-23-5	Carbon tetrachloride	7.0	U
108-90-7	Chlorobenzene	7.0	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
75-00-3	Chloroethane	14	U
110-75-8	2-Chloroethyl vinyl ether	70	U
67-66-3	Chloroform	7.0	U
74-87-3	Chloromethane	14	U
107-05-1	Allyl chloride	14	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
75-35-4	1,1-Dichloroethene	2.3	J
156-59-2	cis-1,2-Dichloroethene	3.5	U
156-60-5	trans-1,2-Dichloroethene	3.5	U
540-59-0	1,2-Dichloroethene (total)	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:A0E050174 004
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/05/00
Work Order: DCT2P102 Date Extracted:05/12/00
Dilution factor: 1.15 Date Analyzed: 05/12/00
Moisture %:18

QC Batch: 0136257

Client Sample Id: 358-SS-SB05-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
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
75-69-4	Trichlorofluoromethane	14	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	7.0	U
80-62-6	Methyl methacrylate	7.0	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	7.0	U
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
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
106-93-4	1,2-Dibromoethane (EDB)	7.0	U
78-93-3	2-Butanone (MEK)	28	U
108-10-1	4-Methyl-2-pentanone (MIBK)	28	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 004
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 1 / mL Date Received: 05/05/00
Work Order: DCT2P107 Date Extracted:05/19/00
Dilution factor: 1 Date Analyzed: 05/19/00
Moisture %:18

QC Batch: 0138243

Client Sample Id: 358-SS-SB05-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.0056	J
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	20	U
127-18-4	Tetrachloroethylene	0.070	U
79-01-6	Trichloroethylene	0.050	U
75-01-4	Vinyl chloride	0.050	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.01 / g Date Received: 05/05/00
Work Order: DCT2P106 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:18

QC Batch: 0130139

Client Sample Id: 358-SS-SB05-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	400	U
208-96-8	Acenaphthylene	400	U
98-86-2	Acetophenone	400	U
53-96-3	2-Acetylaminofluorene	4000	U
92-67-1	4-Aminobiphenyl	1900	U
62-53-3	Aniline	400	U
120-12-7	Anthracene	400	U
92-87-5	Benzidine	4000	U
56-55-3	Benzo(a)anthracene	400	U
205-99-2	Benzo(b)fluoranthene	400	U
207-08-9	Benzo(k)fluoranthene	400	U
191-24-2	Benzo(ghi)perylene	400	U
50-32-8	Benzo(a)pyrene	400	U
100-51-6	Benzyl alcohol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
111-44-4	bis(2-Chloroethyl) ether	400	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	400	U
117-81-7	bis(2-Ethylhexyl) phthalate	400	U
101-55-3	4-Bromophenyl phenyl ether	400	U
85-68-7	Butyl benzyl phthalate	400	U
106-47-8	4-Chloroaniline	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-58-7	2-Chloronaphthalene	400	U
95-57-8	2-Chlorophenol	400	U
7005-72-3	4-Chlorophenyl phenyl ether	400	U
218-01-9	Chrysene	400	U
2303-16-4	Diallate	800	U
53-70-3	Dibenz(a,h)anthracene	400	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.01 / g Date Received: 05/05/00
Work Order: DCT2P106 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:18

QC Batch: 0130139

Client Sample Id: 358-SS-SB05-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
132-64-9	Dibenzofuran	400	U
84-74-2	Di-n-butyl phthalate	400	U
95-50-1	1,2-Dichlorobenzene	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
91-94-1	3,3'-Dichlorobenzidine	1900	U
120-83-2	2,4-Dichlorophenol	400	U
87-65-0	2,6-Dichlorophenol	400	U
84-66-2	Diethyl phthalate	400	U
60-11-7	p-Dimethylaminoazobenzene	800	U
57-97-6	7,12-Dimethylbenz(a)anthrace	800	U
119-93-7	3,3'-Dimethylbenzidine	1900	U
105-67-9	2,4-Dimethylphenol	400	U
131-11-3	Dimethyl phthalate	400	U
117-84-0	Di-n-octyl phthalate	400	U
99-65-0	1,3-Dinitrobenzene	400	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
51-28-5	2,4-Dinitrophenol	1900	U
121-14-2	2,4-Dinitrotoluene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	800	U
123-91-1	1,4-Dioxane	400	U
122-39-4	Diphenylamine	400	U
122-66-7	1,2-Diphenylhydrazine	400	U
62-50-0	Ethyl methanesulfonate	400	U
206-44-0	Fluoranthene	400	U
86-73-7	Fluorene	400	U
118-74-1	Hexachlorobenzene	400	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.01 / g Date Received: 05/05/00
Work Order: DCT2P106 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:18

QC Batch: 0130139

Client Sample Id: 358-SS-SB05-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
87-68-3	Hexachlorobutadiene	400	U
77-47-4	Hexachlorocyclopentadiene	1900	U
67-72-1	Hexachloroethane	400	U
1888-71-7	Hexachloropropene	4000	U
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
78-59-1	Isophorone	400	U
120-58-1	Isosafrole	800	U
91-80-5	Methapyrilene	1900	U
95-53-4	o-Toluidine	800	U
56-49-5	3-Methylcholanthrene	800	U
66-27-3	Methyl methanesulfonate	400	U
91-57-6	2-Methylnaphthalene	400	U
95-48-7	2-Methylphenol	400	U
108-39-4	3-Methylphenol	400	U
106-44-5	4-Methylphenol	400	U
91-20-3	Naphthalene	400	U
130-15-4	1,4-Naphthoquinone	1900	U
134-32-7	1-Naphthylamine	400	U
91-59-8	2-Naphthylamine	400	U
88-74-4	2-Nitroaniline	1900	U
99-09-2	3-Nitroaniline	1900	U
100-01-6	4-Nitroaniline	1900	U
98-95-3	Nitrobenzene	400	U
88-75-5	2-Nitrophenol	400	U
100-02-7	4-Nitrophenol	1900	U
56-57-5	4-Nitroquinoline-1-oxide	4000	U
924-16-3	N-Nitrosodi-n-butylamine	400	U
55-18-5	N-Nitrosodiethylamine	400	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.01 / g Date Received: 05/05/00
Work Order: DCT2P106 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:18

QC Batch: 0130139

Client Sample Id: 358-SS-SB05-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
62-75-9	N-Nitrosodimethylamine	400	U
621-64-7	N-Nitrosodi-n-propylamine	400	U
86-30-6	N-Nitrosodiphenylamine	400	U
10595-95-6	N-Nitrosomethylethylamine	400	U
59-89-2	N-Nitrosomorpholine	400	U
100-75-4	N-Nitrosopiperidine	400	U
930-55-2	N-Nitrosopyrrolidine	400	U
99-55-8	5-Nitro-o-toluidine	800	U
608-93-5	Pentachlorobenzene	400	U
76-01-7	Pentachloroethane	1900	U
82-68-8	Pentachloronitrobenzene	1900	U
87-86-5	Pentachlorophenol	1900	U
62-44-2	Phenacetin	800	U
85-01-8	Phenanthrene	400	U
108-95-2	Phenol	400	U
106-50-3	p-Phenylene diamine	4000	U
109-06-8	2-Picoline	800	U
23950-58-5	Pronamide	800	U
129-00-0	Pyrene	400	U
110-86-1	Pyridine	800	U
94-59-7	Safrole	800	U
95-94-3	1,2,4,5-Tetrachlorobenzene	400	U
58-90-2	2,3,4,6-Tetrachlorophenol	1900	U
120-82-1	1,2,4-Trichlorobenzene	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
99-35-4	1,3,5-Trinitrobenzene	1900	U
86-74-8	Carbazole	400	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.01 / g Date Received: 05/05/00
Work Order: DCT2P106 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:18

QC Batch: 0130139

Client Sample Id: 358-SS-SB05-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
510-15-6	Chlorobenzilate	400	U
122-09-8	a,a-Dimethylphenethylamine	1900	U
140-57-8	Aramite	800	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E050174 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 250 / mL Date Received: 05/05/00
Work Order: DCT2P108 Date Extracted:05/15/00
Dilution factor: 1 Date Analyzed: 05/16/00
Moisture %:18

QC Batch: 0136270

Client Sample Id: 358-SS-SB05-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/L	Q
95-48-7	o-Cresol	0.050	U
65794-96-9	m-Cresol & p-Cresol	0.10	U
106-46-7	1,4-Dichlorobenzene	0.050	U
121-14-2	2,4-Dinitrotoluene	0.050	U
118-74-1	Hexachlorobenzene	0.050	U
87-68-3	Hexachlorobutadiene	0.050	U
67-72-1	Hexachloroethane	0.050	U
98-95-3	Nitrobenzene	0.050	U
87-86-5	Pentachlorophenol	0.10	U
110-86-1	Pyridine	0.10	U
95-95-4	2,4,5-Trichlorophenol	0.050	U
88-06-2	2,4,6-Trichlorophenol	0.050	U

FORM I

TETRA TECH NUS, INC.

Client Sample ID: 358-SS-SB05-04

HPLC

Lot-Sample #...: A0E050174-004 Work Order #...: DCT2P103 Matrix.....: SO
Date Sampled...: 05/04/00 16:00 Date Received..: 05/05/00
Prep Date.....: 05/09/00 Analysis Date..: 05/11/00
Prep Batch #...: 0130193
Dilution Factor: 1
% Moisture.....: 18 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Methylnaphthalene	ND	61	ug/kg
1-Methylnaphthalene	ND	61	ug/kg
Acenaphthene	ND	61	ug/kg
Acenaphthylene	ND	61	ug/kg
Anthracene	ND	61	ug/kg
Benzo(a)anthracene	ND	6.1	ug/kg
Benzo(a)pyrene	ND	6.1	ug/kg
Benzo(b)fluoranthene	ND	6.1	ug/kg
Benzo(ghi)perylene	ND	6.1	ug/kg
Benzo(k)fluoranthene	ND	6.1	ug/kg
Chrysene	ND	6.1	ug/kg
Dibenz(a,h)anthracene	ND	6.1	ug/kg
Fluoranthene	ND	6.1	ug/kg
Fluorene	ND	61	ug/kg
Indeno(1,2,3-cd)pyrene	ND	6.1	ug/kg
Naphthalene	ND	61	ug/kg
Phenanthrene	ND	61	ug/kg
Pyrene	ND	6.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	76	(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

Matrix: (soil/water) SO Lab Sample ID: A0E050174 004
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g
Work Order: DCT2P104
Dilution factor: 1

Date Received: 05/05/00
Date Extracted: 05/09/00
Date Analyzed: 05/11/00

QC Batch: 0130194

Client Sample Id: 358-SS-SB05-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q743	Petroleum Range Organics (C8	12	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	72	(22 - 152)
o-Terphenyl	91	(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 004
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 100 / mL
Work Order: DCT2P10A
Dilution factor: 1

Date Received: 05/05/00
Date Extracted: 05/16/00
Date Analyzed: 05/24/00

QC Batch: 0137264

Client Sample Id: 358-SS-SB05-04

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/L	Q
Q743	Petroleum Range Organics (C8	1.3	J

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	68	(12 - 149)
o-Terphenyl	88	(51 - 135)

FORM I

TETRA TECH NUS, INC.

Client Sample ID: 4252-SS-SB02-05

HPLC

Lot-Sample #...: A0E030194-001 Work Order #...: DCP07106 Matrix.....: SO
Date Sampled...: 05/02/00 11:00 Date Received..: 05/03/00
Prep Date.....: 05/09/00 Analysis Date..: 05/11/00
Prep Batch #...: 0130193
Dilution Factor: 1
% Moisture.....: 7.1 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Methylnaphthalene	ND	54	ug/kg
1-Methylnaphthalene	ND	54	ug/kg
Acenaphthene	ND	54	ug/kg
Acenaphthylene	ND	54	ug/kg
Anthracene	ND	54	ug/kg
Benzo(a)anthracene	ND	5.4	ug/kg
Benzo(a)pyrene	ND	5.4	ug/kg
Benzo(b)fluoranthene	ND	5.4	ug/kg
Benzo(ghi)perylene	ND	5.4	ug/kg
Benzo(k)fluoranthene	ND	5.4	ug/kg
Chrysene	ND	5.4	ug/kg
Dibenz(a,h)anthracene	ND	5.4	ug/kg
Fluoranthene	ND	5.4	ug/kg
Fluorene	ND	54	ug/kg
Indeno(1,2,3-cd)pyrene	ND	5.4	ug/kg
Naphthalene	ND	54	ug/kg
Phenanthrene	ND	54	ug/kg
Pyrene	ND	5.4	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

Matrix: (soil/water) SO Lab Sample ID:A0E030194 001
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/03/00
Work Order: DCP07105 Date Extracted:05/11/00
Dilution factor: 1.3 Date Analyzed: 05/11/00
Moisture %:7.1

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 Date Received: 05/03/00
Work Order: DCP07105 Date Extracted:05/11/00
Dilution factor: 1.3 Date Analyzed: 05/11/00
Moisture %:7.1

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

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
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.

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
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

Matrix: (soil/water) SO Lab Sample ID:A0E030194 001
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g Date Received: 05/03/00
Work Order: DCP07107 Date Extracted:05/09/00
Dilution factor: 1 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 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
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

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
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 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
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

Matrix: (soil/water) SO Lab Sample ID: A0E030194 002
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
Q743	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

Lab Sample ID: A0E040160 002

Matrix: (soil/water) SO
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 100 / mL
Work Order: DCQ9110G
Dilution factor: 1

Date Received: 05/04/00
Date Extracted: 05/16/00
Date Analyzed: 05/24/00

QC Batch: 0137264

Client Sample Id: 436-SS-SB01-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/L	Q
Q743	Petroleum Range Organics (C8	1.6	J

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	67	(12 - 149)
o-Terphenyl	82	(51 - 135)

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/04/00
Work Order: DCQ95105 Date Extracted:05/11/00
Dilution factor: 1.16 Date Analyzed: 05/11/00
Moisture %:5.1

QC Batch: 0133230

Client Sample Id: 436-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
110-75-8	2-Chloroethyl vinyl ether	61	U
156-59-2	cis-1,2-Dichloroethene	3.1	U
540-59-0	1,2-Dichloroethene (total)	6.1	U
67-64-1	Acetone	4.1	J B
75-05-8	Acetonitrile	120	U
107-02-8	Acrolein	120	U
107-13-1	Acrylonitrile	120	U
107-05-1	Allyl chloride	12	U
71-43-2	Benzene	6.1	U
75-27-4	Bromodichloromethane	6.1	U
75-25-2	Bromoform	6.1	U
74-83-9	Bromomethane	12	U
78-93-3	2-Butanone (MEK)	1.6	J B
75-15-0	Carbon disulfide	6.1	U
56-23-5	Carbon tetrachloride	6.1	U
108-90-7	Chlorobenzene	6.1	U
75-00-3	Chloroethane	12	U
67-66-3	Chloroform	6.1	U
74-87-3	Chloromethane	12	U
126-99-8	Chloroprene	6.1	U
124-48-1	Dibromochloromethane	6.1	U
96-12-8	1,2-Dibromo-3-chloropropane	12	U
106-93-4	1,2-Dibromoethane (EDB)	6.1	U
74-95-3	Dibromomethane	6.1	U
110-57-6	trans-1,4-Dichloro-2-butene	6.1	U
75-71-8	Dichlorodifluoromethane	12	U
75-34-3	1,1-Dichloroethane	6.1	U
107-06-2	1,2-Dichloroethane	6.1	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 003
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/04/00
Work Order: DCQ95105 Date Extracted:05/11/00
Dilution factor: 1.16 Date Analyzed: 05/11/00
Moisture %:5.1

QC Batch: 0133230

Client Sample Id: 436-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
75-35-4	1,1-Dichloroethene	6.1	U
156-60-5	trans-1,2-Dichloroethene	3.1	U
78-87-5	1,2-Dichloropropane	6.1	U
10061-01-5	cis-1,3-Dichloropropene	6.1	U
10061-02-6	trans-1,3-Dichloropropene	6.1	U
100-41-4	Ethylbenzene	6.1	U
97-63-2	Ethyl methacrylate	6.1	U
591-78-6	2-Hexanone	24	U
74-88-4	Iodomethane	6.1	U
78-83-1	Isobutyl alcohol	240	U
126-98-7	Methacrylonitrile	6.1	U
75-09-2	Methylene chloride	0.41	J
80-62-6	Methyl methacrylate	6.1	U
108-10-1	4-Methyl-2-pentanone (MIBK)	24	U
107-12-0	Propionitrile	24	U
100-42-5	Styrene	6.1	U
630-20-6	1,1,1,2-Tetrachloroethane	6.1	U
79-34-5	1,1,2,2-Tetrachloroethane	6.1	U
127-18-4	Tetrachloroethene	6.1	U
108-88-3	Toluene	0.33	J
71-55-6	1,1,1-Trichloroethane	6.1	U
79-00-5	1,1,2-Trichloroethane	6.1	U
79-01-6	Trichloroethene	6.1	U
75-69-4	Trichlorofluoromethane	12	U
96-18-4	1,2,3-Trichloropropane	6.1	U
108-05-4	Vinyl acetate	12	U
75-01-4	Vinyl chloride	12	U
1330-20-7	Xylenes (total)	12	U

FORM I

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP007

Matrix: (soil/water) SO Lab Sample ID: A0E040160 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.2 / g Date Received: 05/04/00
Work Order: DCQ9510A Date Extracted: 05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %: 5.1

QC Batch: 0130139

Client Sample Id: 436-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	350	U
208-96-8	Acenaphthylene	350	U
98-86-2	Acetophenone	350	U
53-96-3	2-Acetylaminofluorene	3500	U
92-67-1	4-Aminobiphenyl	1700	U
62-53-3	Aniline	350	U
120-12-7	Anthracene	350	U
92-87-5	Benzidine	3500	U
56-55-3	Benzo(a)anthracene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
191-24-2	Benzo(ghi)perylene	350	U
50-32-8	Benzo(a)pyrene	350	U
100-51-6	Benzyl alcohol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	350	U
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
85-68-7	Butyl benzyl phthalate	350	U
106-47-8	4-Chloroaniline	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-58-7	2-Chloronaphthalene	350	U
95-57-8	2-Chlorophenol	350	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
218-01-9	Chrysene	350	U
2303-16-4	Diallate	700	U
53-70-3	Dibenz(a,h)anthracene	350	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.2 / g Date Received: 05/04/00
Work Order: DCQ9510A Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:5.1

QC Batch: 0130139

Client Sample Id: 436-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
132-64-9	Dibenzofuran	350	U
84-74-2	Di-n-butyl phthalate	350	U
95-50-1	1,2-Dichlorobenzene	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
120-83-2	2,4-Dichlorophenol	350	U
87-65-0	2,6-Dichlorophenol	350	U
84-66-2	Diethyl phthalate	350	U
60-11-7	p-Dimethylaminoazobenzene	700	U
57-97-6	7,12-Dimethylbenz(a)anthrace	700	U
119-93-7	3,3'-Dimethylbenzidine	1700	U
105-67-9	2,4-Dimethylphenol	350	U
131-11-3	Dimethyl phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
99-65-0	1,3-Dinitrobenzene	350	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	350	U
606-20-2	2,6-Dinitrotoluene	350	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	700	U
123-91-1	1,4-Dioxane	350	U
122-39-4	Diphenylamine	350	U
122-66-7	1,2-Diphenylhydrazine	350	U
62-50-0	Ethyl methanesulfonate	350	U
206-44-0	Fluoranthene	350	U
86-73-7	Fluorene	350	U
118-74-1	Hexachlorobenzene	350	U

FORM I

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP007

Matrix: (soil/water) SO Lab Sample ID: A0E040160 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.2 / g Date Received: 05/04/00
Work Order: DCQ9510A Date Extracted: 05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %: 5.1

QC Batch: 0130139

Client Sample Id: 436-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
87-68-3	Hexachlorobutadiene	350	U
77-47-4	Hexachlorocyclopentadiene	1700	U
67-72-1	Hexachloroethane	350	U
1888-71-7	Hexachloropropene	3500	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
78-59-1	Isophorone	350	U
120-58-1	Isosafrole	700	U
91-80-5	Methapyrilene	1700	U
95-53-4	o-Toluidine	700	U
56-49-5	3-Methylcholanthrene	700	U
66-27-3	Methyl methanesulfonate	350	U
91-57-6	2-Methylnaphthalene	350	U
95-48-7	2-Methylphenol	350	U
108-39-4	3-Methylphenol	350	U
106-44-5	4-Methylphenol	350	U
91-20-3	Naphthalene	350	U
130-15-4	1,4-Naphthoquinone	1700	U
134-32-7	1-Naphthylamine	350	U
91-59-8	2-Naphthylamine	350	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	350	U
88-75-5	2-Nitrophenol	350	U
100-02-7	4-Nitrophenol	1700	U
56-57-5	4-Nitroquinoline-1-oxide	3500	U
924-16-3	N-Nitrosodi-n-butylamine	350	U
55-18-5	N-Nitrosodiethylamine	350	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.2 / g Date Received: 05/04/00
Work Order: DCQ9510A Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:5.1

QC Batch: 0130139

Client Sample Id: 436-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
62-75-9	N-Nitrosodimethylamine	350	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
86-30-6	N-Nitrosodiphenylamine	350	U
10595-95-6	N-Nitrosomethylethylamine	350	U
59-89-2	N-Nitrosomorpholine	350	U
100-75-4	N-Nitrosopiperidine	350	U
930-55-2	N-Nitrosopyrrolidine	350	U
99-55-8	5-Nitro-o-toluidine	700	U
608-93-5	Pentachlorobenzene	350	U
76-01-7	Pentachloroethane	1700	U
82-68-8	Pentachloronitrobenzene	1700	U
87-86-5	Pentachlorophenol	1700	U
62-44-2	Phenacetin	700	U
85-01-8	Phenanthrene	350	U
108-95-2	Phenol	350	U
106-50-3	p-Phenylene diamine	3500	U
109-06-8	2-Picoline	700	U
23950-58-5	Pronamide	700	U
129-00-0	Pyrene	350	U
110-86-1	Pyridine	700	U
94-59-7	Safrole	700	U
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U
58-90-2	2,3,4,6-Tetrachlorophenol	1700	U
120-82-1	1,2,4-Trichlorobenzene	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
99-35-4	1,3,5-Trinitrobenzene	1700	U
86-74-8	Carbazole	350	U

FORM I

BLANK WORKORDER NO.

DD0GG101

SW846 8260B METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP007

Lab File ID: ux92022.d

Lot Number: A0E040160

Date Analyzed: 05/19/00

Time Analyzed: 03:04

Matrix: SOLID

Date Extracted:05/19/00

GC Column: DB 624 ID: .18

Extraction Method: 1311/5030B

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	436-SS-SB01-05	DCQ9110D	ux92024.d	05/19/00	03:54
02	436-SS-SB01-05	DCQ91112 S	ux92025.d	05/19/00	04:19
03	436-SS-SB01-05	DCQ91113 D	ux92026.d	05/19/00	04:44
04	CHECK SAMPLE	DD9V5101 C	ux92021.d	05/19/00	02:39
05					
06					
07					
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.

DD0GG101

SW846 8260B METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP007

Lab File ID: ux92022.d

Lot Number: A0E050174

Date Analyzed: 05/19/00

Time Analyzed: 03:04

Matrix: SOLID

Date Extracted:05/19/00

GC Column: DB 624 ID: .18

Extraction Method: 1311/5030B

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	DCQ9110D	ux92024.d	05/19/00	03:54
02	LAB MS/MSD	DCQ91112 S	ux92025.d	05/19/00	04:19
03	LAB MS/MSD	DCQ91113 D	ux92026.d	05/19/00	04:44
04	358-SS-SB05-04	DCT2P107	ux92023.d	05/19/00	03:29
05	CHECK SAMPLE	DD9V5101 C	ux92021.d	05/19/00	02:39
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
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23					
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25					
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27					
28					
29					
30					

COMMENTS:

FORM IV

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SOLID Lab Sample ID:A0E150000 257
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/05/00
Work Order: DD70R101 Date Extracted:05/12/00
Dilution factor: 1 Date Analyzed: 05/12/00
Moisture %:NA

QC Batch: 0136257

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
67-64-1	Acetone	2.4	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:MP007

Matrix: (soil/water) SOLID Lab Sample ID:A0E150000 257
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g
Work Order: DD70R101
Dilution factor: 1
Moisture %:NA

Date Received: 05/05/00
Date Extracted:05/12/00
Date Analyzed: 05/12/00

QC Batch: 0136257

Client Sample Id: INTRA-LAB BLANK

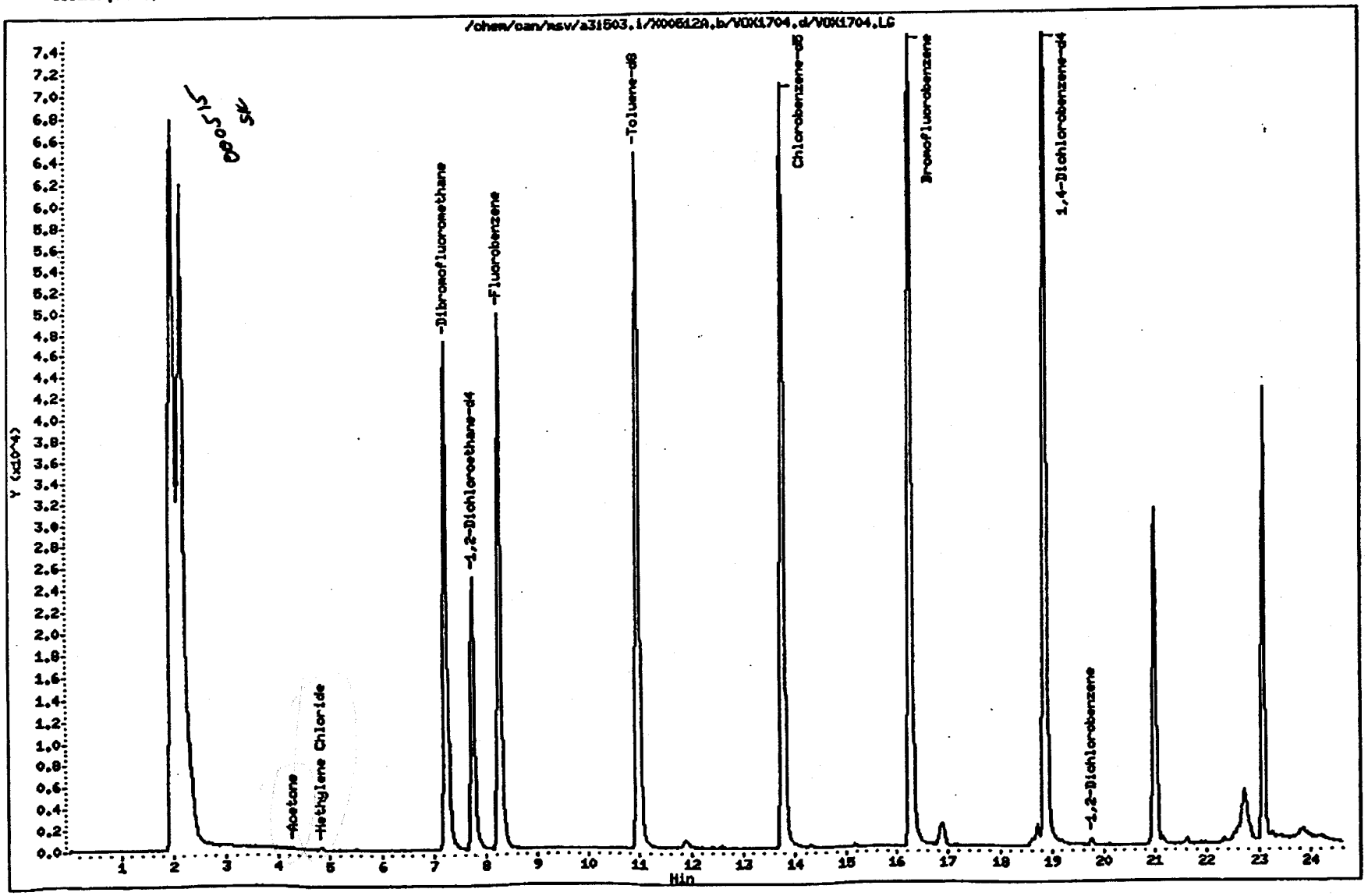
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
78-87-5	1,2-Dichloropropane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
100-41-4	Ethylbenzene	5.0	U
97-63-2	Ethyl methacrylate	5.0	U
75-69-4	Trichlorofluoromethane	10	U
591-78-6	2-Hexanone	20	U
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	0.40	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
106-93-4	1,2-Dibromoethane (EDB)	5.0	U
78-93-3	2-Butanone (MEK)	20	U
108-10-1	4-Methyl-2-pentanone (MIBK)	20	U

FORM I

Data File: /chem/can/msv/a31503.i/X000612A.b/VOX1704.d
Date : 12-MAY-2000 10:25
Client ID: VBLK DD70R101
Sample Info: VBLK,,5G/5ML
Purge Volume: 5.0
Column phase: DB624 75m

Instrument: a31503.i

Operator: 01819
Column diameter: 0.53



TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SOLID Lab Sample ID:A0E120000 230
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/03/00
Work Order: DD4J1101 Date Extracted:05/11/00
Dilution factor: 1 Date Analyzed: 05/11/00
Moisture %:NA

QC Batch: 0133230

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
110-75-8	2-Chloroethyl vinyl ether	50	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
540-59-0	1,2-Dichloroethene (total)	5.0	U
67-64-1	Acetone	2.3	J
75-05-8	Acetonitrile	100	U
107-02-8	Acrolein	100	U
107-13-1	Acrylonitrile	100	U
107-05-1	Allyl chloride	10	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
78-93-3	2-Butanone (MEK)	1.3	J
75-15-0	Carbon disulfide	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
108-90-7	Chlorobenzene	5.0	U
75-00-3	Chloroethane	10	U
67-66-3	Chloroform	5.0	U
74-87-3	Chloromethane	10	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
106-93-4	1,2-Dibromoethane (EDB)	5.0	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

FORM I

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SOLID Lab Sample ID:A0E120000 230
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/03/00
Work Order: DD4J1101 Date Extracted:05/11/00
Dilution factor: 1 Date Analyzed: 05/11/00
Moisture %:NA

QC Batch: 0133230

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
75-35-4	1,1-Dichloroethene	5.0	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
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
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	5.0	U
80-62-6	Methyl methacrylate	5.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	20	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
75-69-4	Trichlorofluoromethane	10	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

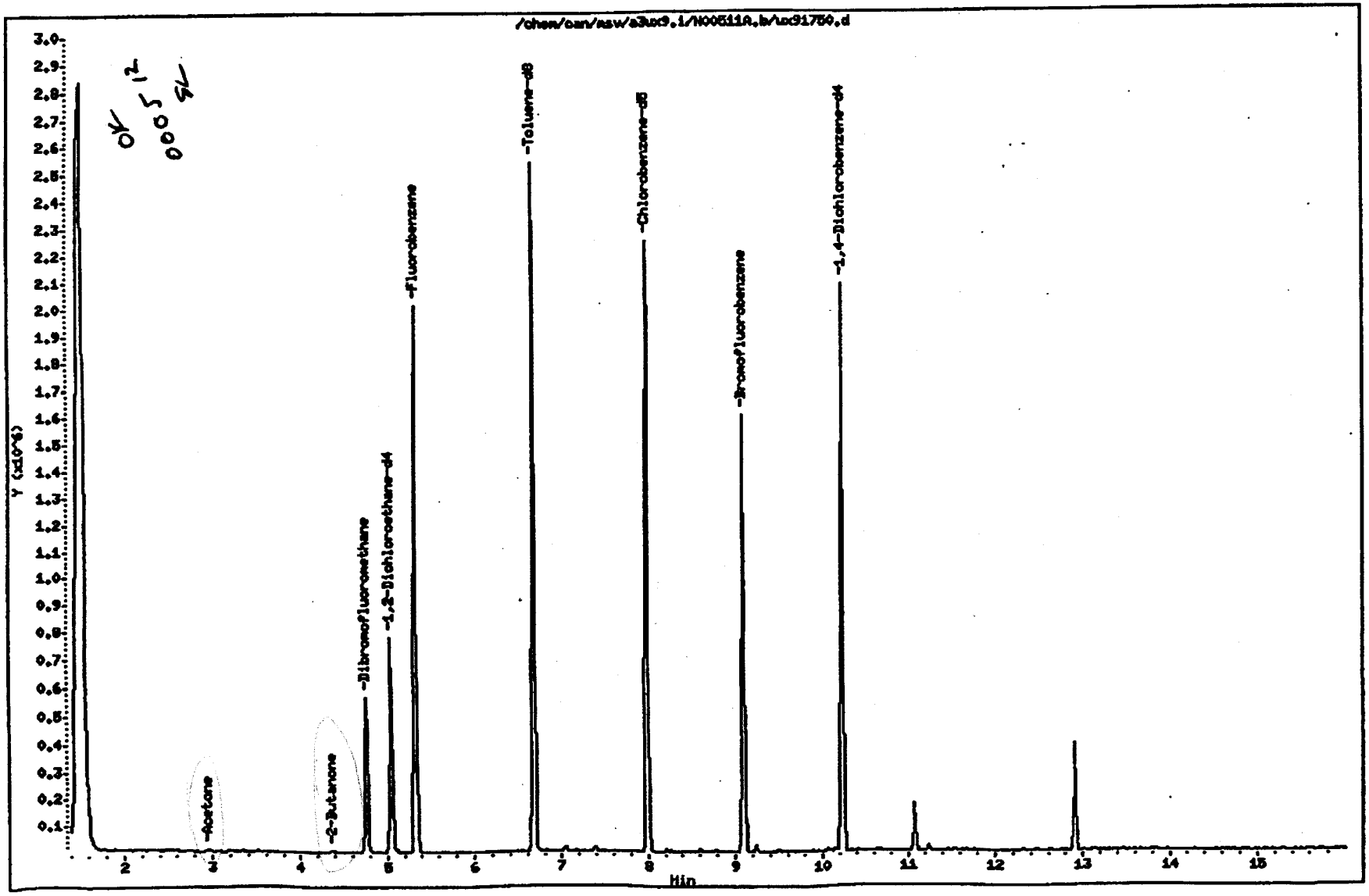
FORM I

Data File: /chem/oan/nsw/a3ux9.i/N00511A.b/ux91750.d
Date : 11-MAY-2000 10:57
Client ID: VBLK DD4J101
Sample Info: VBLK,.5G/5ML
Purge Volume: 5.0
Column phase: DB624 75m

Page 7

Instrument: a3ux9.i

Operator: 01819
Column diameter: 0.53



TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SOLID Lab Sample ID:A0E100000 148
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 1 / mL Date Received: 05/05/00
Work Order: DD0GG101 Date Extracted:05/19/00
Dilution factor: 1 Date Analyzed: 05/19/00
Moisture %:NA

QC Batch: 0138243

Client Sample Id: INTRA-LAB BLANK

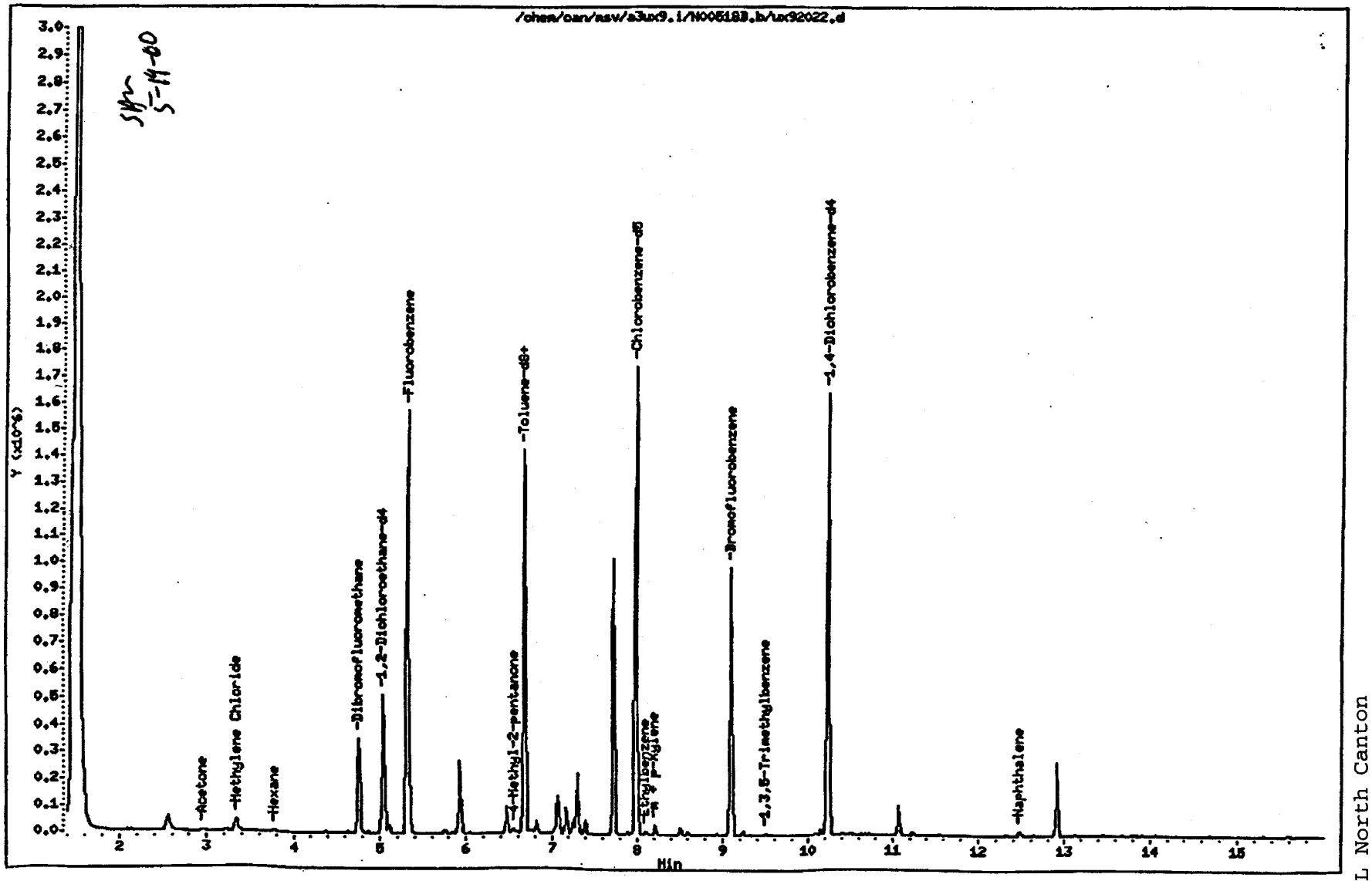
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/L	Q
71-43-2	Benzene	0.025	U
56-23-5	Carbon tetrachloride	0.025	U
108-90-7	Chlorobenzene	0.025	U
67-66-3	Chloroform	0.025	U
107-06-2	1,2-Dichloroethane	0.025	U
75-35-4	1,1-Dichloroethylene	0.070	U
78-93-3	Methyl ethyl ketone	20	U
127-18-4	Tetrachloroethylene	0.070	U
79-01-6	Trichloroethylene	0.050	U
75-01-4	Vinyl chloride	0.050	U

FORM I

Data File: /chem/oan/msv/a3ux9.i/N0051BB.b/ux92022.d
Date : 19-MAY-2000 03:04
Client ID: INTRA-LAB BLANK
Sample Info: BDOGC101,,1ML/5ML
Purge Volume: 1.0
Column phase: DB624 75m

Page 7

Instrument: a3ux9.i
Operator: 2907
Column diameter: 0.53



STL North Canton

SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Lot #: A0E150000 WO #: DD70R102
BATCH: 0136257

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Chloromethane	50	48	97	10- 273	
Bromomethane	50	37	73	10- 242	
Vinyl chloride	50	52	105	41- 138	
Chloroethane	50	44	87	82- 114	
Methylene chloride	50	52	105	10- 221	
Acetone	50	75	151*	80- 120	a
Carbon disulfide	50	59	119	81- 125	
1,1-Dichloroethene	50	52	104	55- 142	
1,1-Dichloroethane	50	53	107	59- 155	
1,2-Dichloroethene (total	100	98	98	50- 150	
Chloroform	50	51	103	77- 126	
1,2-Dichloroethane	50	46	93	76- 127	
2-Butanone (MEK)	50	75	149	20- 155	
1,1,1-Trichloroethane	50	48	95	52- 162	
Carbon tetrachloride	50	47	93	66- 141	
Bromodichloromethane	50	48	95	35- 155	
1,2-Dichloropropane	50	49	98	10- 210	
cis-1,3-Dichloropropene	50	51	101	10- 227	
Trichloroethene	50	48	96	70- 131	
Dibromochloromethane	50	47	94	53- 149	
1,1,2-Trichloroethane	50	49	99	52- 150	
Benzene	50	51	101	75- 129	
trans-1,3-Dichloropropene	50	52	103	17- 183	
Bromoform	50	44	88	45- 169	
4-Methyl-2-pentanone (MIB	50	53	105	90- 125	
2-Hexanone	50	73	146*	87- 129	a
Tetrachloroethene	50	47	93	68- 136	
1,1,2,2-Tetrachloroethane	50	57	115	46- 157	
Toluene	50	52	105	71- 130	
Chlorobenzene	50	50	100	75- 127	
Ethylbenzene	50	49	98	37- 162	

(Continued on next page)

SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Lot #: A0E150000 WO #: DD70R102
BATCH: 0136257

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Styrene	50	49	98	79 - 100	
Xylenes (total)	150	150	98	83 - 129	
cis-1,2-Dichloroethene	50	49	99	50 - 150	
trans-1,2-Dichloroethene	50	49	98	54 - 156	
n-Hexane	50	54	107	98 - 117	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

* Values outside of QC limits

Spike Recovery: 2 out of 36 outside limits

COMMENTS:

FORM III

SW846 8260B CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Lot #: A0E150000 WO #: DD70R103
BATCH: 0136257

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Bromomethane	50	39	78	10- 242	
Vinyl chloride	50	54	109	41- 138	
Chloroethane	50	46	92	82- 114	
Methylene chloride	50	55	109	10- 221	
Acetone	50	77	154*	80- 120	a
Carbon disulfide	50	61	122	81- 125	
1,1-Dichloroethene	50	54	109	55- 142	
1,1-Dichloroethane	50	55	111	59- 155	
1,2-Dichloroethene (total	100	100	102	50- 150	
Chloroform	50	54	107	77- 126	
1,2-Dichloroethane	50	49	98	76- 127	
2-Butanone (MEK)	50	76	152	20- 155	
1,1,1-Trichloroethane	50	50	99	52- 162	
Carbon tetrachloride	50	48	96	66- 141	
Bromodichloromethane	50	50	101	35- 155	
1,2-Dichloropropane	50	52	103	10- 210	
cis-1,3-Dichloropropene	50	53	105	10- 227	
Trichloroethene	50	50	99	70- 131	
Dibromochloromethane	50	49	98	53- 149	
1,1,2-Trichloroethane	50	51	102	52- 150	
Benzene	50	53	106	75- 129	
trans-1,3-Dichloropropene	50	55	109	17- 183	
Bromoform	50	46	91	45- 169	
4-Methyl-2-pentanone (MIB	50	52	104	90- 125	
2-Hexanone	50	74	148*	87- 129	a
Tetrachloroethene	50	47	95	68- 136	
1,1,2,2-Tetrachloroethane	50	59	117	46- 157	
Toluene	50	54	108	71- 130	
Chlorobenzene	50	51	103	75- 127	
Ethylbenzene	50	51	101	37- 162	
Styrene	50	51	102*	79- 100	a

(Continued on next page)

SW846 8260B CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Lot #: A0E150000 WO #: DD70R103
BATCH: 0136257

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Xylenes (total)	150	150	101	83- 129	
cis-1,2-Dichloroethene	50	51	102	50- 150	
trans-1,2-Dichloroethene	50	50	101	54- 156	
n-Hexane	50	53	106	98- 117	
Chloromethane	50	50	101	10- 273	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

* Values outside of QC limits

Spike Recovery: 3 out of 36 outside limits

COMMENTS:

FORM III

SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Lot #: A0E120000 WO #: DD4J1102
BATCH: 0133230

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Chloromethane	50	45	90	10- 273	
Bromomethane	50	58	116	10- 242	
Vinyl chloride	50	49	98	41- 138	
Chloroethane	50	59	118*	82- 114	a
Methylene chloride	50	47	94	10- 221	
Acetone	50	94	188*	80- 120	a
Carbon disulfide	50	54	108	81- 125	
1,1-Dichloroethene	50	50	100	55- 142	
1,1-Dichloroethane	50	49	99	59- 155	
1,2-Dichloroethene (total	100	96	96	50- 150	
Chloroform	50	48	97	77- 126	
1,2-Dichloroethane	50	46	92	76- 127	
2-Butanone (MEK)	50	76	152	20- 155	
1,1,1-Trichloroethane	50	49	98	52- 162	
Carbon tetrachloride	50	48	96	66- 141	
Bromodichloromethane	50	46	93	35- 155	
1,2-Dichloropropane	50	48	96	10- 210	
cis-1,3-Dichloropropene	50	49	98	10- 227	
Trichloroethene	50	51	101	70- 131	
Dibromochloromethane	50	46	92	53- 149	
1,1,2-Trichloroethane	50	48	96	52- 150	
Benzene	50	48	96	75- 129	
trans-1,3-Dichloropropene	50	50	99	17- 183	
Bromoform	50	46	92	45- 169	
4-Methyl-2-pentanone (MIB	50	55	109	90- 125	
2-Hexanone	50	75	150*	87- 129	a
Tetrachloroethene	50	53	107	68- 136	
1,1,2,2-Tetrachloroethane	50	48	96	46- 157	
Toluene	50	48	97	71- 130	
Chlorobenzene	50	50	100	75- 127	
Ethylbenzene	50	49	99	37- 162	

(Continued on next page)

SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Lot #: A0E120000 WO #: DD4J1102
BATCH: 0133230

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Styrene	50	50	100	79 - 100	
Xylenes (total)	150	150	99	83 - 129	
cis-1,2-Dichloroethene	50	48	96	50 - 150	
trans-1,2-Dichloroethene	50	48	96	54 - 156	
n-Hexane	50	51	103	98 - 117	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

* Values outside of QC limits

Spike Recovery: 3 out of 36 outside limits

COMMENTS:

FORM III

SW846 8260B CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Lot #: A0E120000 WO #: DD4J1103
BATCH: 0133230

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Chloromethane	50	44	89	10- 273	
Bromomethane	50	58	116	10- 242	
Vinyl chloride	50	47	95	41- 138	
Chloroethane	50	58	116*	82- 114	a
Methylene chloride	50	47	94	10- 221	
Acetone	50	91	182*	80- 120	a
Carbon disulfide	50	53	105	81- 125	
1,1-Dichloroethene	50	49	98	55- 142	
1,1-Dichloroethane	50	50	99	59- 155	
1,2-Dichloroethene (total	100	95	95	50- 150	
Chloroform	50	49	98	77- 126	
1,2-Dichloroethane	50	47	94	76- 127	
2-Butanone (MEK)	50	77	155	20- 155	
1,1,1-Trichloroethane	50	48	97	52- 162	
Carbon tetrachloride	50	47	95	66- 141	
Bromodichloromethane	50	47	93	35- 155	
1,2-Dichloropropane	50	48	95	10- 210	
cis-1,3-Dichloropropene	50	49	97	10- 227	
Trichloroethene	50	49	99	70- 131	
Dibromochloromethane	50	46	92	53- 149	
1,1,2-Trichloroethane	50	48	96	52- 150	
Benzene	50	48	95	75- 129	
trans-1,3-Dichloropropene	50	49	97	17- 183	
Bromoform	50	47	94	45- 169	
4-Methyl-2-pentanone (MIB	50	55	110	90- 125	
2-Hexanone	50	73	147*	87- 129	a
Tetrachloroethene	50	51	102	68- 136	
1,1,2,2-Tetrachloroethane	50	49	98	46- 157	
Toluene	50	47	95	71- 130	
Chlorobenzene	50	48	96	75- 127	
Ethylbenzene	50	48	95	37- 162	

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SW846 8260B CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Lot #: A0E120000 WO #: DD4J1103
BATCH: 0133230

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Styrene	50	49	98	79 - 100	
Xylenes (total)	150	140	95	83 - 129	
cis-1,2-Dichloroethene	50	47	94	50 - 150	
trans-1,2-Dichloroethene	50	48	96	54 - 156	
n-Hexane	50	49	97*	98 - 117	a

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

* Values outside of QC limits

Spike Recovery: 4 out of 36 outside limits

COMMENTS:

FORM III

SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Lot #: A0E170000 WO #: DD9V5101
BATCH: 0138243

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
Chloromethane	0.25	0.27	107	10- 273	
Bromomethane	0.25	0.31	125	10- 242	
Methylene chloride	0.25	0.26	102	10- 221	
Vinyl chloride	0.25	0.27	107	41- 138	
Chloroethane	0.25	0.30	121*	82- 114	a
Acetone	0.25	0.18	72*	80- 120	a
Carbon disulfide	0.25	0.26	103	81- 125	
1,1-Dichloroethylene	0.25	0.25	99	55- 142	
1,1-Dichloroethane	0.25	0.24	96	59- 155	
Methyl ethyl ketone	0.25	0.21	85	20- 155	
1,1,1-Trichloroethane	0.25	0.23	92	52- 162	
Carbon tetrachloride	0.25	0.23	92	66- 141	
1,2-Dichloroethene (total	0.50	0.46	93	50- 150	
Chloroform	0.25	0.24	95	77- 126	
1,2-Dichloroethane	0.25	0.24	95	76- 127	
Bromodichloromethane	0.25	0.24	94	35- 155	
1,2-Dichloropropane	0.25	0.24	96	10- 210	
cis-1,3-Dichloropropene	0.25	0.25	99	10- 227	
Dibromochloromethane	0.25	0.23	91	53- 149	
Trichloroethylene	0.25	0.24	96	70- 131	
1,1,2-Trichloroethane	0.25	0.24	95	52- 150	
Benzene	0.25	0.23	92	75- 129	
trans-1,3-Dichloropropene	0.25	0.24	96	17- 183	
Bromoform	0.25	0.23	92	45- 169	
4-Methyl-2-pentanone	0.25	0.24	97	90- 125	
2-Hexanone	0.25	0.28	113	87- 129	
Tetrachloroethylene	0.25	0.23	93	68- 136	
1,1,2,2-Tetrachloroethane	0.25	0.23	93	46- 157	
Toluene	0.25	0.22	89	71- 130	
Chlorobenzene	0.25	0.23	94	75- 127	
Ethylbenzene	0.25	0.22	90	37- 162	

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SW846 8260B CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Lot #: A0E170000 WO #: DD9V5101
BATCH: 0138243

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	% REC	QC LIMITS REC	QUAL
Styrene	0.25	0.23	93	79 - 100	
Xylenes (total)	0.75	0.68	91	83 - 129	
cis-1,2-Dichloroethene	0.25	0.23	94	50 - 150	
trans-1,2-Dichloroethene	0.25	0.23	92	54 - 156	
n-Hexane	0.25	0.23	92*	98 - 117	a

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

* Values outside of QC limits

Spike Recovery: 3 out of 36 outside limits

COMMENTS:

FORM III

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Matrix Spike ID: LAB MS/MSD Level:(low/med) LOW

Lot #: A0E050113 WO #: DCRG712N
BATCH: 0136257

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
Chloroform	51	ND	44	86	52 - 140	
1,2-Dichloroethane	51	ND	40	79	44 - 145	
2-Butanone (MEK)	51	ND	59	115	10 - 187	
1,1,1-Trichloroethane	51	ND	40	78	52 - 162	
Trichloroethene	51	ND	39	77	46 - 143	
Benzene	51	ND	43	83	55 - 138	
Tetrachloroethene	51	ND	36	71	39 - 154	
Toluene	51	0.60	43	84	46 - 147	
Chlorobenzene	51	ND	39	75	49 - 139	
Ethylbenzene	51	ND	38	75	37 - 162	
Styrene	51	ND	36	70*	79 - 110	a
Xylenes (total)	150	ND	110	72*	83 - 129	a
1,1-Dichloroethene	51	1.2	46	88	43 - 147	
Carbon disulfide	51	ND	46	90	81 - 125	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 2 out of 14 outside limits

COMMENTS:

FORM III

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Matrix Spike ID: LAB MS/MSD Level:(low/med) LOW

Lot #: A0E050113 WO #: DCRG712P
BATCH: 0136257

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
1,1-Dichloroethene	48	43	88	0.62	27	43 - 147	
Carbon disulfide	48	43	89	0.39	19	81 - 125	
Chloroform	48	42	87	0.69	17	52 - 140	
1,2-Dichloroethane	48	38	80	0.66	41	44 - 145	
2-Butanone (MEK)	48	52	108	5.7	47	10 - 187	
1,1,1-Trichloroethane	48	37	78	0.54	12	52 - 162	
Trichloroethene	48	37	77	0.35	23	46 - 143	
Benzene	48	40	84	1.4	20	55 - 138	
Tetrachloroethene	48	33	70	1.5	22	39 - 154	
Toluene	48	41	85	1.0	24	46 - 147	
Chlorobenzene	48	36	76	1.2	22	49 - 139	
Ethylbenzene	48	35	74	1.0	14	37 - 162	
Styrene	48	34	71*	1.2	10	79 - 110	a
Xylenes (total)	140	100	71*	1.4	10	83 - 129	a

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 14 outside limits
Spike Recovery: 2 out of 14 outside limits

COMMENTS:

FORM III

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Matrix Spike ID: 436-SS-SB01-05

Lot #: A0E040160 WO #: DCQ91112
BATCH: 0138243

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
1,1-Dichloroethylene	0.25	ND	0.25	102	43 - 147	
Chloromethane	0.25	ND	0.28	111	10 - 273	
Bromomethane	0.25	ND	0.32	127	10 - 242	
Vinyl chloride	0.25	ND	0.28	112	29 - 150	
Chloroethane	0.25	ND	0.32	128*	82 - 114	a
Methylene chloride	0.25	0.018	0.26	97	10 - 221	
Acetone	0.25	0.026	0.28	100	80 - 120	
Carbon disulfide	0.25	ND	0.27	108	81 - 125	
1,1-Dichloroethane	0.25	ND	0.24	98	33 - 137	
1,2-Dichloroethene (total	0.50	ND	0.48	96	50 - 150	
Chloroform	0.25	0.0011	0.25	98	52 - 140	
1,2-Dichloroethane	0.25	ND	0.24	96	44 - 145	
Methyl ethyl ketone	0.25	ND	0.26	102	10 - 187	
1,1,1-Trichloroethane	0.25	ND	0.24	95	52 - 162	
Carbon tetrachloride	0.25	ND	0.23	93	39 - 149	
Bromodichloromethane	0.25	ND	0.24	95	35 - 155	
1,2-Dichloropropane	0.25	ND	0.24	98	10 - 210	
cis-1,3-Dichloropropene	0.25	ND	0.25	100	10 - 227	
Trichloroethylene	0.25	ND	0.24	98	46 - 143	
Dibromochloromethane	0.25	ND	0.23	91	53 - 149	
1,1,2-Trichloroethane	0.25	ND	0.24	96	52 - 150	
Benzene	0.25	ND	0.24	96	55 - 138	
trans-1,3-Dichloropropene	0.25	ND	0.24	95	17 - 183	
Bromoform	0.25	ND	0.23	91	45 - 169	
4-Methyl-2-pentanone	0.25	0.0080	0.24	92	90 - 125	
2-Hexanone	0.25	ND	0.28	111	87 - 129	
Tetrachloroethylene	0.25	ND	0.23	94	39 - 154	
1,1,2,2-Tetrachloroethane	0.25	ND	0.23	92	46 - 157	

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SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Matrix Spike ID: 436-SS-SB01-05

Lot #: A0E040160 WO #: DCQ91112
BATCH: 0138243

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENT. (mg/L)	MS CONCENT. (mg/L)	MS % REC	LIMITS REC	QUAL
Toluene	0.25	0.0021	0.23	90	46 - 147	
Chlorobenzene	0.25	ND	0.24	95	49 - 139	
Ethylbenzene	0.25	0.0012	0.23	91	37 - 162	
Styrene	0.25	ND	0.24	94	79 - 110	
Xylenes (total)	0.75	0.0042	0.69	91	83 - 129	
cis-1,2-Dichloroethene	0.25	ND	0.24	96	50 - 150	
trans-1,2-Dichloroethene	0.25	ND	0.24	96	54 - 156	
n-Hexane	0.25	0.0013	0.23	90	66 - 110	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 1 out of 36 outside limits

COMMENTS:

FORM III

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Matrix Spike ID: 436-SS-SB01-05

Lot #: A0E040160 WO #: DCQ91113
BATCH: 0138243

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENT. (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Chloromethane	0.25	0.28	111	0.010	18	10- 273	
Bromomethane	0.25	0.33	130	2.2	11	10- 242	
Vinyl chloride	0.25	0.27	109	2.7	43	29- 150	
Chloroethane	0.25	0.31	125*	2.4	11	82- 114	a
Methylene chloride	0.25	0.26	98	0.24	22	10- 221	
Acetone	0.25	0.27	96	3.9	18	80- 120	
Carbon disulfide	0.25	0.27	108	0.19	19	81- 125	
1,1-Dichloroethane	0.25	0.24	97	0.40	14	33- 137	
1,2-Dichloroethene (total	0.50	0.47	94	1.8	50	50- 150	
Chloroform	0.25	0.24	97	1.2	17	52- 140	
1,2-Dichloroethane	0.25	0.24	94	2.0	41	44- 145	
Methyl ethyl ketone	0.25	0.24	96	6.6	47	10- 187	
1,1,1-Trichloroethane	0.25	0.24	94	1.3	12	52- 162	
Carbon tetrachloride	0.25	0.23	92	1.2	55	39- 149	
Bromodichloromethane	0.25	0.23	94	0.74	21	35- 155	
1,2-Dichloropropane	0.25	0.24	95	3.1	13	10- 210	
cis-1,3-Dichloropropene	0.25	0.24	98	2.5	14	10- 227	
Trichloroethylene	0.25	0.24	96	2.4	23	46- 143	
Dibromochloromethane	0.25	0.22	88	3.4	16	53- 149	
1,1,2-Trichloroethane	0.25	0.23	93	3.2	19	52- 150	
Benzene	0.25	0.23	94	2.2	20	55- 138	
trans-1,3-Dichloropropene	0.25	0.23	92	2.6	14	17- 183	
Bromoform	0.25	0.22	88	3.9	22	45- 169	
4-Methyl-2-pentanone	0.25	0.23	89*	2.4	12	90- 125	a
2-Hexanone	0.25	0.27	107	4.4	17	87- 129	
Tetrachloroethylene	0.25	0.23	94	0.060	22	39- 154	
1,1,2,2-Tetrachloroethane	0.25	0.22	88	3.8	24	46- 157	
Toluene	0.25	0.22	88	2.5	24	46- 147	

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SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: TETRA TECH NUS, INC.

Lab Code: QESCAN SDG No: MP007

Matrix Spike ID: 436-SS-SB01-05

Lot #: A0E040160 WO #: DCQ91113
BATCH: 0138243

COMPOUND	SPIKE ADDED	MSD CONCENT.	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Chlorobenzene	0.25	0.23	92	2.4	22	49 - 139	
Ethylbenzene	0.25	0.22	89	2.0	14	37 - 162	
Styrene	0.25	0.23	91	3.7	10	79 - 110	
Xylenes (total)	0.75	0.67	88	2.9	10	83 - 129	
cis-1,2-Dichloroethene	0.25	0.24	94	2.3	50	50 - 150	
trans-1,2-Dichloroethene	0.25	0.24	95	1.2	10	54 - 156	
n-Hexane	0.25	0.22	87	3.7	20	66 - 110	
1,1-Dichloroethylene	0.25	0.25	100	1.2	27	43 - 147	

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 36 outside limits
Spike Recovery: 2 out of 36 outside limits

COMMENTS:

FORM III

CASE NARRATIVE
GC/MS SEMIVOLATILES
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 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.

CASE NARRATIVE
POLYNUCLEAR AROMATIC HYDROCARBONS
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 Violations

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

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

Calibrations

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: A0E030194 Work Order #...: DCT2H10J-MS Matrix.....: SOLID
MS Lot-Sample #: A0E050174-003 DCT2H10K-MSD
Date Sampled...: 05/04/00 14:00 Date Received..: 05/05/00
Prep Date.....: 05/09/00 Analysis Date..: 05/11/00
Prep Batch #...: 0130193
Dilution Factor: 1 % Moisture.....: 8.7

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1-Methylnaphthalene	61	(45 - 115)			SW846 8310
	46 p	(45 - 115)	28	(0-27)	SW846 8310
2-Methylnaphthalene	59	(46 - 115)			SW846 8310
	46	(46 - 115)	24	(0-29)	SW846 8310
Acenaphthene	59	(41 - 115)			SW846 8310
	58	(41 - 115)	2.6	(0-30)	SW846 8310
Acenaphthylene	59	(39 - 115)			SW846 8310
	57	(39 - 115)	3.8	(0-35)	SW846 8310
Anthracene	68	(33 - 115)			SW846 8310
	67	(33 - 115)	1.8	(0-30)	SW846 8310
Benzo(a)anthracene	75	(46 - 115)			SW846 8310
	75	(46 - 115)	0.54	(0-33)	SW846 8310
Benzo(a)pyrene	73	(41 - 115)			SW846 8310
	80	(41 - 115)	9.7	(0-36)	SW846 8310
Benzo(b)fluoranthene	72	(48 - 115)			SW846 8310
	75	(48 - 115)	4.0	(0-24)	SW846 8310
Benzo(ghi)perylene	73	(34 - 115)			SW846 8310
	77	(34 - 115)	5.7	(0-30)	SW846 8310
Benzo(k)fluoranthene	73	(47 - 115)			SW846 8310
	83	(47 - 115)	13	(0-30)	SW846 8310
Chrysene	60	(45 - 115)			SW846 8310
	84 p	(45 - 115)	34	(0-27)	SW846 8310
Dibenz(a,h)anthracene	65	(38 - 115)			SW846 8310
	67	(38 - 115)	2.2	(0-27)	SW846 8310
Fluoranthene	92	(53 - 115)			SW846 8310
	86	(53 - 115)	6.8	(0-53)	SW846 8310
Fluorene	66	(42 - 115)			SW846 8310
	70	(42 - 115)	4.9	(0-28)	SW846 8310
Indeno(1,2,3-cd)pyrene	85	(39 - 115)			SW846 8310
	93	(39 - 115)	8.9	(0-37)	SW846 8310
Naphthalene	55	(28 - 116)			SW846 8310
	26 a,p	(28 - 116)	72	(0-26)	SW846 8310
Phenanthrene	73	(44 - 115)			SW846 8310
	77	(44 - 115)	5.4	(0-25)	SW846 8310
Pyrene	86	(46 - 115)			SW846 8310
	69	(46 - 115)	22	(0-50)	SW846 8310

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	72	(17 - 115)
	74	(17 - 115)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: A0E030194 Work Order #...: DCT2H10J-MS Matrix.....: SOLID
MS Lot-Sample #: A0E050174-003 DCT2H10K-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

BLANK WORKORDER NO.

DCX83101

FL-DEP FL-PRO METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP007

Lab File ID: hpka2293.

Lot Number: A0E040160

Matrix: SOLID

Extraction Method:

Date Extracted: 05/09/00

Date Analyzed(1): 05/10/00

Date Analyzed(2): N/A

Time Analyzed(1): 22:35

Time Analyzed(2): N/A

Instrument ID(1): HPK

Instrument ID(2): N/A

GC Column(1): RTX5MS ID: 025 GC Column(2): N/A ID: N/A

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

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	436-SS-SB01-05	DCQ91108	05/11/00	N/A
02	436-SS-SB04-05	DCQ95108	05/11/00	N/A
03	436-SS-SB09-05	DCQ97107	05/11/00	N/A
04	INTRA-LAB QC	DCT23103	05/11/00	N/A
05	LAB MS/MSD	DCT23106 S	05/11/00	N/A
06	LAB MS/MSD	DCT23107 D	05/11/00	N/A
07	CHECK SAMPLE	DCX83102 C	05/10/00	N/A
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

CASE NARRATIVE
TPH FL-PRO
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 Violations

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

Method Blank Contamination

The method blank associated with batch 0137264 had J-value for PRO @ 3.0 mg/L, the reporting limit is 5.0 mg/L and the MDL is 0.5 mg/L. The samples also had J-value for PRO @ 1.7 mg/L for sample "436-SS-SB09-05" and 1.3 mg/L for sample "358-SS-SB05-04". Sample concentration are significantly less than reporting limit.

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.

DCX83101

FL-DEP FL-PRO METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP007

Lab File ID: hpka2293.

Lot Number: A0E050174

Matrix: SOLID

Extraction Method:

Date Extracted: 05/09/00

Date Analyzed(1): 05/10/00

Date Analyzed(2): N/A

Time Analyzed(1): 22:35

Time Analyzed(2): N/A

Instrument ID(1): HPK

Instrument ID(2): N/A

GC Column(1): RTX5MS ID: 025 GC Column(2): N/A ID: N/A

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

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	358-SS-SB04-04	DCT2H10A	05/11/00	N/A
02	358-SS-SB05-04	DCT2P104	05/11/00	N/A
03	358-SS-SB01-04	DCT23103	05/11/00	N/A
04	358-SS-SB01-04	DCT23106 S	05/11/00	N/A
05	358-SS-SB01-04	DCT23107 D	05/11/00	N/A
06	CHECK SAMPLE	DCX83102 C	05/10/00	N/A
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

BLANK WORKORDER NO.

DD892104

FL-DEP FL-PRO METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP007

Lab File ID: hpka2545.

Lot Number: A0E040160

Matrix: SOLID

Extraction Method:

Date Extracted: 05/16/00

Date Analyzed(1): 05/24/00

Date Analyzed(2): N/A

Time Analyzed(1): 10:09

Time Analyzed(2): N/A

Instrument ID(1): HPK

Instrument ID(2): N/A

GC Column(1): RTX5MS ID: 025 GC Column(2): N/A ID: N/A

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

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	436-SS-SB01-05	DCQ9110G	05/24/00	N/A
02	CHECK SAMPLE	DD87H102 C	05/23/00	N/A
03	DUPLICATE CHECK	DD87H103 L	05/23/00	N/A
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

Project Summary

Client: 240

Florida Tracking #(s): Original A0E030194, A0E040160, A0E050174

Method: FL Leo Soil SDG, MPDJ

Check List:

- [ ] AS400 Report Pages w/dil factor on Letterhead
- [ ] Sample Chromatograms
- [ ] Method Blank Chromatograms
- [ ] Spiking Summary
- [ ] LCS/D Chromatograms
- [ ] MS/D Chromatograms
- [ ] QA Criteria Summary
- [ ] Instrument Blanks & Breakdown Evaluations
- [ ] Inital Calibrations
- [ ] Initial Cal. Verification
- [ ] Continuing Calibrations
- [ ] Retention Time Windows
- [ ] Extractions Prep Logbook
- [ ] Analytical RunLog & Inj/Time Summary
- [ ] Standard Tracking Log and C of A's
- [ ] MDLs

Date: 5/25/01 Initials: MCS

BLANK WORKORDER NO.

DCX83101

FL-DEP FL-PRO METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP007

Lab File ID: hpka2293.

Lot Number: A0E030194

Matrix: SOLID

Extraction Method:

Date Extracted: 05/09/00

Date Analyzed(1): 05/10/00

Date Analyzed(2): N/A

Time Analyzed(1): 22:35

Time Analyzed(2): N/A

Instrument ID(1): HPK

Instrument ID(2): N/A

GC Column(1): RTX5MS ID: 025 GC Column(2): N/A ID: N/A

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

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	4252-SS-SB05-05	DCP07107	05/10/00	N/A
02	4252-SS-SB11-05	DCP1J107	05/11/00	N/A
03	4252-SS-SB04-05	DCP18107	05/10/00	N/A
04	INTRA-LAB QC	DCT23103	05/11/00	N/A
05	LAB MS/MSD	DCT23106 S	05/11/00	N/A
06	LAB MS/MSD	DCT23107 D	05/11/00	N/A
07	CHECK SAMPLE	DCX83102 C	05/10/00	N/A
08				
09				
10				
11				
12				
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15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP007

Matrix: (soil/water) SOLID Lab Sample ID: B0E090000 194
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g
Work Order: DCX83101
Dilution factor: 1

Date Received: 05/05/00
Date Extracted: 05/09/00
Date Analyzed: 05/10/00

QC Batch: 0130194

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q743	Petroleum Range Organics (C8	10	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	53	(22 - 152)
o-Terphenyl	56	(45 - 143)

FORM I

BLANK WORKORDER NO.

DD892104

FL-DEP FL-PRO METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: QESCAN

SDG Number:MP007

Lab File ID: hpka2545.

Lot Number: A0E050174

Matrix: SOLID

Extraction Method:

Date Extracted: 05/16/00

Date Analyzed(1): 05/24/00

Date Analyzed(2): N/A

Time Analyzed(1): 10:09

Time Analyzed(2): N/A

Instrument ID(1): HPK

Instrument ID(2): N/A

GC Column(1): RTX5MS ID: 025 GC Column(2): N/A ID: N/A

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

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	358-SS-SB05-04	DCT2P10A	05/24/00	N/A
02	CHECK SAMPLE	DD87H102 C	05/23/00	N/A
03	DUPLICATE CHECK	DD87H103 L	05/23/00	N/A
04				
05				
06				
07				
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14				
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17				
18				
19				
20				

COMMENTS:

FORM IV

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SOLID Lab Sample ID:B0E090000 194
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g Date Received: 05/05/00
Work Order: DCX83101 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/10/00

QC Batch: 0130194

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q743	Petroleum Range Organics (C8	10	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	53	(22 - 152)
o-Terphenyl	56	(45 - 143)

FORM I

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Lab Sample ID:B0E090000 194

Matrix: (soil/water) SOLID
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g
Work Order: DCX83101
Dilution factor: 1

Date Received: 05/05/00
Date Extracted:05/09/00
Date Analyzed: 05/10/00

QC Batch: 0130194

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q743	Petroleum Range Organics (C8	10	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	53	(22 - 152)
o-Terphenyl	56	(45 - 143)

FORM I

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SOLID Lab Sample ID:B0E160000 272
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 100 / mL Date Received: 05/04/00
Work Order: DD892104 Date Extracted:05/16/00
Dilution factor: 1 Date Analyzed: 05/24/00

QC Batch: 0137264

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/L	Q
Q743	Petroleum Range Organics (C8	3.0	J

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	71	(12 - 149)
o-Terphenyl	85	(51 - 135)

FORM I

TETRA TECH NUS, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SOLID Lab Sample ID:B0E160000 272
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 100 / mL Date Received: 05/04/00
Work Order: DD892104 Date Extracted:05/16/00
Dilution factor: 1 Date Analyzed: 05/24/00

QC Batch: 0137264

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/L	Q
Q743	Petroleum Range Organics (C8	3.0	J

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	71	(12 - 149)
o-Terphenyl	85	(51 - 135)

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 003
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.2 / g Date Received: 05/04/00
Work Order: DCQ9510A Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:5.1

QC Batch: 0130139

Client Sample Id: 436-SS-SB04-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
510-15-6	Chlorobenzilate	350	U
122-09-8	a,a-Dimethylphenethylamine	1700	U
140-57-8	Aramite	700	U

FORM I

TETRA TECH NUS, INC.

Client Sample ID: 436-SS-SB04-05

HPLC

Lot-Sample #...: A0E040160-003 Work Order #...: DCQ95107 Matrix.....: SO
Date Sampled...: 05/03/00 13:45 Date Received..: 05/04/00
Prep Date.....: 05/09/00 Analysis Date..: 05/11/00
Prep Batch #...: 0130193
Dilution Factor: 1
% Moisture.....: 5.1 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Methylnaphthalene	ND	53	ug/kg
1-Methylnaphthalene	ND	53	ug/kg
Acenaphthene	ND	53	ug/kg
Acenaphthylene	ND	53	ug/kg
Anthracene	ND	53	ug/kg
Benzo(a)anthracene	1.2 J	5.3	ug/kg
Benzo(a)pyrene	ND	5.3	ug/kg
Benzo(b)fluoranthene	ND	5.3	ug/kg
Benzo(ghi)perylene	ND	5.3	ug/kg
Benzo(k)fluoranthene	ND	5.3	ug/kg
Chrysene	ND	5.3	ug/kg
Dibenz(a,h)anthracene	ND	5.3	ug/kg
Fluoranthene	ND	5.3	ug/kg
Fluorene	ND	53	ug/kg
Indeno(1,2,3-cd)pyrene	ND	5.3	ug/kg
Naphthalene	ND	53	ug/kg
Phenanthrene	ND	53	ug/kg
Pyrene	3.9 J	5.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	71	(17 - 115)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP007

Lab Sample ID: A0E040160 003

Matrix: (soil/water) SO
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g
Work Order: DCQ95108
Dilution factor: 1

Date Received: 05/04/00
Date Extracted: 05/09/00
Date Analyzed: 05/11/00

QC Batch: 0130194

Client Sample Id: 436-SS-SB04-05

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	72	(22 - 152)
o-Terphenyl	66	(45 - 143)

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 004
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/04/00
Work Order: DCQ97105 Date Extracted:05/11/00
Dilution factor: 1.1 Date Analyzed: 05/11/00
Moisture %:5.3

QC Batch: 0133230

Client Sample Id: 436-SS-SB09-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
110-75-8	2-Chloroethyl vinyl ether	58	U
156-59-2	cis-1,2-Dichloroethene	2.9	U
540-59-0	1,2-Dichloroethene (total)	5.8	U
67-64-1	Acetone	23	U
75-05-8	Acetonitrile	120	U
107-02-8	Acrolein	120	U
107-13-1	Acrylonitrile	120	U
107-05-1	Allyl chloride	12	U
71-43-2	Benzene	5.8	U
75-27-4	Bromodichloromethane	5.8	U
75-25-2	Bromoform	5.8	U
74-83-9	Bromomethane	12	U
78-93-3	2-Butanone (MEK)	23	U
75-15-0	Carbon disulfide	5.8	U
56-23-5	Carbon tetrachloride	5.8	U
108-90-7	Chlorobenzene	5.8	U
75-00-3	Chloroethane	12	U
67-66-3	Chloroform	5.8	U
74-87-3	Chloromethane	12	U
126-99-8	Chloroprene	5.8	U
124-48-1	Dibromochloromethane	5.8	U
96-12-8	1,2-Dibromo-3-chloropropane	12	U
106-93-4	1,2-Dibromoethane (EDB)	5.8	U
74-95-3	Dibromomethane	5.8	U
110-57-6	trans-1,4-Dichloro-2-butene	5.8	U
75-71-8	Dichlorodifluoromethane	12	U
75-34-3	1,1-Dichloroethane	5.8	U
107-06-2	1,2-Dichloroethane	5.8	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 004
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/04/00
Work Order: DCQ97105 Date Extracted:05/11/00
Dilution factor: 1.1 Date Analyzed: 05/11/00
Moisture %:5.3

QC Batch: 0133230

Client Sample Id: 436-SS-SB09-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
75-35-4	1,1-Dichloroethene	0.58	J
156-60-5	trans-1,2-Dichloroethene	2.9	U
78-87-5	1,2-Dichloropropane	5.8	U
10061-01-5	cis-1,3-Dichloropropene	5.8	U
10061-02-6	trans-1,3-Dichloropropene	5.8	U
100-41-4	Ethylbenzene	5.8	U
97-63-2	Ethyl methacrylate	5.8	U
591-78-6	2-Hexanone	23	U
74-88-4	Iodomethane	5.8	U
78-83-1	Isobutyl alcohol	230	U
126-98-7	Methacrylonitrile	5.8	U
75-09-2	Methylene chloride	5.8	U
80-62-6	Methyl methacrylate	5.8	U
108-10-1	4-Methyl-2-pentanone (MIBK)	23	U
107-12-0	Propionitrile	23	U
100-42-5	Styrene	5.8	U
630-20-6	1,1,1,2-Tetrachloroethane	5.8	U
79-34-5	1,1,2,2-Tetrachloroethane	5.8	U
127-18-4	Tetrachloroethene	5.8	U
108-88-3	Toluene	0.31	J
71-55-6	1,1,1-Trichloroethane	5.8	U
79-00-5	1,1,2-Trichloroethane	5.8	U
79-01-6	Trichloroethene	5.8	U
75-69-4	Trichlorofluoromethane	12	U
96-18-4	1,2,3-Trichloropropane	5.8	U
108-05-4	Vinyl acetate	12	U
75-01-4	Vinyl chloride	12	U
1330-20-7	Xylenes (total)	12	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.05 / g Date Received: 05/04/00
Work Order: DCQ97109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:5.3

QC Batch: 0130139

Client Sample Id: 436-SS-SB09-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	350	U
208-96-8	Acenaphthylene	350	U
98-86-2	Acetophenone	350	U
53-96-3	2-Acetylaminofluorene	3500	U
92-67-1	4-Aminobiphenyl	1700	U
62-53-3	Aniline	350	U
120-12-7	Anthracene	350	U
92-87-5	Benzidine	3500	U
56-55-3	Benzo(a)anthracene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
191-24-2	Benzo(ghi)perylene	350	U
50-32-8	Benzo(a)pyrene	350	U
100-51-6	Benzyl alcohol	350	U
111-91-1	bis(2-Chloroethoxy)methane	350	U
111-44-4	bis(2-Chloroethyl) ether	350	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	350	U
117-81-7	bis(2-Ethylhexyl) phthalate	350	U
101-55-3	4-Bromophenyl phenyl ether	350	U
85-68-7	Butyl benzyl phthalate	350	U
106-47-8	4-Chloroaniline	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-58-7	2-Chloronaphthalene	350	U
95-57-8	2-Chlorophenol	350	U
7005-72-3	4-Chlorophenyl phenyl ether	350	U
218-01-9	Chrysene	350	U
2303-16-4	Diallate	700	U
53-70-3	Dibenz(a,h)anthracene	350	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.05 / g Date Received: 05/04/00
Work Order: DCQ97109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:5.3

QC Batch: 0130139

Client Sample Id: 436-SS-SB09-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
132-64-9	Dibenzofuran	350	U
84-74-2	Di-n-butyl phthalate	350	U
95-50-1	1,2-Dichlorobenzene	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
120-83-2	2,4-Dichlorophenol	350	U
87-65-0	2,6-Dichlorophenol	350	U
84-66-2	Diethyl phthalate	350	U
60-11-7	p-Dimethylaminoazobenzene	700	U
57-97-6	7,12-Dimethylbenz(a)anthrace	700	U
119-93-7	3,3'-Dimethylbenzidine	1700	U
105-67-9	2,4-Dimethylphenol	350	U
131-11-3	Dimethyl phthalate	350	U
117-84-0	Di-n-octyl phthalate	350	U
99-65-0	1,3-Dinitrobenzene	350	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	350	U
606-20-2	2,6-Dinitrotoluene	350	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	700	U
123-91-1	1,4-Dioxane	350	U
122-39-4	Diphenylamine	350	U
122-66-7	1,2-Diphenylhydrazine	350	U
62-50-0	Ethyl methanesulfonate	350	U
206-44-0	Fluoranthene	350	U
86-73-7	Fluorene	350	U
118-74-1	Hexachlorobenzene	350	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.05 / g Date Received: 05/04/00
Work Order: DCQ97109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:5.3

QC Batch: 0130139

Client Sample Id: 436-SS-SB09-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
87-68-3	Hexachlorobutadiene	350	U
77-47-4	Hexachlorocyclopentadiene	1700	U
67-72-1	Hexachloroethane	350	U
1888-71-7	Hexachloropropene	3500	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
78-59-1	Isophorone	350	U
120-58-1	Isosafrole	700	U
91-80-5	Methapyrilene	1700	U
95-53-4	o-Toluidine	700	U
56-49-5	3-Methylcholanthrene	700	U
66-27-3	Methyl methanesulfonate	350	U
91-57-6	2-Methylnaphthalene	350	U
95-48-7	2-Methylphenol	350	U
108-39-4	3-Methylphenol	350	U
106-44-5	4-Methylphenol	350	U
91-20-3	Naphthalene	350	U
130-15-4	1,4-Naphthoquinone	1700	U
134-32-7	1-Naphthylamine	350	U
91-59-8	2-Naphthylamine	350	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	350	U
88-75-5	2-Nitrophenol	350	U
100-02-7	4-Nitrophenol	1700	U
56-57-5	4-Nitroquinoline-1-oxide	3500	U
924-16-3	N-Nitrosodi-n-butylamine	350	U
55-18-5	N-Nitrosodiethylamine	350	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.05 / g Date Received: 05/04/00
Work Order: DCQ97109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:5.3

QC Batch: 0130139

Client Sample Id: 436-SS-SB09-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
62-75-9	N-Nitrosodimethylamine	350	U
621-64-7	N-Nitrosodi-n-propylamine	350	U
86-30-6	N-Nitrosodiphenylamine	350	U
10595-95-6	N-Nitrosomethylethylamine	350	U
59-89-2	N-Nitrosomorpholine	350	U
100-75-4	N-Nitrosopiperidine	350	U
930-55-2	N-Nitrosopyrrolidine	350	U
99-55-8	5-Nitro-o-toluidine	700	U
608-93-5	Pentachlorobenzene	350	U
76-01-7	Pentachloroethane	1700	U
82-68-8	Pentachloronitrobenzene	1700	U
87-86-5	Pentachlorophenol	1700	U
62-44-2	Phenacetin	700	U
85-01-8	Phenanthrene	350	U
108-95-2	Phenol	350	U
106-50-3	p-Phenylene diamine	3500	U
109-06-8	2-Picoline	700	U
23950-58-5	Pronamide	700	U
129-00-0	Pyrene	350	U
110-86-1	Pyridine	700	U
94-59-7	Safrole	700	U
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U
58-90-2	2,3,4,6-Tetrachlorophenol	1700	U
120-82-1	1,2,4-Trichlorobenzene	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
99-35-4	1,3,5-Trinitrobenzene	1700	U
86-74-8	Carbazole	350	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 004
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.05 / g Date Received: 05/04/00
Work Order: DCQ97109 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:5.3

QC Batch: 0130139

Client Sample Id: 436-SS-SB09-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
510-15-6	Chlorobenzilate	350	U
122-09-8	a,a-Dimethylphenethylamine	1700	U
140-57-8	Aramite	700	U

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

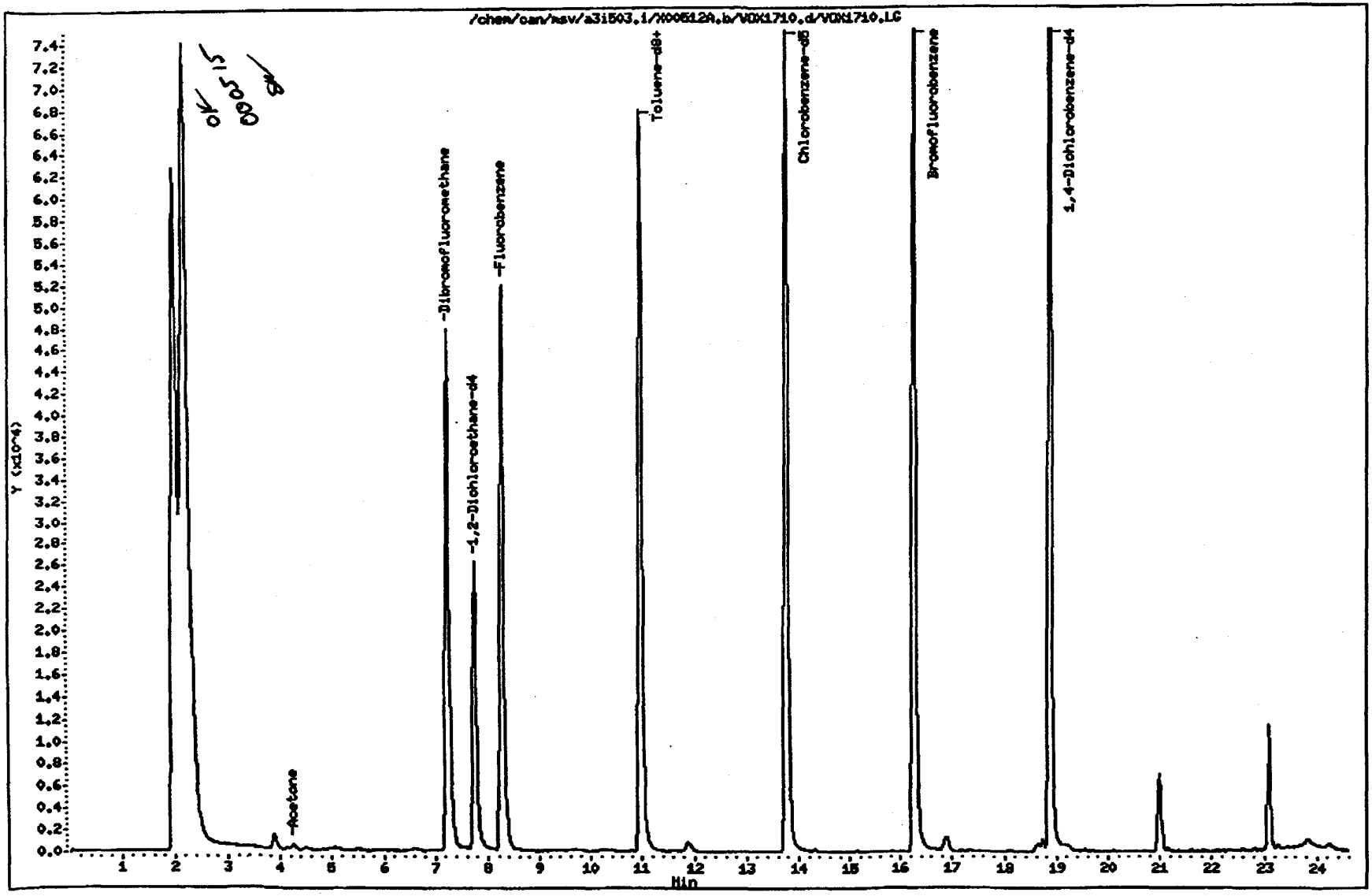
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
100-41-4	Ethylbenzene	13	U
97-63-2	Ethyl methacrylate	13	U
75-69-4	Trichlorofluoromethane	26	U
591-78-6	2-Hexanone	52	U
74-88-4	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/a3i503.i/X00612A.b/VOX1710.d
Date : 12-MAY-2000 13:22
Client ID: 4252-SS-SB11-05
Sample Info: DCT1D101,,1.94G/5ML
Purge Volume: 1.9
Column phase: DB624 75m

Instrument: a3i503.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

TETRA TECH NUS, INC.

Client Sample ID: 436-SS-SB09-05

HPLC

Lot-Sample #...: A0E040160-004 Work Order #...: DCQ97106 Matrix.....: SO
Date Sampled...: 05/03/00 14:40 Date Received..: 05/04/00
Prep Date.....: 05/09/00 Analysis Date..: 05/11/00
Prep Batch #...: 0130193
Dilution Factor: 1
% Moisture.....: 5.3 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Methylnaphthalene	ND	53	ug/kg
1-Methylnaphthalene	ND	53	ug/kg
Acenaphthene	ND	53	ug/kg
Acenaphthylene	ND	53	ug/kg
Anthracene	ND	53	ug/kg
Benzo(a)anthracene	ND	5.3	ug/kg
Benzo(a)pyrene	ND	5.3	ug/kg
Benzo(b)fluoranthene	ND	5.3	ug/kg
Benzo(ghi)perylene	ND	5.3	ug/kg
Benzo(k)fluoranthene	ND	5.3	ug/kg
Chrysene	ND	5.3	ug/kg
Dibenz(a,h)anthracene	ND	5.3	ug/kg
Fluoranthene	ND	5.3	ug/kg
Fluorene	ND	53	ug/kg
Indeno(1,2,3-cd)pyrene	ND	5.3	ug/kg
Naphthalene	ND	53	ug/kg
Phenanthrene	ND	53	ug/kg
Pyrene	ND	5.3	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

Matrix: (soil/water) SO Lab Sample ID:A0E040160 004
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g Date Received: 05/04/00
Work Order: DCQ97107 Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/11/00

QC Batch: 0130194

Client Sample Id: 436-SS-SB09-05

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	91	(22 - 152)
o-Terphenyl	101	(45 - 143)

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 1 / mL Date Received: 05/04/00
Work Order: DCQ9110D Date Extracted:05/19/00
Dilution factor: 1 Date Analyzed: 05/19/00
Moisture %:4.1

QC Batch: 0138243

Client Sample Id: 436-SS-SB01-05

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	0.0011	J
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	0.018	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	0.0080	J
591-78-6	2-Hexanone	0.25	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 1 / mL Date Received: 05/04/00
Work Order: DCQ9110D Date Extracted:05/19/00
Dilution factor: 1 Date Analyzed: 05/19/00
Moisture %:4.1

QC Batch: 0138243

Client Sample Id: 436-SS-SB01-05

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	0.0021	J
100-41-4	Ethylbenzene	0.0012	J
100-42-5	Styrene	0.025	U
1330-20-7	Xylenes (total)	0.0042	J
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	0.0013	J

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/04/00
Work Order: DCQ91105 Date Extracted:05/11/00
Dilution factor: 1.2 Date Analyzed: 05/11/00
Moisture %:4.1

QC Batch: 0133230

Client Sample Id: 436-SS-SB01-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
110-75-8	2-Chloroethyl vinyl ether	63	U
156-59-2	cis-1,2-Dichloroethene	3.1	U
540-59-0	1,2-Dichloroethene (total)	6.3	U
67-64-1	Acetone	3.5	J B
75-05-8	Acetonitrile	130	U
107-02-8	Acrolein	130	U
107-13-1	Acrylonitrile	130	U
107-05-1	Allyl chloride	13	U
71-43-2	Benzene	6.3	U
75-27-4	Bromodichloromethane	6.3	U
75-25-2	Bromoform	6.3	U
74-83-9	Bromomethane	13	U
78-93-3	2-Butanone (MEK)	25	U
75-15-0	Carbon disulfide	6.3	U
56-23-5	Carbon tetrachloride	6.3	U
108-90-7	Chlorobenzene	6.3	U
75-00-3	Chloroethane	13	U
67-66-3	Chloroform	6.3	U
74-87-3	Chloromethane	13	U
126-99-8	Chloroprene	6.3	U
124-48-1	Dibromochloromethane	6.3	U
96-12-8	1,2-Dibromo-3-chloropropane	13	U
106-93-4	1,2-Dibromoethane (EDB)	6.3	U
74-95-3	Dibromomethane	6.3	U
110-57-6	trans-1,4-Dichloro-2-butene	6.3	U
75-71-8	Dichlorodifluoromethane	13	U
75-34-3	1,1-Dichloroethane	6.3	U
107-06-2	1,2-Dichloroethane	6.3	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 002
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / g Date Received: 05/04/00
Work Order: DCQ91105 Date Extracted:05/11/00
Dilution factor: 1.2 Date Analyzed: 05/11/00
Moisture %:4.1

QC Batch: 0133230

Client Sample Id: 436-SS-SB01-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
75-35-4	1,1-Dichloroethene	1.0	J
156-60-5	trans-1,2-Dichloroethene	3.1	U
78-87-5	1,2-Dichloropropane	6.3	U
10061-01-5	cis-1,3-Dichloropropene	6.3	U
10061-02-6	trans-1,3-Dichloropropene	6.3	U
100-41-4	Ethylbenzene	6.3	U
97-63-2	Ethyl methacrylate	6.3	U
591-78-6	2-Hexanone	25	U
74-88-4	Iodomethane	6.3	U
78-83-1	Isobutyl alcohol	250	U
126-98-7	Methacrylonitrile	6.3	U
75-09-2	Methylene chloride	6.3	U
80-62-6	Methyl methacrylate	6.3	U
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U
107-12-0	Propionitrile	25	U
100-42-5	Styrene	6.3	U
630-20-6	1,1,1,2-Tetrachloroethane	6.3	U
79-34-5	1,1,2,2-Tetrachloroethane	6.3	U
127-18-4	Tetrachloroethene	6.3	U
108-88-3	Toluene	0.32	J
71-55-6	1,1,1-Trichloroethane	6.3	U
79-00-5	1,1,2-Trichloroethane	6.3	U
79-01-6	Trichloroethene	6.3	U
75-69-4	Trichlorofluoromethane	13	U
96-18-4	1,2,3-Trichloropropane	6.3	U
108-05-4	Vinyl acetate	13	U
75-01-4	Vinyl chloride	13	U
1330-20-7	Xylenes (total)	13	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.09 / g Date Received: 05/04/00
Work Order: DCQ9110C Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:4.1

QC Batch: 0130139

Client Sample Id: 436-SS-SB01-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
83-32-9	Acenaphthene	340	U
208-96-8	Acenaphthylene	340	U
98-86-2	Acetophenone	340	U
53-96-3	2-Acetylaminofluorene	3400	U
92-67-1	4-Aminobiphenyl	1700	U
62-53-3	Aniline	340	U
120-12-7	Anthracene	340	U
92-87-5	Benzidine	3400	U
56-55-3	Benzo(a)anthracene	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
191-24-2	Benzo(ghi)perylene	340	U
50-32-8	Benzo(a)pyrene	340	U
100-51-6	Benzyl alcohol	340	U
111-91-1	bis(2-Chloroethoxy)methane	340	U
111-44-4	bis(2-Chloroethyl) ether	340	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	340	U
117-81-7	bis(2-Ethylhexyl) phthalate	340	U
101-55-3	4-Bromophenyl phenyl ether	340	U
85-68-7	Butyl benzyl phthalate	340	U
106-47-8	4-Chloroaniline	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-58-7	2-Chloronaphthalene	340	U
95-57-8	2-Chlorophenol	340	U
7005-72-3	4-Chlorophenyl phenyl ether	340	U
218-01-9	Chrysene	340	U
2303-16-4	Diallate	690	U
53-70-3	Dibenz(a,h)anthracene	340	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.09 / g Date Received: 05/04/00
Work Order: DCQ9110C Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:4.1

QC Batch: 0130139

Client Sample Id: 436-SS-SB01-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
132-64-9	Dibenzofuran	340	U
84-74-2	Di-n-butyl phthalate	340	U
95-50-1	1,2-Dichlorobenzene	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
120-83-2	2,4-Dichlorophenol	340	U
87-65-0	2,6-Dichlorophenol	340	U
84-66-2	Diethyl phthalate	340	U
60-11-7	p-Dimethylaminoazobenzene	690	U
57-97-6	7,12-Dimethylbenz(a)anthrace	690	U
119-93-7	3,3'-Dimethylbenzidine	1700	U
105-67-9	2,4-Dimethylphenol	340	U
131-11-3	Dimethyl phthalate	340	U
117-84-0	Di-n-octyl phthalate	340	U
99-65-0	1,3-Dinitrobenzene	340	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	340	U
606-20-2	2,6-Dinitrotoluene	340	U
88-85-7	2-sec-Butyl-4,6-dinitropheno	690	U
123-91-1	1,4-Dioxane	340	U
122-39-4	Diphenylamine	340	U
122-66-7	1,2-Diphenylhydrazine	340	U
62-50-0	Ethyl methanesulfonate	340	U
206-44-0	Fluoranthene	340	U
86-73-7	Fluorene	340	U
118-74-1	Hexachlorobenzene	340	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.09 / g Date Received: 05/04/00
Work Order: DCQ9110C Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:4.1

QC Batch: 0130139

Client Sample Id: 436-SS-SB01-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
87-68-3	Hexachlorobutadiene	340	U
77-47-4	Hexachlorocyclopentadiene	1700	U
67-72-1	Hexachloroethane	340	U
1888-71-7	Hexachloropropene	3400	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
78-59-1	Isophorone	340	U
120-58-1	Isosafrole	690	U
91-80-5	Methapyrilene	1700	U
95-53-4	o-Toluidine	690	U
56-49-5	3-Methylcholanthrene	690	U
66-27-3	Methyl methanesulfonate	340	U
91-57-6	2-Methylnaphthalene	340	U
95-48-7	2-Methylphenol	340	U
108-39-4	3-Methylphenol	340	U
106-44-5	4-Methylphenol	340	U
91-20-3	Naphthalene	340	U
130-15-4	1,4-Naphthoquinone	1700	U
134-32-7	1-Naphthylamine	340	U
91-59-8	2-Naphthylamine	340	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	340	U
88-75-5	2-Nitrophenol	340	U
100-02-7	4-Nitrophenol	1700	U
56-57-5	4-Nitroquinoline-1-oxide	3400	U
924-16-3	N-Nitrosodi-n-butylamine	340	U
55-18-5	N-Nitrosodiethylamine	340	U

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.09 / g Date Received: 05/04/00
Work Order: DCQ9110C Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:4.1

QC Batch: 0130139

Client Sample Id: 436-SS-SB01-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
62-75-9	N-Nitrosodimethylamine	340	U
621-64-7	N-Nitrosodi-n-propylamine	340	U
86-30-6	N-Nitrosodiphenylamine	340	U
10595-95-6	N-Nitrosomethylethylamine	340	U
59-89-2	N-Nitrosomorpholine	340	U
100-75-4	N-Nitrosopiperidine	340	U
930-55-2	N-Nitrosopyrrolidine	340	U
99-55-8	5-Nitro-o-toluidine	690	U
608-93-5	Pentachlorobenzene	340	U
76-01-7	Pentachloroethane	1700	U
82-68-8	Pentachloronitrobenzene	1700	U
87-86-5	Pentachlorophenol	1700	U
62-44-2	Phenacetin	690	U
85-01-8	Phenanthrene	340	U
108-95-2	Phenol	340	U
106-50-3	p-Phenylene diamine	3400	U
109-06-8	2-Picoline	690	U
23950-58-5	Pronamide	690	U
129-00-0	Pyrene	340	U
110-86-1	Pyridine	690	U
94-59-7	Safrole	690	U
95-94-3	1,2,4,5-Tetrachlorobenzene	340	U
58-90-2	2,3,4,6-Tetrachlorophenol	1700	U
120-82-1	1,2,4-Trichlorobenzene	340	U
95-95-4	2,4,5-Trichlorophenol	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
99-35-4	1,3,5-Trinitrobenzene	1700	U
86-74-8	Carbazole	340	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 30.09 / g Date Received: 05/04/00
Work Order: DCQ9110C Date Extracted:05/09/00
Dilution factor: 1 Date Analyzed: 05/15/00
Moisture %:4.1

QC Batch: 0130139

Client Sample Id: 436-SS-SB01-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
510-15-6	Chlorobenzilate	340	U
122-09-8	a,a-Dimethylphenethylamine	1700	U
140-57-8	Aramite	690	U

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP007

Matrix: (soil/water) SO Lab Sample ID:A0E040160 002
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 250 / mL Date Received: 05/04/00
Work Order: DCQ9110E Date Extracted:05/15/00
Dilution factor: 1 Date Analyzed: 05/16/00
Moisture %:4.1

QC Batch: 0136270

Client Sample Id: 436-SS-SB01-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/L	Q
95-48-7	o-Cresol	0.050	U
65794-96-9	m-Cresol & p-Cresol	0.10	U
106-46-7	1,4-Dichlorobenzene	0.050	U
121-14-2	2,4-Dinitrotoluene	0.050	U
118-74-1	Hexachlorobenzene	0.050	U
87-68-3	Hexachlorobutadiene	0.050	U
67-72-1	Hexachloroethane	0.050	U
98-95-3	Nitrobenzene	0.050	U
87-86-5	Pentachlorophenol	0.10	U
110-86-1	Pyridine	0.10	U
95-95-4	2,4,5-Trichlorophenol	0.050	U
88-06-2	2,4,6-Trichlorophenol	0.050	U

FORM I

TETRA TECH NUS, INC.

Client Sample ID: 436-SS-SB01-05

HPLC

Lot-Sample #...: A0E040160-002 Work Order #...: DCQ91107 Matrix.....: SO
Date Sampled...: 05/03/00 13:00 Date Received..: 05/04/00
Prep Date.....: 05/09/00 Analysis Date..: 05/11/00
Prep Batch #...: 0130193
Dilution Factor: 1
% Moisture.....: 4.1 Method.....: SW846 8310

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Methylnaphthalene	ND	52	ug/kg
1-Methylnaphthalene	ND	52	ug/kg
Acenaphthene	ND	52	ug/kg
Acenaphthylene	ND	52	ug/kg
Anthracene	ND	52	ug/kg
Benzo(a)anthracene	ND	5.2	ug/kg
Benzo(a)pyrene	ND	5.2	ug/kg
Benzo(b)fluoranthene	ND	5.2	ug/kg
Benzo(ghi)perylene	ND	5.2	ug/kg
Benzo(k)fluoranthene	ND	5.2	ug/kg
Chrysene	2.0 J	5.2	ug/kg
Dibenz(a,h)anthracene	ND	5.2	ug/kg
Fluoranthene	ND	5.2	ug/kg
Fluorene	ND	52	ug/kg
Indeno(1,2,3-cd)pyrene	ND	5.2	ug/kg
Naphthalene	ND	52	ug/kg
Phenanthrene	ND	52	ug/kg
Pyrene	2.8 J	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Carbazole	98	(17 - 115)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP007

Lab Sample ID: A0E040160 002

Matrix: (soil/water) SO
Method: FL-DEP FL-PRO
Hydrocarbons, Total Petroleum (FL-PRO)

Sample WT/Vol: 30 / g
Work Order: DCQ91108
Dilution factor: 1

Date Received: 05/04/00
Date Extracted: 05/09/00
Date Analyzed: 05/11/00

QC Batch: 0130194

Client Sample Id: 436-SS-SB01-05

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) mg/kg	Q
Q743	Petroleum Range Organics (C8	10	U

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nonatriacontane	83	(22 - 152)
o-Terphenyl	88	(45 - 143)

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.

SAMPLE SUMMARY

A0E040160

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
DCQ8T	001	4251-SS-SB05-05	05/03/00	08:03
DCQ91	002	436-SS-SB01-05	05/03/00	13:00
DCQ95	003	436-SS-SB04-05	05/03/00	13:45
DCQ97	004	436-SS-SB09-05	05/03/00	14:40

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.

SAMPLE SUMMARY

A0E050174

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
DCT1D	001	4252-SS-SB11-05	05/04/00	08:00
DCT23	002	358-SS-SB01-04	05/04/00	11:00
DCT2H	003	358-SS-SB04-04	05/04/00	14:00
DCT2P	004	358-SS-SB05-04	05/04/00	16:00

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

QUA-4124

0.0°C

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**	**Page 1 of 1**
794 S. MILITARY TRAIL	(954) 570-5885 ext 250		
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.			

Analysis

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	11:40	SOIL				NONE		✓	✓	✓	✓	✓	✓						
4252-SS-SB04-05	↓	8:45	↓				↓		✓	✓	✓	✓	✓	✓						
4252-SS-SB11-05	↓	13:00	↓				↓		✓	✓	✓	✓	✓	✓	✓					

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: Gary Braganza	5/2/00		1. Received By		
2. Relinquished By			2. Received By: [signature]	5/3/00	9:05
3. Relinquished By			3. Received By		

Comments

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

STL North Canton

15

Chain of Custody Record

Quanterra

DUA-4124

0.0°C

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		Date	Time
1. Relinquished By: Gary Burgess	5/3/00	17:30	1. Received By:		
2. Relinquished By:			2. Received By:	5/4/00	9 45
3. Relinquished By:			3. Received By:		

Comments:

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

STL North Canton

16

[redacted]

Chain of Custody Record

Quanterra

DUA-4124

0.1°C

Client	Project Manager	Date	Chain Of Custody Number
TETRA TECH NUS	RICK OFSANKO	5/4/00	59268

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page ____ of ____
794 S. MILITARY TRAIL	(954) 570-5885 x250		

City	State	Zip Code	Site Contact
DEERFIELD BEACH	FL	33442	GB

Project Name	Carrier/Waybill Number
NS MAYPORT - CTO 123	FED-EX/815314453839

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	FOC	Grain Size + Lead/Alt					
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 Briggs	5/4/00	15:15	1. Received By: Jerry Liard	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: TSTLA TSCH Project: _____ Quote#: 33126
Cooler Received on: 5/3/00 Opened on: 5/3/00 by: [signature] (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: [signature] 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 sample SB05 bottle, SB02 on COC, use SB05 for DJP 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 (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 overlid
   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: TetraTech Project: Maydon Quote#: 331216
Cooler Received on: 5-5-00 Opened on: 5-5-00 by: Jenny Ricard (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:

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

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					
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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					
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28					
29					
30					

COMMENTS:

FORM IV

APPENDIX F

MOBILE LABORATORY ANALYTICAL REPORTS FOR GROUNDWATER

TetraTech NUS

Analytical Data
Mayport NAS, Bldg 358
Jacksonville, FL
5/1/00 - 5/5/00

Method 8260 (ug/L)	358-gw-tw01-01	358-gw-tw02-01	358-gw-tw03-01	358-gw-tw06-01	358-gw-tw07-01	358-gw-tw04-01	358-gw-tw09-01	358-gw-tw08-01
MTBE	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND
m&p-Xylene	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND
dilution factor	1x	1x	1x	1x	1x	1x	1x	1x

Method 8260 (ug/L)	358-gw-fd01-01	358-gw-tw05-01	358-gw-tw10-01					
MTBE	ND	ND	ND					
Benzene	ND	ND	ND					
Toluene	ND	ND	ND					
Ethylbenzene	ND	ND	ND					
m&p-Xylene	ND	ND	ND					
o-Xylene	ND	ND	ND					
Naphthalene	ND	ND	ND					
dilution factor	1x	1x	1x					

Source: KB Labs, Inc.
May 2000

APPENDIX G

GROUNDWATER SAMPLE LOG SHEETS

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NS MAYPORT Bldg 358
PROJECT NUMBER: N0506

WELL ID.: 358-MW01
DATE: 6/14/00

Time (Hrs)	Water Level (ft. below TOC)	Flow (ml/Min.)	pH (SU)	Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1155	4.75	—	—	—	—	—	—	—	
1200	4.75		7.51	0.697	68.3	0.90	25.8	-136	
1205	4.75	-	7.44	0.634	-10	0.55	25.8	-143	
1210	4.77	-	7.43	0.621	-10	0.45	25.8	-150	
1215	4.77	-	7.43	0.620	-10	0.44	25.9	-154	
1220	4.77	-	7.43	0.620	-10	0.43	25.9	-157	
1225	4.77	-	7.42	0.621	-10	0.41	25.9	-159	
1230	4.77	-	7.42	0.620	-10	0.41	26.0	-160	
1235	4.77	-	7.42	0.620	-10	0.41	26.0	-160	
1240	4.77	-	7.41	0.624	-9.1	0.39	26.0	-160	
1245	4.70	-	7.41	0.622	-9.1	0.43	26.1	-159	
END PURGE									

Page___ of ___

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

Project Site Name:
Project No.:

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

Sample ID No.: 358-GW-MW01-001
Sample Location: 358-MW01
Sampled By: AP
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 6/14/00 Time: 1248	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	~~Other~~ ORP
Method: Low Flow Peristaltic	Clear	7.41	0.622	26.1	-9.1	0.43	—	-159

PURGE DATA

Date: 6/14/00	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								
Static Water Level (WL): 4.75								
One Casing Volume (gal/L): 4.8								
Start Purge (hrs): 1155								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES

14.9
~~15.00~~
4.75
10.25

Circle If Applicable:

Signature(s):

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NS MAYPORT Bldg 358
PROJECT NUMBER: N0506

WELL ID.: 358-MW02
DATE: 6/14/00

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	Cond. (mS/~~cm~~ m)	Turb. (NTU)	DO (mg/L)	Temp. (Celsius)	ORP (mV)	Comments
1200	4.47	—	—	—	—	—	—	—	
1205	—	—	7.1	64	27	1.7	26.3	-160	
1210	—	—	7.2	63	18	0.7	26.2	-156	
1215	—	—	7.2	62	7	0.5	26.4	-163	
1220	—	—	7.2	62	-10	0.6	26.5	-165	
1225	—	—	7.2	62	-10	0.5	26.6	-169	
1230	—	—	7.2	62	-5	0.5	26.6	-171	
1235	—	—	7.2	62	-5	0.5	26.5	-173	
1240	—	—	7.3	62	-3	0.5	26.6	-176	
1245	—	—	7.3	62	-3	0.5	26.6	-183	
1250	—	—	7.4	61	-3	0.4	26.6	-192	
END	PURGE								

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NS MAYPORT
Project No.: N0506

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

Sample ID No.: 358-GW-MW03-001
Sample Location: 358-MW02
Sampled By: AP
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 6/14/00 Time:	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Other ORP
Method: Low Flow Peristaltic		7.4	61	26.6	-3	0.4		-192

PURGE DATA

Date: 6/14/00	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 ft								
Static Water Level (WL): 4.47								
One Casing Volume (gal/L): 4.8								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES

15.80
4.47
10.53

Circle if Applicable:

Signature(s):

Tetra Tech NUS, Inc.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MAYPORT SITE 358
PROJECT NUMBER: N05006

WELL ID.: 358-MW03
DATE: 6/14/00

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
1352	4.25	–	–	–	–	–	–	–	
1357	4.28	–	7.63	0.834	15.4	1.08	26.3	-191	clear
1405	4.28	–	7.53	0.800	31.3	0.65	26.3	-195	clear
1410	4.28	–	7.49	0.781	14.3	0.71	26.3	-196	clear
1415	4.28	–	7.48	0.776	10.2	0.57	26.8	-194	clear
1420	4.28	–	7.47	0.779	8.8	0.57	26.8	-195	clear
1425	4.28	–	7.46	0.776	6.4	0.56	26.6	-197	clear
1430	4.28	–	7.46	0.773	1.9	0.57	26.7	-196	clear
1435	4.28	–	7.46	0.772	2.0	0.81	26.7	-196	clear
1440	4.28	–	7.46	0.772	2.2	0.61	26.5	-197	clear
1445	4.28	–	7.46	0.772	2.0	0.60	26.5	-197	clear
END PURGE									

Page___ of ___

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

Project Site Name: MAYPORT
Project No.: ~~N5OG~~ N050QQ

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

Sample ID No.: 358-GW-MW03-001
Sample Location: 358-GW-MW03
Sampled By: AP
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 6/14/00 Time:	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Other
Method: Low Flow Peristaltic								

PURGE DATA

Date: 6/14/00	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								
Static Water Level (WL): 4.25								
One Casing Volume(gal/L): 1.8								
Start Purge (hrs): 1352								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES

15.00
4.25
10.75

Circle if Applicable:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: MAYPORT
Project No.: N50 N0506
Location: Bldg 358
Personnel: AP/ER/GB
Weather Conditions:
Measuring Device:
Tidally Influenced: Yes ___ No ___
Remarks:

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
358-MW1	6/14/00	1146	8.82	15ft	4.75		4.07	
358-MW2		1148	~~7~~ 8.53	15ft	4.47		4.06	
358-MW3		1150	8.30	15ft	4.25		4.05	

* All measurements to the nearest 0.01 foot

Page ___ of ___

APPENDIX H

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 009
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGJ103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 358-GW-MW01-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	1.5	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 009
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGJ103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 358-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 009
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGJ103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 358-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 010
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGL103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 358-GW-MW02-001

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 010
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGL103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 358-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	0.044	J B
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 010
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQGL103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 358-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 011
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQH0103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 358-GW-MW03-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
67-64-1	Acetone	1.5	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 011
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQH0103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 358-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	0.055	J B
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 011
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQH0103 Date Extracted:06/19/00
Dilution factor: 1 Date Analyzed: 06/19/00
Moisture %:

QC Batch: 0171170

Client Sample Id: 358-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 012
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQH5103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 358-GW-DUP1-001

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	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 012
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQH5103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 358-GW-DUP1-001

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 012
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQH5103 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: 358-GW-DUP1-001

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) WQ Lab Sample ID:A0F150214 013
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQH6101 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: TRIP BLANK

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	1.0	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) WQ Lab Sample ID:A0F150214 013
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQH6101 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: TRIP BLANK

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	0.18	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) WQ Lab Sample ID:A0F150214 013
Method: SW846 8260B
Volatile Organics, GC/MS (8260B)

Sample WT/Vol: 5 / mL Date Received: 06/15/00
Work Order: DEQH6101 Date Extracted:06/20/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0173099

Client Sample Id: TRIP BLANK

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 009
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGJ104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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	2.3	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 009
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGJ104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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 009
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGJ104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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 009
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGJ104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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

FORM I

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 009
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGJ104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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 010
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGL104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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	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 010
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGL104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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 010
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGL104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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 010
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGL104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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	2.1	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 010
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGL104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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 011
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH0104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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 011
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH0104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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 011
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH0104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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 011
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH0104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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	1.3	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 011
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH0104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 07/04/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-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 012
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH5104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-GW-DUP1-001

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 012
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH5104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-GW-DUP1-001

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 012
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH5104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-GW-DUP1-001

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

TETRA TECH NUS, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:MP012

Matrix: (soil/water) WG Lab Sample ID:A0F150214 012
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH5104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-GW-DUP1-001

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 012
Method: SW846 8270C
Base/Neutrals and Acids (8270C)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH5104 Date Extracted:06/15/00
Dilution factor: 1 Date Analyzed: 06/30/00
Moisture %:

QC Batch: 0167410

Client Sample Id: 358-GW-DUP1-001

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 009
Method: SW846 8310
Hydrocarbons, Polynuclear Aromatic (HPLC - 8310)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGJ105 Date Extracted:06/16/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:

QC Batch: 0167453

Client Sample Id: 358-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	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 010
Method: SW846 8310
Hydrocarbons, Polynuclear Aromatic (HPLC - 8310)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQGL106 Date Extracted:06/16/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:
QC Batch: 0167453

Client Sample Id: 358-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 011
Method: SW846 8310
Hydrocarbons, Polynuclear Aromatic (HPLC - 8310)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH0105 Date Extracted:06/16/00
Dilution factor: 1 Date Analyzed: 06/20/00
Moisture %:
QC Batch: 0167453

Client Sample Id: 358-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 012
Method: SW846 8310
Hydrocarbons, Polynuclear Aromatic (HPLC - 8310)

Sample WT/Vol: 1000 / mL Date Received: 06/15/00
Work Order: DEQH5105 Date Extracted:06/16/00
Dilution factor: 1 Date Analyzed: 06/21/00
Moisture %:
QC Batch: 0167453

Client Sample Id: 358-GW-DUP1-001

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
Method: RSK SOP-175
Dissolved Gases in Water

Lab Sample ID:A0F150214 010

mg/L

Sample WT/Vol: 40 / mL
Work Order: DEQGL105
Dilution factor: 1
Moisture %:

Date Received: 06/15/00
Date Extracted:06/27/00
Date Analyzed: 06/27/00

QC Batch: 0182470

Client Sample Id: 358-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
74-82-8	Methane	18	B

TETRA TECH NUS, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: MP012

Matrix: (soil/water) WG
Method: RSK SOP-175
Dissolved Gases in Water

Lab Sample ID: A0F150214 010

mg/L

Sample WT/Vol: 40 / mL
Work Order: DEQGL105
Dilution factor: 1
Moisture %:

Date Received: 06/15/00
Date Extracted: 06/27/00
Date Analyzed: 06/27/00

QC Batch: 0182470

Client Sample Id: 358-GW-MW02-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
74-82-8	Methane	18	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

Committed To Your Success

LOG NO: C0-06484
Received: 17 JUN 00
Reported: 26 JUN 00

Ms. DENISE POHL
STL Ohio
4101 Shuffel Drive
North Canton, OH 44720

Client PO. No.: SR023952

Project: A0F160173-NS MAYPORT
Sampled By: Client
Code: 162100626

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06484-1	436-GW-MW01-001	06-15-00
06484-2	436-GW-MW02-001	06-15-00
06484-3	436-GW-MW03-001	06-15-00
06484-4	436-GW-DUP2-001	06-15-00

PARAMETER	06484-1	06484-2	06484-3	06484-4
Petroleum Hydrocarbons (FL-PRO)				
Petroleum Range Organics (FL-PRO), ug/l	<100	<100	<100	<100
Surrogate - o-Terphenyl	88 %	79 %	70 %	72 %
Surrogate - Nonatriacontane (C39)	62 %	55 %	53 %	52 %
Analyst	KA	KA	KA	KA
Prep Date	06.20.00	06.20.00	06.20.00	06.20.00
Analysis Date	06.20.00	06.20.00	06.20.00	06.20.00
Batch ID	FLW088	FLW088	FLW088	FLW088
Prep Method	3510	3510	3510	3510
Dilution Factor	1	1	1	1

STL North Canton

Metals Data Reporting Form

Sample Results

Lab Sample ID: DEQGJ **Client ID:** 358-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	18:34

Comments: Lot #: A0F150214 Sample #: 9

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: DEQGL **Client ID:** 358-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	18:39

Comments: Lot #: A0F150214 Sample #: 10

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: DEQH0 **Client ID:** 358-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	18:44

Comments: Lot #: A0F150214 Sample #: 11

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: DEQH5 **Client ID:** 358-GW-DUP1-001

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	5.9		1	ICPST	6/28/00	18:49

Comments: Lot #: A0F150214 Sample #: 12

Version 3.63.6 Beta

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

Form 1 Equivalent

TETRA TECH NUS, INC.

Client Sample ID: 358-GW-MW02-001

General Chemistry

Lot-Sample #...: A0F150214-010 **Work Order #...:** DEQGL **Matrix.....:** WG
Date Sampled...: 06/14/00 13:00 **Date Received..:** 06/15/00

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate	ND	0.1	mg/L	MCAWW 353.2	06/16/00	0171378
		Dilution Factor: 1				
Nitrite	ND	0.1	mg/L	MCAWW 353.2	06/16/00	0171377
		Dilution Factor: 1				
Sulfate	**43**	**10**	**mg/L**	**MCAWW 375.4**	**06/29/00**	**0181373**
		Dilution Factor: 2				
Total Sulfide	ND	1.0	mg/L	MCAWW 376.1	06/19-06/20/00	0171417
		Dilution Factor: 1				

APPENDIX I

U.S. GEOLOGICAL 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

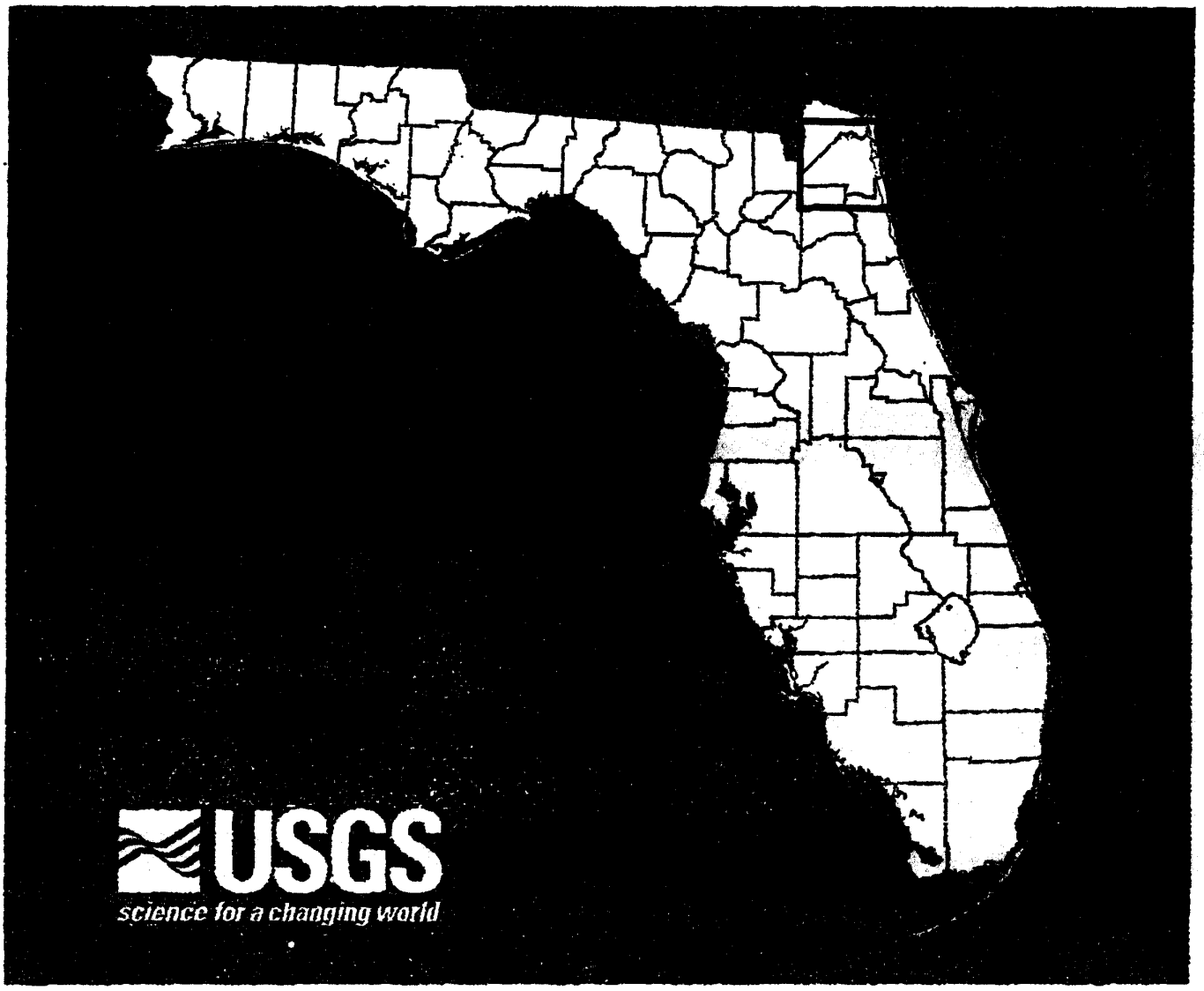

Figure 12. Active model grid.

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	5:00	--	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	1.1	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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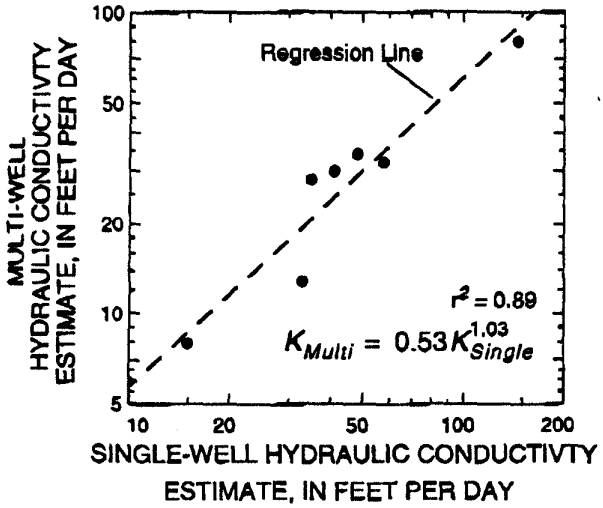

Figure 13. Relation between lateral hydraulic conductivity values estimated by single-well tests and multi-well tests.

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).

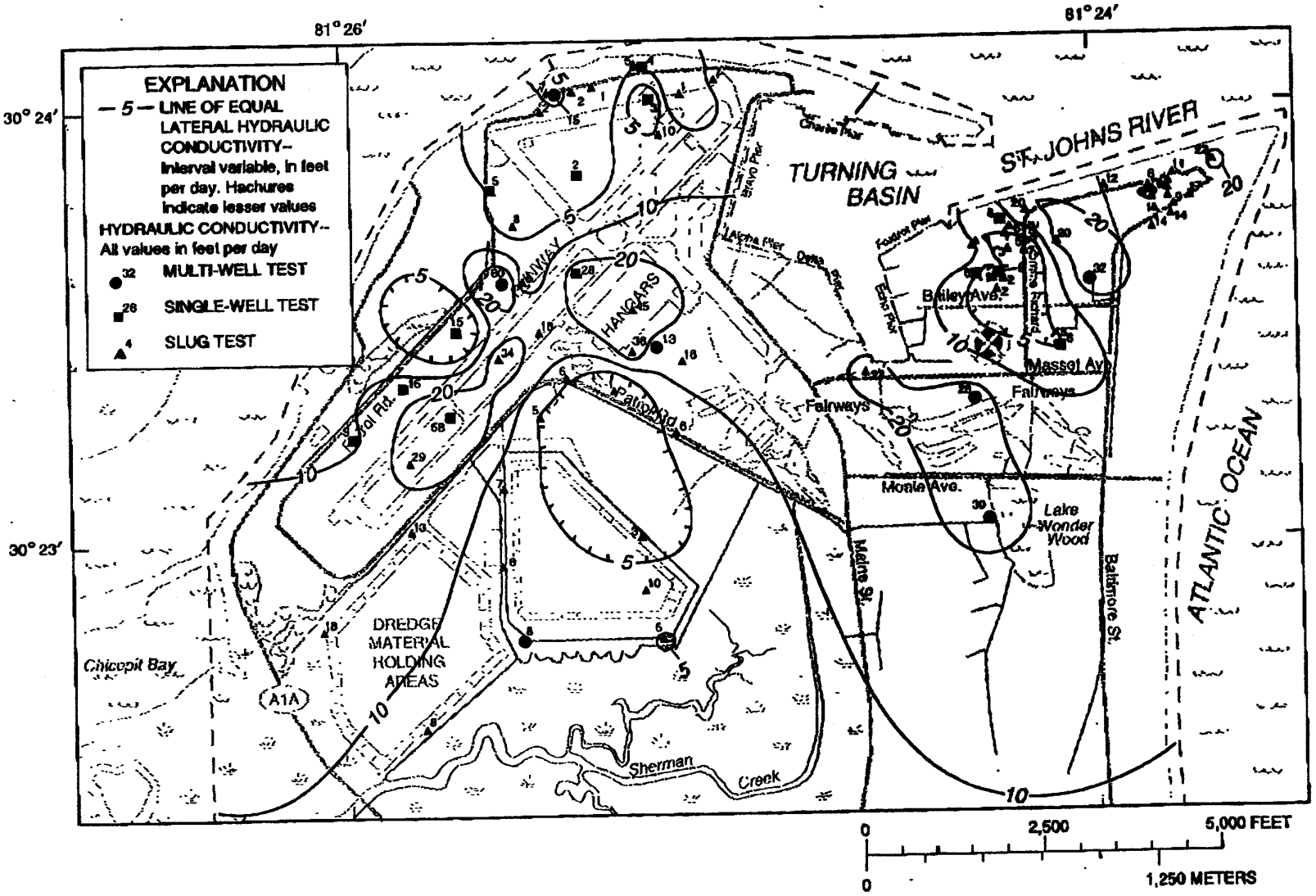

Figure 15. Lateral hydraulic conductivity of the S-zone (layer 1).

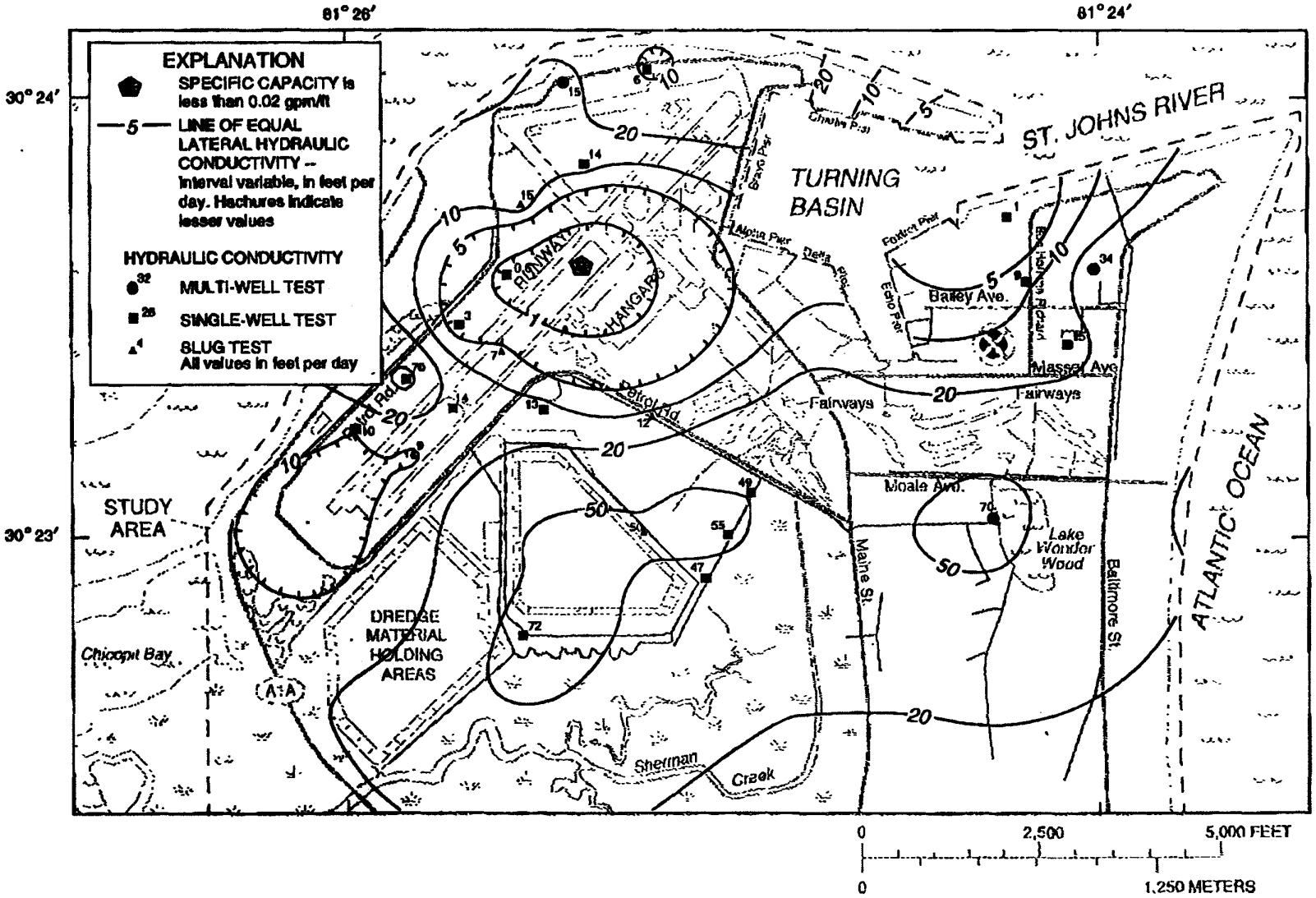

Figure 16. Lateral hydraulic conductivity of the I-zone (layer 2).

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

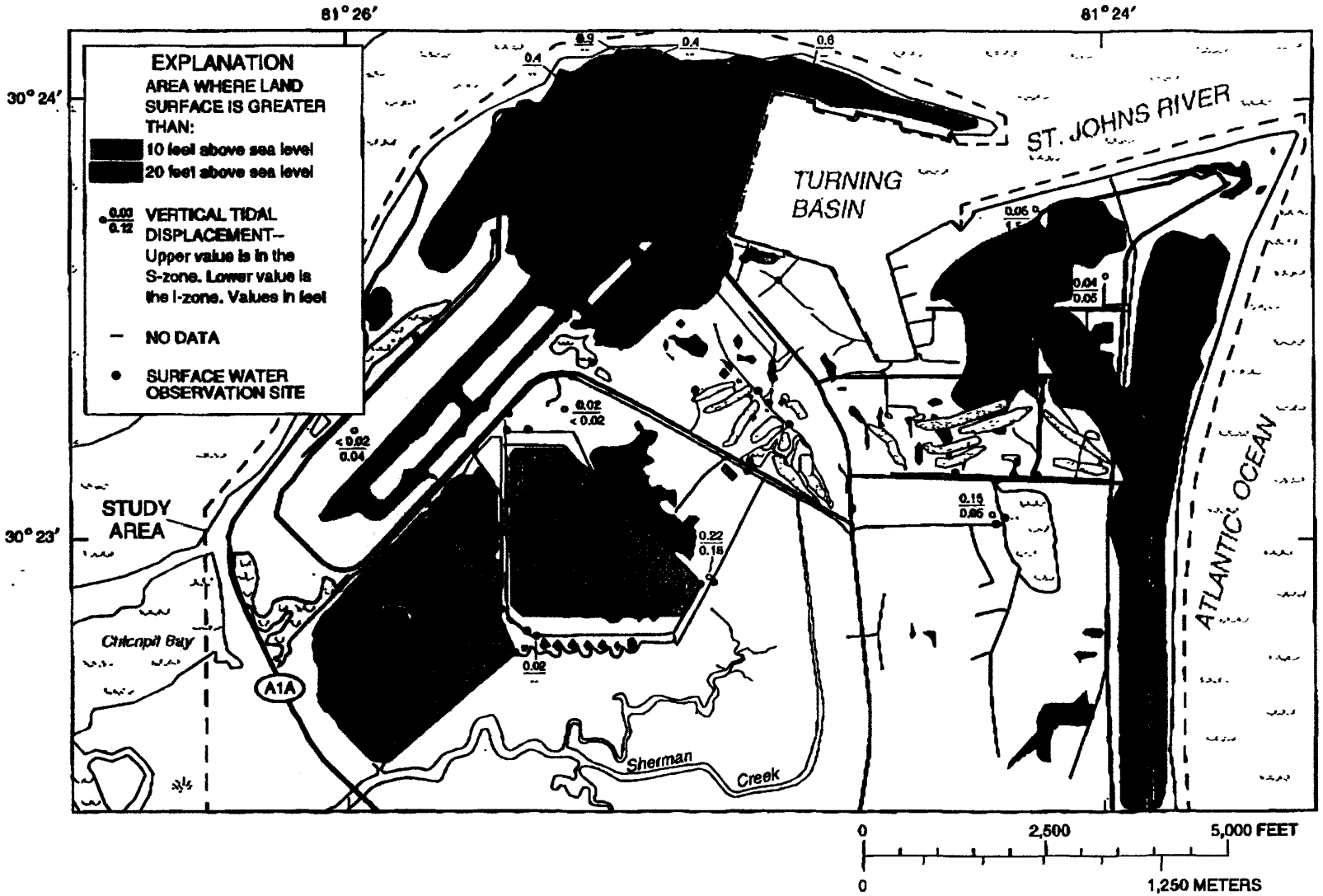

Figure 17. Generalized land surface altitudes in the study area, surface-water observation sites, and vertical tidal displacement measurement sites.

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:

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

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.

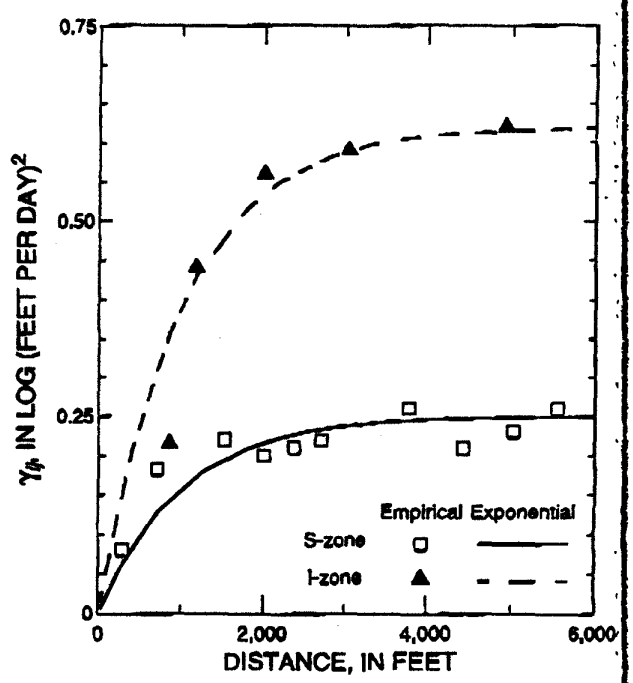

Figure 14. Empirical and exponential variograms of log hydraulic conductivity in the S-zone (layer 1) and the I-zone (layer 2).

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.

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

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;
$(P - Q_S)$ 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