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TIER I ASSESSMENT FOR CHARLESTON NAVAL COMPLEX 2231 SOUTH HOBSON AVENUE BUILDING 202 CNC CHARLESTON SC

12/01/2003

ENVIRO-LOGICAL SOLUTIONS, INC

TIER I ASSESSMENT

CHARLESTON NAVAL COMPLEX
2231 SOUTH HOBSON AVENUE
BUILDING 202
CHARLESTON, SOUTH CAROLINA
SITE ID NO. 02228

Submitted to:

Groundwater Quality Section Bureau of Water
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Prepared By:

ENVIRO-LOGICAL SOLUTIONS, INC.
13135 North Dale Mabry
Tampa, Florida 33618
(813) 963-0811

DECEMBER 2003

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RECEIVED
DEC 23 2003
Water Monitoring, Assessment & Protection Division

STATEMENT OF DOCUMENT PREPARATION AND REVIEW

This Report has been prepared under the supervision of a registered South Carolina Professional Geologist, and is consistent with geological principles related to groundwater and soil assessments.

Prepared by:

Stephanie Hertz

Stephanie M. Hertz
Project Geologist

12/22/03

Date

Reviewed by:

Joseph M. Fuhr, P.G.
Licensed Geologist No. 2341

12/22/03

Date

TIER I ASSESSMENT REPORT OF FINDINGS

I. INTRODUCTION

A. Property Owner Information

Charleston Naval Complex
(Co-Owner: Redevelopment Authority)
1360 Truxtan Avenue
N. Charleston, SC 29405

B. UST Owner Information

Naval Facilities Engineering Command, Southern Division
P.O. Box 190010
North Charleston, SC 29419-9010
(843) 820-7307
UST Permit # 02228

C. Contractor Information

Enviro-Logical Solutions, Inc.
13135 North Dale Mabry
Tampa, Florida 33618
(813) 963-0811

D. Facility Information

Charleston Naval Complex Building 202
2231 South Hobson Avenue
Charleston, South Carolina

Description of Adjacent Land Use: The facility is part of the Charleston Naval Complex, which was closed in 1996. Plans for the reuse of the Naval Complex include public recreation and leasing or selling the existing buildings to private businesses, government agencies and non-profit groups. The area surrounding Building 202 is currently a marine repair shop, NOAA Coastal Services and a U.S. Border Patrol Training Facility.

UST Facilities Identified within 1,000 ft. radius of the site: None

Predicted Future Land Use: Same as current.

E. Facility History

Date Release Reported to SCDHEC: The report date of the release is unknown. ADVENT Environmental, Inc. (AE) removed one 5,000-gallon UST on July 30, 2002.

Estimated Quantity of Product Released: The estimated quantity of the release is unknown.

Cause of Release: The cause of the release is unknown.

UST #	Product	Date Installed	Currently in use (Yes or No)	Date Removed
1	5,000-gallon Diesel	~1982	No	7/30/2002

Other Releases at this site? No
If yes, Date Release Reported to SCDHEC: N/A
Status of Release: N/A
No Further Action Date: N/A

II. SITE CHARACTERISTICS

A. Site Geography

The Charleston Naval Complex is located on the west bank of the Cooper River approximately five miles north of Charleston. The facility and surrounding area is generally flat. The site is located in the courtyard of Building 202, which is covered with grass. The property and surrounding area are not heavily vegetated. The elevation of the site is approximately 6 feet National Geodetic Vertical Datum (N.G.V.D.).

B. Exposure Analysis

No potential receptors, other than the utilities discussed in the following section, were identified within a 1,000 foot radius of the site.

C. Utilities Survey

Subsurface utilities identified within 250 feet of the source area consist of the following:

- A buried sewer line is located approximately five feet northeast of the former UST. The sewer line runs from the northwest to the southeast.
- Buried electrical and water lines from the air conditioning (A/C) unit, located in the on the western portion of the courtyard, run from the A/C unit to the northeast corner of the courtyard.
- Underground piping from an aboveground diesel tank, located near the center of the courtyard, run to the northeast corner of the courtyard.

The identified utilities could serve as exposure points or as preferential pathways, however they are most likely located slightly above the water table.

D. Site Geology

Regional Geology:

The Coastal Plain province is a broad, almost level plain underlain by unconsolidated to partly consolidated sedimentary rocks that gently dip seaward. The intrusive work

conducted as part of this assessment focuses only on the late-Tertiary to Recent deposits. Underlying the study area is an artesian aquifer composed of a series of limestones of upper Eocene age. This regional aquifer system stretches from South Carolina to southeastern Georgia, to Florida, and into adjacent parts of Alabama. It is variously called the Ocala, the principal artesian aquifer, and the Floridan Aquifer. This regional aquifer system is most commonly referred to as the Floridan Aquifer. In South Carolina, the Floridan Aquifer is composed of Ocala Limestone that is divided into a lower, a middle, and an upper unit on the basis of geophysical logs, lithologic logs, and hydraulic properties. The upper unit of the Ocala Limestone equates to the upper Floridan Aquifer and occurs at roughly 10 meters below land surface throughout the study area. The upper Floridan Aquifer is lithologically a white to light gray, calcitized, abundantly fossilferous, indurated limestone. The upper Floridan Aquifer is a major groundwater resource all along the Atlantic Coastal Plain. It is capable of yielding large quantities of good quality water.

Within the study area the Hawthorn Formation, where present, overlies the upper Floridan Aquifer. Miocene in age, the Hawthorn Formation consists of phosphatic, clayey sand to sandy clay. Where it is present it functions as a semi-confining bed.

Pleistocene to Holocene sediments overlie the Ocala Limestone, or Hawthorn Formation where present, and give rise to a thin surficial unconfined aquifer supported by local precipitation. The water table typically occurs within 2 to 3 meters of land surface. Clays and organic materials leached from the surface in mostly poorer drained areas have resulted in discontinuous, but distinct, clay beds less than 1 meter below land surface. The better drained have a thicker leached horizon with translocated organic matter and iron sometime fairly deep in the profile. [Source: Shafer, J.M., J.M. Rine, M.G. Waddell and R. C. Berg, 3D Hydrogeologic Characterization of the Marine Corps Air Station at Beaufort, South Carolina for Aquifer Vulnerability Analysis and Groundwater Flow and Transport Modeling].

Work completed as part of this assessment was limited to the Pleistocene to Holocene sediments. The shallow geology consisted of fine tan to brown sand with varying amounts of gravel and shell material and minor amounts of clay. Depth-to-water was approximately 5.5 feet below land surface.

E. Soil Boring Data

Drilling Date: September 3, 2003

Soil boring SB-1 was advanced southwest of the former UST to collect a representative background sample for total organic carbon analysis.

SB-2 was advanced to the west of the former UST area to collect a cross gradient sample.

Soil borings SB-3 and SB-4 were advanced in the former UST area.

Soil borings SB-5 through SB-9 were advanced along the former piping.

Standard Operating Procedures for Field Screening:

Soil samples collected by Force and Associates, Inc. were transferred into ELS custody for field screening and selection of samples for laboratory analysis. Headspace within sample containers was screened by ELS using a Foxboro Model 128 Organic Vapor Analyzer (OVA) equipped with a flame ionization detector. Samples were screened with and without carbon filter tips on the OVA, and adjustments subsequently made for methane concentrations.

UST Area Borings –

Borehole SB-3 **Sampling Date-9/3/03** **Sample Depth-4.0 feet**

Sample Interval (ft.)	OVA Results	Lithology	Soil Conditions
2	<1	Fine sand, tan to light brown, fill	Dry, No Odor
4	<5	Fine sand, dark brown, ~2-inch angular gravel throughout	Dry, No Odor
6	<1	Fine sand, dark brown to black, ~2-inch angular gravel throughout	Wet @ 5.5 ft, No Odor

Borehole SB-4 **Sampling Date-9/3/03** **Sample Depth-2.0 feet**

Sample Interval (ft.)	OVA Results	Lithology	Soil Conditions
2	<1	Fine sand, tan to light brown	Dry, No Odor
4	<1	Fine sand, dark brown, ~2-inch angular gravel throughout	Dry, No Odor
6	<5	Fine sand, dark brown, ~2-inch angular gravel throughout	Wet @ 5.5 ft, No Odor

Piping and Dispenser Area Borings

Borehole SB-5 **Sampling Date-7/29/03** **Sample Depth-2.0 feet**

Sample Interval (ft.)	OVA Results	Lithology	Soil Conditions
2	<1	Medium to fine sand, tan to brown with gravel	Dry, No Odor
4	<1	Medium to fine sand, tan to brown with shell	Dry, No Odor
6	<1	Clayey sand, med. Brown to dark brown	Wet @ 5.5 ft, No Odor

Borehole SB-6 **Sampling Date-9/3/03** **Sample Depth-4.0 feet**

Sample Interval (ft.)	OVA Results	Lithology	Soil Conditions
2	<1	Medium to fine sand, tan to light brown, minor clay	Dry, No Odor
4	<1	Medium to fine sand, tan to light brown, minor clay	Dry, No Odor
6	<1	Medium to fine sand, tan to light brown, minor clay	Wet @ 5.5 ft, No Odor

Borehole SB-7 **Sampling Date-9/3/03** **Sample Depth-4.0 feet**

Sample Interval (ft.)	OVA Results	Lithology	Soil Conditions
2	<1	Fine sand, brown, minor gravel	Dry, No Odor
4	<1	Fine sand, brown, minor gravel	Dry, No Odor
6	<1	Fine sand, brown, minor gravel	Wet @ 5.5 ft, No Odor

Borehole SB-8 **Sampling Date-9/3/03** **Sample Depth-4.0 feet**

Sample Interval (ft.)	OVA Results	Lithology	Soil Conditions
2	<1	Fine sand, dark brown, minor gravel	Dry, No Odor
4	<1	Fine sand, dark brown, minor gravel	Dry, No Odor
6	<1	Fine sand, dark brown, minor gravel	Wet @ 5.5 ft, No Odor

Borehole SB-9 **Sampling Date-9/3/03** **Sample Depth-4.0 feet**

Sample Interval (ft.)	OVA Results	Lithology	Soil Conditions
2	<1	Clayey sand, brown	Dry, No Odor
4	<1	Clayey sand, brown	Dry, No Odor
6	<1	Clayey sand, brown	Wet @ 5.5 ft, No Odor

Background Boring

Borehole SB-1 **Sampling Date-9/3/03** **Sample Depth-4.0 feet**

Sample Interval (ft.)	OVA Results	Lithology	Soil Conditions
2	<1	Fine sand, brown, ~10% clay, trace shell material	Dry, No Odor
4	<1	Fine sand, brown, ~10% clay, trace shell material	Dry, No Odor
5	<1	Fine sand, ~15-20% silt	Wet @ 5.5 ft, No Odor

Cross Gradient Boring

Borehole SB-2 **Sampling Date-9/3/03** **Sample Depth-4.0 feet**

Sample Interval (ft.)	OVA Results	Lithology	Soil Conditions
2	<1	Fine sand, brown, ~10% clay, trace shell material	Dry, No Odor
4	<1	Fine sand, brown, ~10% clay, trace shell material	Dry, No Odor
6	<1	Clay and sand, ~20% clay and silt	Wet @ 5.5 ft, No Odor

COC (mg/kg)	RBSL	SB-1 4'	SB-2 4'	SB-3 4'	SB-4 2'	SB-5 2'	SB-6 4'	SB-7 4'	SB-8 4'	SB-9 4'
Benzene	0.007		0.0021	<0.0017	<0.0022	0.0031	0.0033	0.0041	0.0022	0.0023
Toluene	1.450		<0.0017	<0.0017	<0.0022	0.0052	0.0069	0.0052	0.0039	<0.0023
Ethylbenzene	1.150		<0.0017	<0.0017	<0.0022	0.0063	0.0108	0.0056	0.0046	<0.0023
Xylenes	14.500		<0.0017	<0.0017	<0.0022	<0.0021	<0.00J1	<0.0019	<0.00J	<0.0023
Total BTEX	N/A		0.0021	BDL	BDL	0.0146	0.021	0.0149	0.0107	0.0023
Naphthalene (8260B)	0.036		<0.00437	<0.00424	<0.00558	<0.0052	<0.00515	<0.00466	<0.00492	<0.00566
Naphthalene (8270C)	0.036		<0.066	<0.066	<0.066	<0.066	<0.066	<0.132	<0.066	<0.066
Benzo(a)anthracene	0.066		<0.066	<0.066	<0.066	<0.066	<0.066	<0.132	<0.066	<0.066
Benzo(b)fluoranthene	0.066		<0.066	<0.066	<0.066	<0.066	<0.066	<0.132	<0.066	<0.066
Benzo(k)fluoranthene	0.066		<0.066	<0.066	<0.066	<0.066	<0.066	<0.132	<0.066	<0.066
Chrysene	0.066		<0.066	<0.066	<0.066	<0.066	<0.066	<0.132	<0.066	<0.066
Dibenzo(a,h)anthracene	0.066		<0.066	<0.066	<0.066	<0.066	<0.066	<0.132	<0.066	<0.066
TPH (EPA 3550) (Diesel Range)	NA					<10				
TOC (Background boring)	NA	7620								

Results of the sieve analysis of SB-5 @4 ft. bls indicated the soil to be composed of 67.3% sand, 23.2% silt and 9.5% clay. The RBSLs shown are standard values for sandy soil as referenced in the

South Carolina Risk-Based Corrective Action for Petroleum Releases document dated May 15, 2001.

No COCs were detected above RBSL's. A review of the analytical laboratory report indicates some of the reporting limits are slightly greater than the RBSLs for some of the COCs. With the exception of the soil sample collected from SB-7, the reporting limits are non-diluted levels and are therefore the best attainable reporting limits. It is noted that although the assessment was performed around a former diesel fuel tank, the COC's reported in soil samples were BTEX analytes. No PAH COC's were detected at laboratory detection limits that would typically be associated with a diesel fuel release.

F. Chemicals of Concern - Ground Water

MW #	INSTALLATION DATE	DEVELOPMENT DATE	SAMPLING DATE
1	9/3/03	9/3/03	9/4/03
2	9/3/03	9/3/03	9/4/03
3	9/3/03	9/3/03	9/4/03

COC (mg/kg)	MW-1 (SB-1)	MW-2 (SB-2)	MW-3 (SB-5)
Depth of sample	4	4	2
Benzene	NA	0.0021	0.0031
Toluene	NA	<0.0017	0.0052
Ethylbenzene	NA	<0.0017	0.0063
Xylene	NA	<0.0017	<0.0021
Total BTEX	NA	0.0021	0.0146
Naphthalene (8260B)	NA	<0.00437	<0.0052
Naphthalene (8270C)	NA	<0.066	<0.066
Benzo(a)anthracene	NA	<0.066	<0.066
Benzo(b)fluoranthene	NA	<0.066	<0.066
Benzo(k)fluoranthene	NA	<0.066	<0.066
Chrysene	NA	<0.066	<0.066
Dibenzo(a,h)anthracene	NA	<0.066	<0.066
TPH (DRO)	NA	NA	<10
TOC	7620	NA	NA

MW #	RELATIVE TOC ELEVATION (FT)	SCREENED INTERVAL (FT)	DEPTH TO WATER (FT)	RELATIVE WATER TABLE ELEVATION (FT)
1	4.66	2 to 12	5.41	-0.75
2	4.63	2 to 12	5.56	-0.93
3	5.04	2 to 12	5.87	-0.83

Note: Relative water table elevations are negative, indicating elevations are below NGVD. Tops of casing were professionally surveyed according to an established benchmark located just northeast of the site.

MONITORING WELL #	MW-1	MW-2	MW-3
Temperature (°C)	24.3	24.0	22.5
pH (s.u.)	7.2	7.22	6.83
Conductivity (umhos/cm)	367	1,393	1,541
Dissolved Oxygen (mg/l)	0.05	2.37	0.09

CoC (µg/l)	RBSL (µg/l)	MW-1	MW-2	MW-3
Free Product Thickness	None	None	None	None
Benzene	5	<1.0	<1.0	<1.0
Toluene	1,000	<1.0	<1.0	<1.0
Ethylbenzene	700	<1.0	<1.0	<1.0
Xylene	10,000	<1.0	<1.0	<1.0
Total BTEX	N/A	BDL	BDL	BDL
MTBE	40	<1.0	<1.0	<1.0
Naphthalene 8260B	25	<5.00	<5.0	<5.0
Naphthalene 8270C	25	<2.0	<2.0	<2.0
Ethylene Dibromide (8011)	0.05	<1.00	<1.00	<1.00
Benzo(a)anthracene	10	<2.0	<2.0	<2.0
Benzo(a)pyrene	5	<2.0	<2.0	<2.0
Benzo(b)fluoranthene	10	<2.0	<2.0	<2.0
Benzo(k)fluoranthene	10	<2.0	<2.0	<2.0
Chrysene	10	<2.0	<2.0	<2.0
Dibenzo(a,h)anthracene	10	<2.0	<2.0	<2.0
Methane	N/A	136.	381.	134.
Carbon Dioxide	N/A	30,800	32,200	33,700
Sulfate (mg/l)	N/A	0.0251	0.376	0.758
Lead	15	<5.0	**34.2**	<5.0
Ferrous Iron (mg/l)	N/A	<100	254.	3,540
Nitrates (mg/l)	N/A	0.00127	<0.000100	<0.000100

Only one COC (lead, MW-2) exceeded RBSL's. MW-2 is a cross-gradient well, and the site investigation was performed around a diesel fuel tank, which would not include lead as a contaminant.

G. Aquifer Characteristics

Hydraulic Conductivity: MW-1: 0.672942 feet/day; MW-3: 0.723979 feet/day; Average: 0.698461 feet/day

Hydraulic Gradient: 0.2 ft/48 ft = 0.004ft/ft

Porosity: 45% (based on Figure C1, South Carolina Risk-based Corrective Action for Petroleum Releases, May 15, 2001)

Estimated Seepage Velocity: 0.006 feet/day or 2.19 feet/year

$V_s = q/n$
$q = K_n i$

q = 0.698461 ft/day x 0.004 ft/ft = 0.003 ft/day

V_s = 0.003 ft/day / 0.45 = 0.006 ft/day = 2.19 ft/yr

Groundwater Flow Direction: Northwest

III. TIER I EVALUATION

A. Current Land Use

The following table identifies any potential receptors or human exposure pathways (e.g. basements, contaminated soils from UST closures, etc.) within a 1000-foot radius for current land use.

Media (for exposure)	Exposure Route	Pathway Selected for Evaluation? (Yes or No)	Exposure point or Reason for Non-Selection	Data Requirements (If pathway selected)
Air	Inhalation	No	COC's Too Low	
	Explosion Hazard	No		
Ground-Water	Ingestion	No	Municipal Water Supply	
	Dermal Contact	No		
	Volatile Inhalation	No		
Surface Water	Ingestion	No	No Surface Water Present On-Site	
	Dermal contact	No		
	Volatile Inhalation	No		
Surficial Soil	Ingestion	No	COC's Too Low	
	Dermal Contact	No		
	Volatile Inhalation	No		
	Leaching to Ground-Water	No		

The RBSLs shown in the table on Page 9 are standard values as referenced in the South Carolina Risk-Based Corrective Action for Petroleum Releases document dated May 15, 2001.

No soil COCs were detected above laboratory reporting limits. The RBSL for Lead in groundwater is 15 µg/L. Lead was detected in the groundwater sample from MW-2 at a concentration of 34.2 µg/L by EPA Method 6010B, however, lead should not be attributable to a diesel fuel release, and lead was not detected in the source well.

Based on results of the most recent assessment work, ELS recommends the site be issued a No

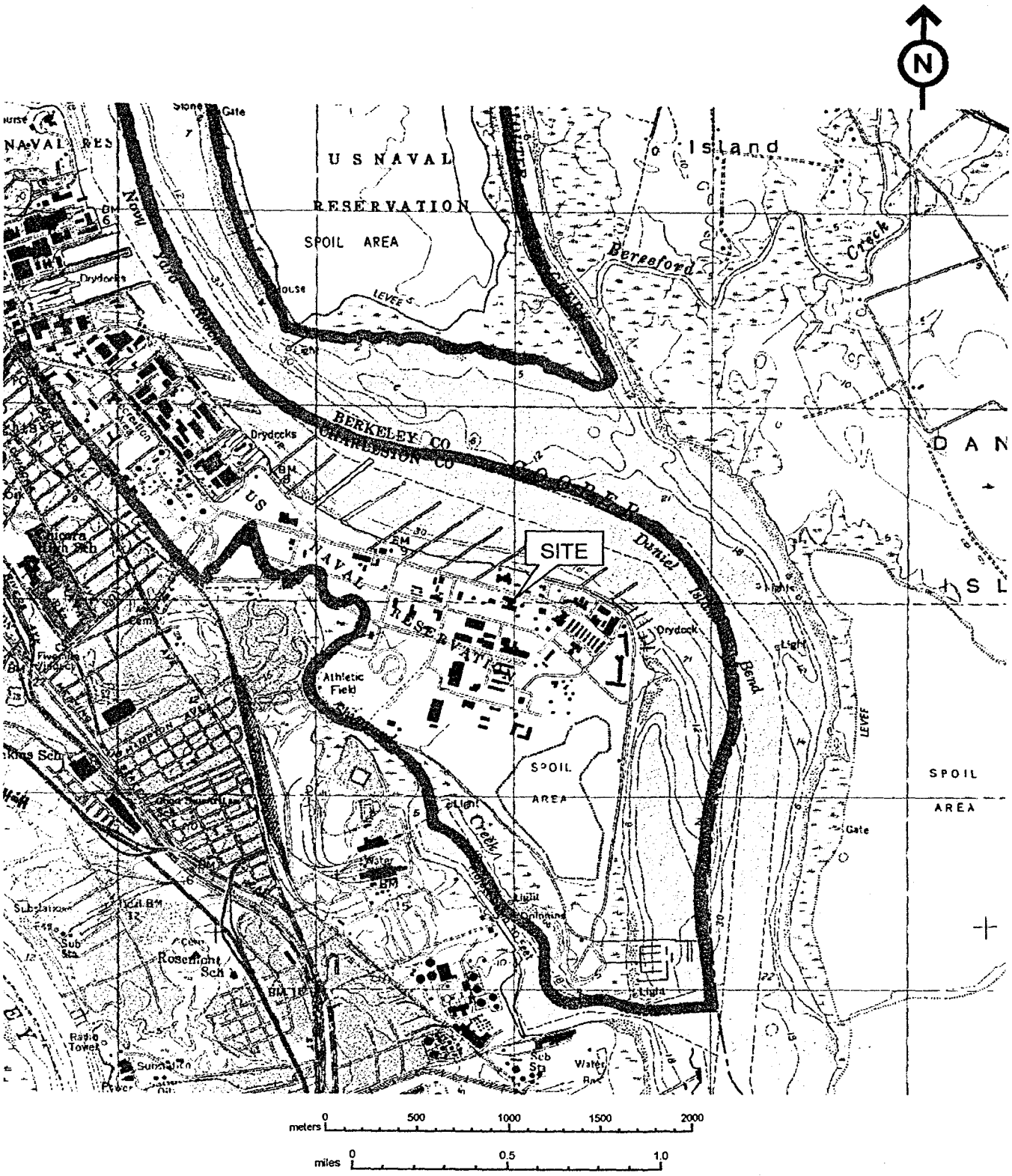
Further Action.

B. Future Land Use

The following table identifies any potential receptors or human exposure pathways (e.g. basements, contaminated soils from UST closures, etc.) within a 1000-foot radius for projected future land use.

Media (for exposure)	Exposure Route	Pathway Selected for Evaluation? (Yes or No)	Exposure point or Reason for Non-Selection	Data Requirements (If pathway selected)
Air	Inhalation	No	COC's Too Low	
	Explosion Hazard	No		
Ground-Water	Ingestion	No	Municipal Water Supply	
	Dermal Contact	No		
	Volatile Inhalation	No		
Surface Water	Ingestion	No	Surface Soil Not Impacted	
	Dermal contact	No		
	Volatile Inhalation	No		
Surficial Soil	Ingestion	No	COC's Too Low	
	Dermal contact	No		
	Volatile Inhalation	No		
	Leaching to Ground-Water	No		
Subsurface Soil	Ingestion	No	Groundwater	
	Dermal contact	No		
	Volatile Inhalation	No		
	Leaching to Ground-Water	No		

FIGURES



Source: United States Department of the Interior Geological Survey
Charleston, SC Quadrangle Map, 1983
Approximate Scale: 1:25,000

DWG DATE: 11/12/03
CAD FILE# M:\CAD\DWGS\PROJECTS\12-776\SITETOPO
DRAFTED BY: SMH
APPROVED BY:
CHECKED BY:
DESIGNED BY:

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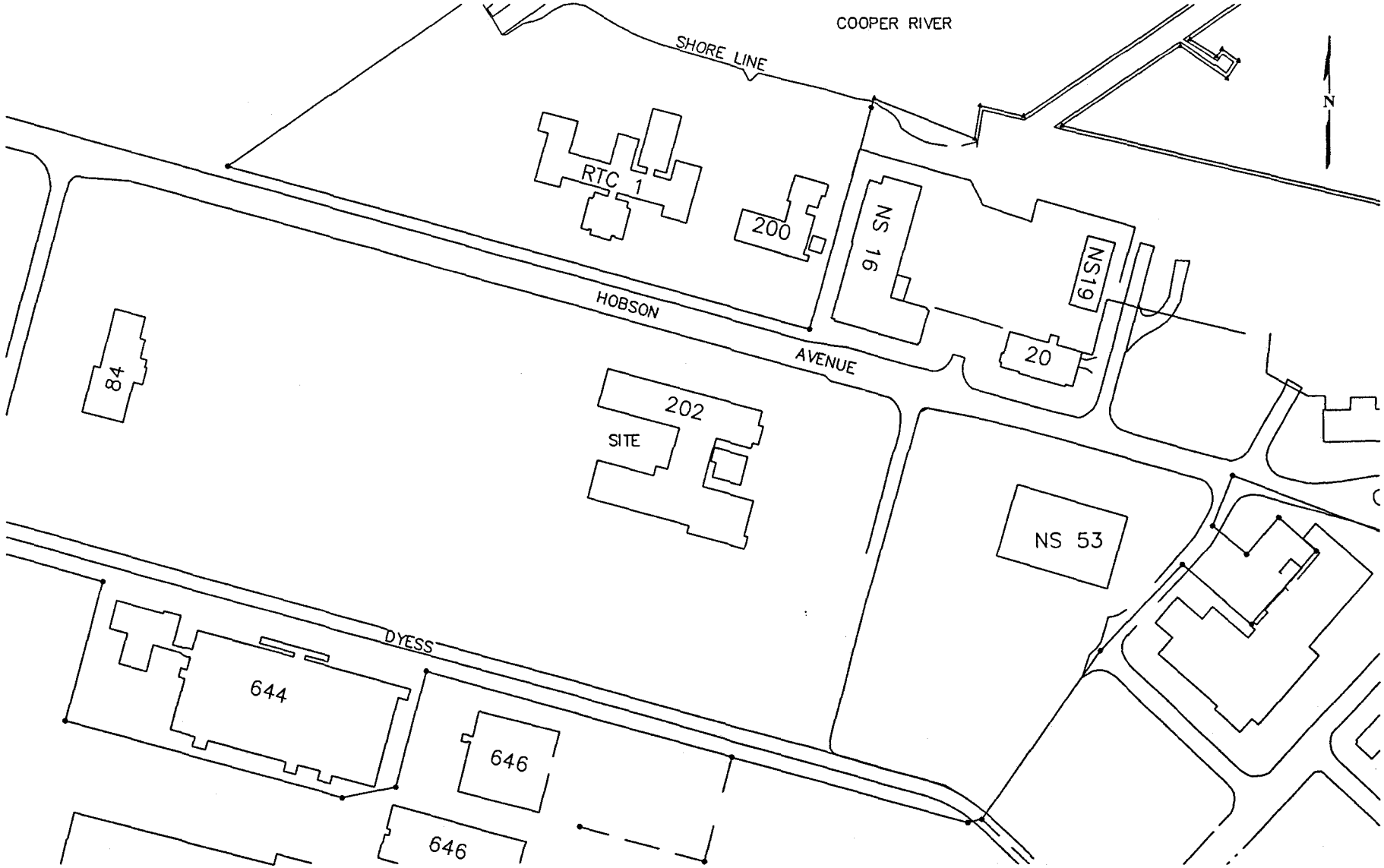
(813) 963-0811

SITE LOCATION
CHARLESTON NAVAL COMPLEX
BUILDING 202
NORTH CHARLESTON, SC
SITE ID #02228

TITLE
FIGURE 1
TOPOGRAPHIC MAP

DESIGNED BY:	CHECKED BY:	APPROVED BY:	DRAFTED BY: LTF	CAD FILE# M:\CAD\DWGS\PROJECTS\12-776\SITE\SITE 4\SITE	DWG DATE: 11/19/03



NOTE: REFER TO SITE MAP LEGEND FOR ADDITIONAL INFORMATION.

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SCALE

1" = 200'

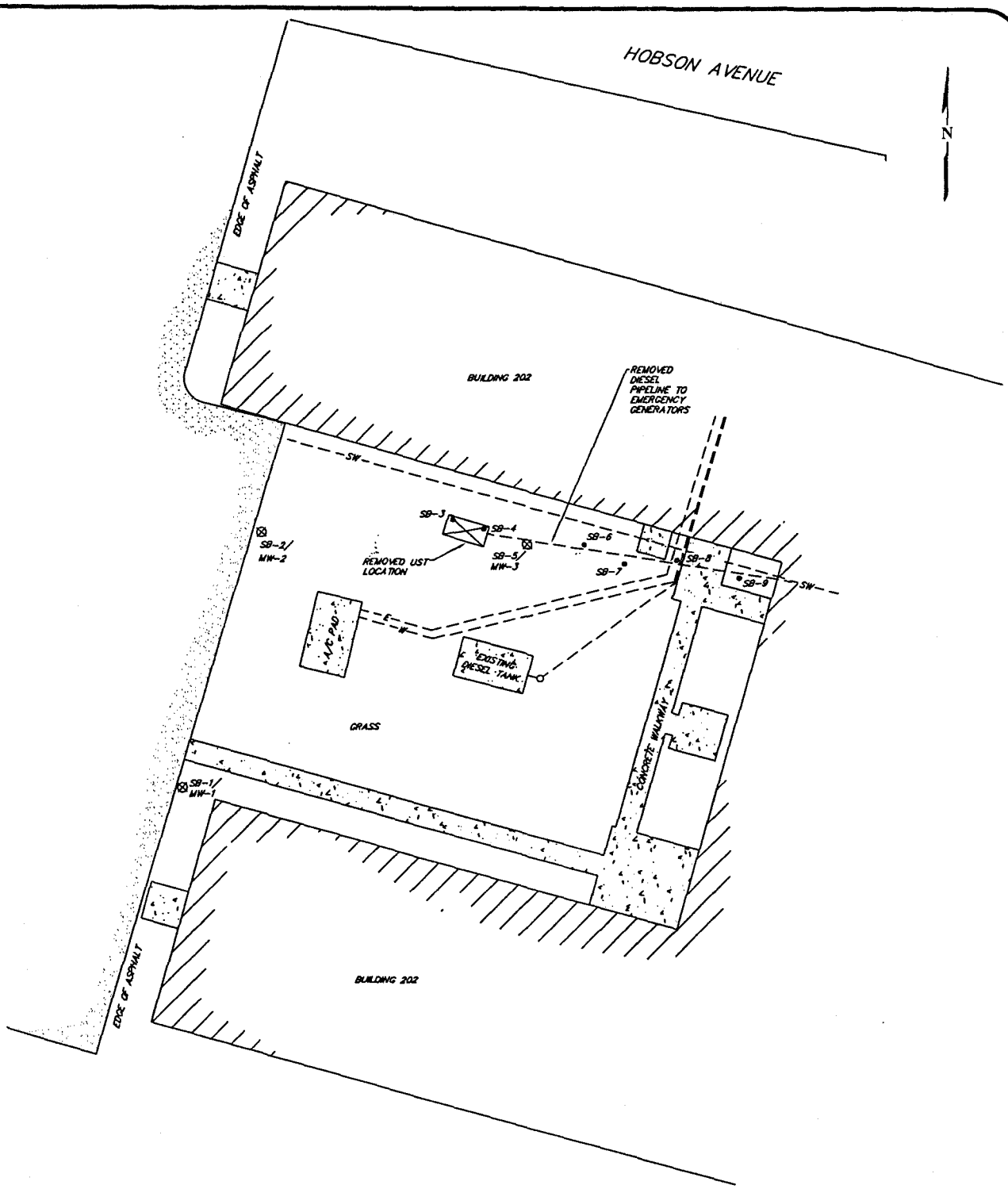
0 50' 100' 150' 200'

SITE LOCATION

CHARLESTON NAVAL COMPLEX
FACILITY 202
NORTH CHARLESTON, SC
SITE ID #02228

TITLE

FIGURE 2
SITE LOCATION MAP



SCALE
1" = 30'
0 10' 20' 30'

NOTE: REFER TO SITE MAP LEGEND FOR ADDITIONAL INFORMATION.

DWG DATE: 11/12/03
CAD FILE# M:\CAD\DWGS\PROJECTS\12-776\SITE\SITE3\SITE
DRAFTED BY: LTF
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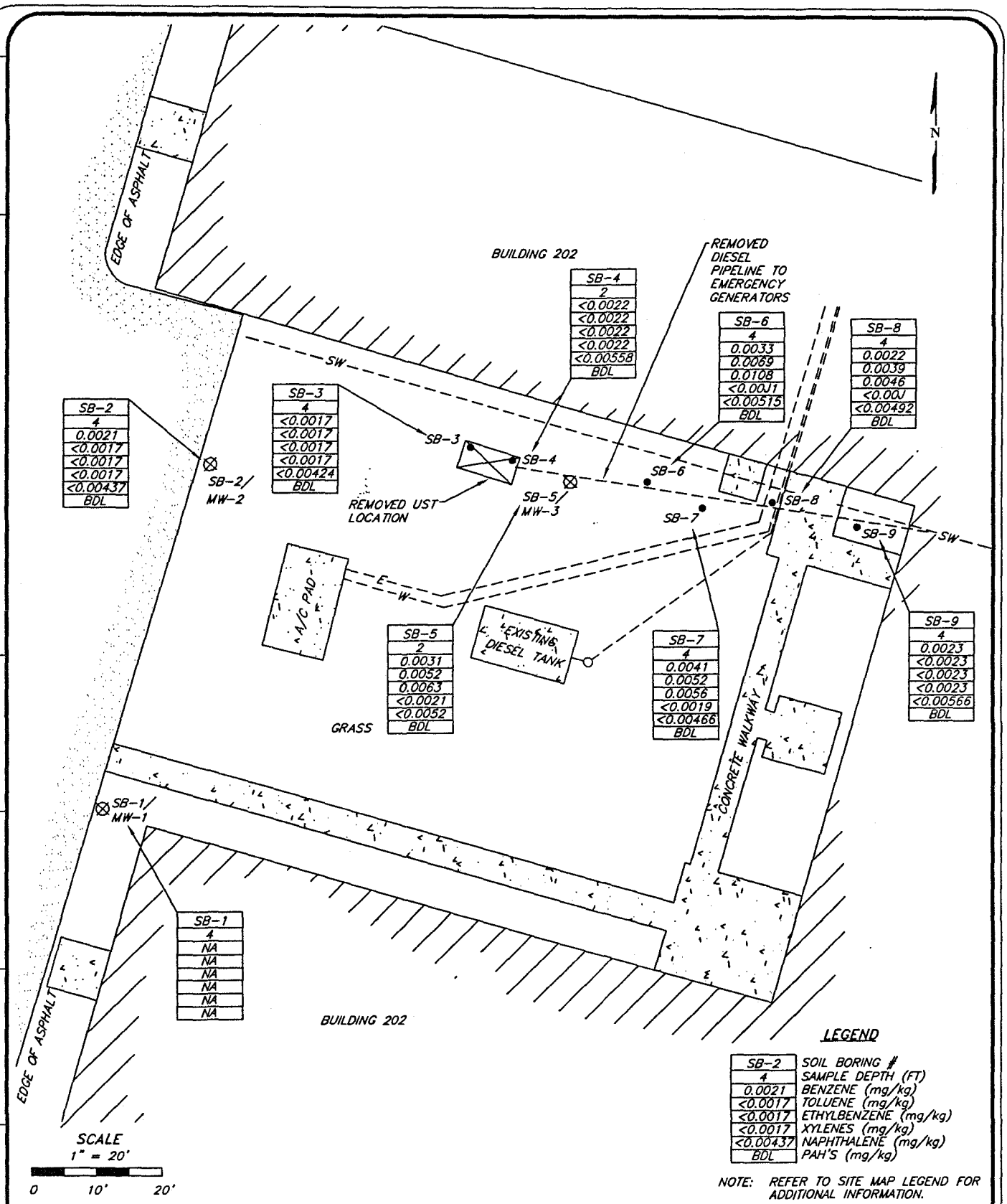
SITE LOCATION
CHARLESTON NAVAL COMPLEX
BUILDING 202
NORTH CHARLESTON, SC
SITE ID #02228

TITLE
FIGURE 3
SURVEYED SITE MAP



DWG DATE: 11/12/03

CAD FILE# M:\CAD\DWGS\PROJECTS\12-776\SITE\SITE2\SDATA

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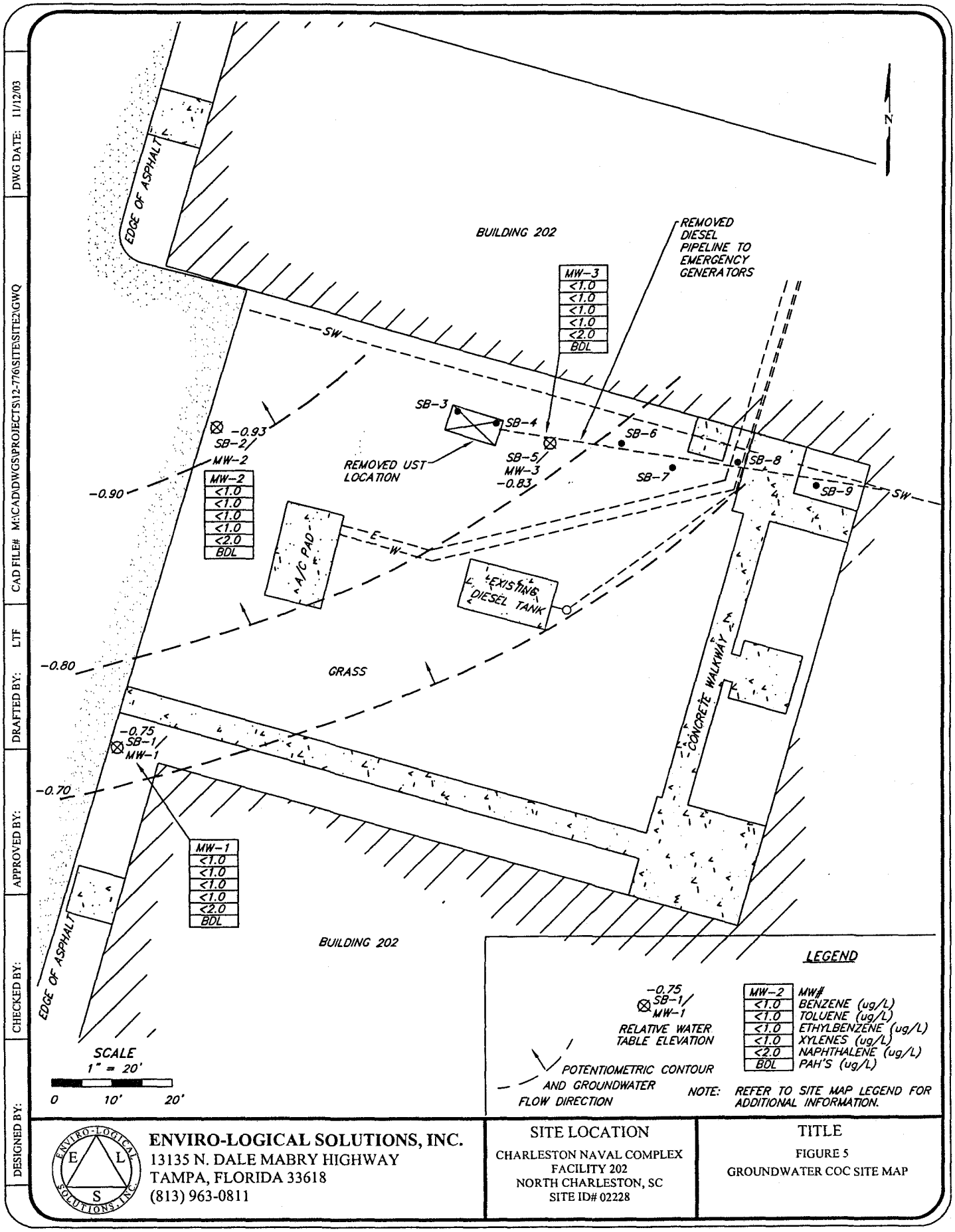
SITE LOCATION
CHARLESTON NAVAL COMPLEX
FACILITY 202
NORTH CHARLESTON, SC
SITE ID# 02228

TITLE
FIGURE 4
SOIL COC SITE MAP



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TITLE
FIGURE 5
GROUNDWATER COC SITE MAP

APPENDICES

APPENDIX A

SOIL BORING LOGS

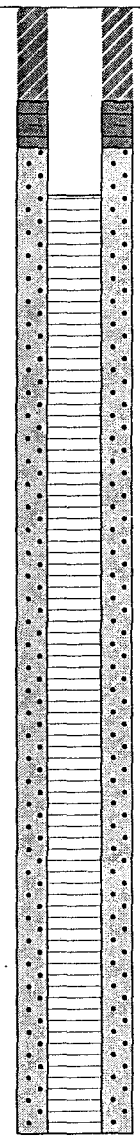
VISUAL CLASSIFICATION OF SOILS

ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-1/MW-1
BORING/WELL LOCATION: SW corner of Bldg 202
GEOLOGIST/ENGINEER: Thompson
DRILLING METHOD: Hand Auger
PROJECT NUMBER: 12-776-00
DATE: 9/3/03
PROJECT NAME: Former UST 202
PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description
0								SAND: fine sand, tan to brown loose
2	<1	NR	<1					
4	<1	NR	<1					CLAY AND SAND: sandy clay, Fe stained throughout, approximately 20% fine sand, medium stiff, dry
	<1	NR	<1			▼		
6								
8								
10								
12								

Well Construction



WELL CONSTRUCTION DETAILS

BOREHOLE DIA 4.25

INNER CASING
Material: Schedule 40 PVC
Diameter: 2 in.
Top Depth: land surface
Bottom Depth: 2 feet bls

OUTER CASING
Material: NA
Top Depth: NA
Bottom Depth: NA
Diameter: NA

GROUT
Type: Type 1
Top Depth: land surface
Bottom Depth: 1 foot bls

SCREEN
Diameter: 2 in.
Slot Size: 0.010 in.
Material: PVC
Top Depth: 2 feet bls
Bottom Depth: 12 feet bls

FILTER PACK
Type: 20/30
Quantity:
Top Depth: 1.5 feet bls
Bottom Depth: 12 feet bls

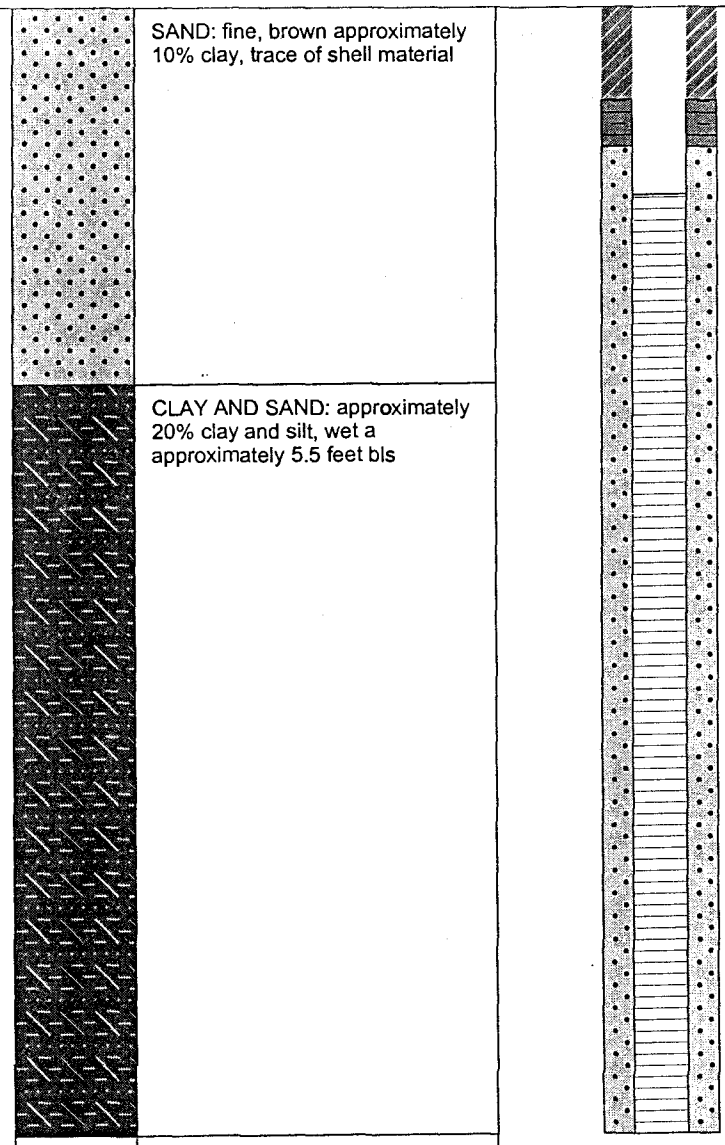
SEAL
Type: *bentonite*
Top Depth: 1 foot bls
Bottom Depth: 1.5 feet bls

VISUAL CLASSIFICATION OF SOILS

ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-2/MW-2
BORING/WELL LOCATION: NE corner of Bldg 202
GEOLOGIST/ENGINEER: Thompson
DRILLING METHOD: Hand Auger
PROJECT NUMBER: 12-776-00
DATE: 9/3/03
PROJECT NAME: Former UST 202
PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description	Well Construction
0								SAND: fine, brown approximately 10% clay, trace of shell material	
2	<1	NR	<1						
4	<1	NR	<1					CLAY AND SAND: approximately 20% clay and silt, wet a approximately 5.5 feet bls	
6	<1	NR	<1			▼			
8									
10									
12									



WELL CONSTRUCTION DETAILS

BOREHOLE DIA. 4.25

INNER CASING
Material: Schedule 40 PVC
Diameter: 2 in.
Top Depth: land surface
Bottom Depth: 2 feet bls

OUTER CASING
Material: NA
Top Depth: NA
Bottom Depth: NA
Diameter: NA

GROUT
Type: Type 1
Top Depth: land surface
Bottom Depth: 1 foot bls

SCREEN
Diameter: 2 in.
Slot Size: 0.010 in.
Material: PVC
Top Depth: 2 feet bls
Bottom Depth: 12 feet bls

FILTER PACK
Type: 20/30
Quantity:
Top Depth: 1.5 feet bls
Bottom Depth: 12 feet bls

SEAL
Type: bentonite
Top Depth: 1 foot bls
Bottom Depth: 1.5 feet bls

VISUAL CLASSIFICATION OF SOILS

ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-3
BORING/WELL LOCATION: Northwest corner of former UST area
GEOLOGIST/ENGINEER: RWT/BJL
DRILLING METHOD: Hand Auger
PROJECT NUMBER: 12-776
DATE: 9/3/03
PROJECT NAME: Charleston Naval Complex
PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description	Well Construction
0					SM			Fine sand, tan to light brown, fill	
2	<1	NA	<1		GM			Fine sand, dark brown, ~2-inch angular gravel throughout	
4	<5	NA	<5		GM			Fine sand, dark brown, ~2-inch angular gravel throughout	
6	<1	NA	<1						

WELL CONSTRUCTION DETAILS

BOREHOLE DIA.:	OUTER CASING	SCREEN	FILTER PACK	SEAL
INNER CASING Material: Diameter: Top Depth: Bottom Depth:	Material: Top Depth: Bottom Depth: Diameter: GROUT Type: Top Depth: Bottom Depth:	Diameter: Slot Size: Material: Top Depth: Bottom Depth:	Type: Quantity: Top Depth: Bottom Depth:	Type: Top Depth: Bottom Depth:

VISUAL CLASSIFICATION OF SOILS

ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-4	
BORING/WELL LOCATION: Northeast corner of former UST area	
GEOLOGIST/ENGINEER: RWT/BJL	
DRILLING METHOD: Hand Auger	
PROJECT NUMBER: 12-776	DATE: 9/3/03
PROJECT NAME: Charleston Naval Complex	PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description	Well Construction
0					SM			Fine sand; tan to light brown, fill	
2	<1	NA	<1		GM			Fine sand, dark brown, ~2-inch angular gravel throughout	
4	<1	NA	<1		GM			Fine sand, dark brown, ~2-inch angular gravel throughout	
6	<5	NA	<5						

WELL CONSTRUCTION DETAILS

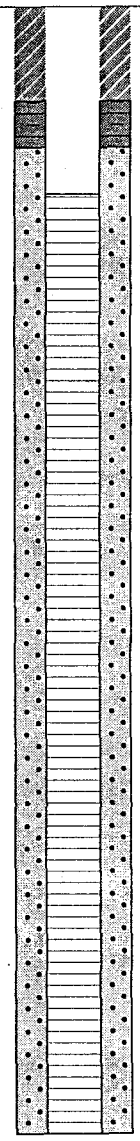
BOREHOLE DIA.:	OUTER CASING	SCREEN	FILTER PACK	SEAL
INNER CASING Material: Diameter: Top Depth: Bottom Depth:	Material: Top Depth: Bottom Depth: Diameter: GROUT Type: Top Depth: Bottom Depth:	Diameter: Slot Size: Material: Top Depth: Bottom Depth:	Type: Quantity: Top Depth: Bottom Depth:	Type: Top Depth: Bottom Depth:

VISUAL CLASSIFICATION OF SOILS

ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-5/MW-3
BORING/WELL LOCATION: product line east of Former UST
GEOLOGIST/ENGINEER: Thompson
DRILLING METHOD: Hand Auger
PROJECT NUMBER: 12-776-00
DATE: 9/3/03
PROJECT NAME: Former UST 202
PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description	Well Construction
0								SAND: fine, brown approximately 10% clay, trace of shell material	
2	<1	NR	<1						
4	<1	NR	<1					CLAY AND SAND: approximately 20% clay and silt, wet a approximately 5.5 feet bls	
6	<1	NR	<1			▼			
8									
10									
12									



WELL CONSTRUCTION DETAILS

BOREHOLE DIA. 4.25

INNER CASING
Material: Schedule 40 PVC
Diameter: 2 in.
Top Depth: land surface
Bottom Depth: 2 feet bls

OUTER CASING
Material: NA
Top Depth: NA
Bottom Depth: NA
Diameter: NA

GROUT
Type: Type 1
Top Depth: land surface
Bottom Depth: 1 foot bls

SCREEN
Diameter: 2 in.
Slot Size: 0.010 in.
Material: PVC
Top Depth: 2 feet bls
Bottom Depth: 12 feet bls

FILTER PACK
Type: 20/30
Quantity:
Top Depth: 1.5 feet bls
Bottom Depth: 12 feet bls

SEAL
Type: bentonite
Top Depth: 1 foot bls
Bottom Depth: 1.5 feet bls

VISUAL CLASSIFICATION OF SOILS

ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-6	
BORING/WELL LOCATION: Northeast corner of courtyard	
GEOLOGIST/ENGINEER: RWT/BJL	
DRILLING METHOD: Hand Auger	
PROJECT NUMBER: 12-776	DATE: 9/3/03
PROJECT NAME: Charleston Naval Complex	PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description	Well Construction
0					SM			Medium to fine sand, tan to light brown, minor clay	
2	<1	NA	<1		SM			Medium to fine sand, tan to light brown, minor clay	
4	<1	NA	<1		SM			Medium to fine sand, tan to light brown, minor clay	
6	<1	NA	<1						

WELL CONSTRUCTION DETAILS

BOREHOLE DIA.:	OUTER CASING	SCREEN	FILTER PACK	SEAL
INNER CASING Material: Diameter: Top Depth: Bottom Depth:	Material: Top Depth: Bottom Depth: Diameter: GROUT Type: Top Depth: Bottom Depth:	Diameter: Slot Size: Material: Top Depth: Bottom Depth:	Type: Quantity: Top Depth: Bottom Depth:	Type: Top Depth: Bottom Depth:

VISUAL CLASSIFICATION OF SOILS

ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-7	
BORING/WELL LOCATION: Northeast corner of courtyard	
GEOLOGIST/ENGINEER: RWT/BJL	
DRILLING METHOD: Hand Auger	
PROJECT NUMBER: 12-776	DATE: 9/3/03
PROJECT NAME: Charleston Naval Complex	PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description	Well Construction
0					gm			Fine sand, brown, minor gravel	
2	<1	NA	<1		GM			Fine sand, brown, minor gravel	
4	<1	NA	<1		GM			Fine sand, brown, minor gravel	
6	<1	NA	<1						

WELL CONSTRUCTION DETAILS

BOREHOLE DIA.:	OUTER CASING	SCREEN	FILTER PACK	SEAL
INNER CASING Material: Diameter: Top Depth: Bottom Depth:	Material: Top Depth: Bottom Depth: Diameter: GROUT Type: Top Depth: Bottom Depth:	Diameter: Slot Size: Material: Top Depth: Bottom Depth:	Type: Quantity: Top Depth: Bottom Depth:	Type: Top Depth: Bottom Depth:

VISUAL CLASSIFICATION OF SOILS

ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-8
BORING/WELL LOCATION: Northeast corner of courtyard
GEOLOGIST/ENGINEER: RWT/BJL
DRILLING METHOD: Hand Auger
PROJECT NUMBER: 12-776
DATE: 9/3/03
PROJECT NAME: Charleston Naval Complex
PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description	Well Construction
0								Fine sand, dark brown, minor gravel	
					GM				
2	<1	NA	<1					Fine sand, dark brown, minor gravel	
					GM				
4	<1	NA	<1					Fine sand, dark brown, minor gravel	
					GM				
6	<1	NA	<1						

WELL CONSTRUCTION DETAILS

BOREHOLE DIA.:	OUTER CASING	SCREEN	FILTER PACK	SEAL
INNER CASING Material: Diameter: Top Depth: Bottom Depth:	Material: Top Depth: Bottom Depth: Diameter: GROUT Type: Top Depth: Bottom Depth:	Diameter: Slot Size: Material: Top Depth: Bottom Depth:	Type: Quantity: Top Depth: Bottom Depth:	Type: Top Depth: Bottom Depth:

VISUAL CLASSIFICATION OF SOILS

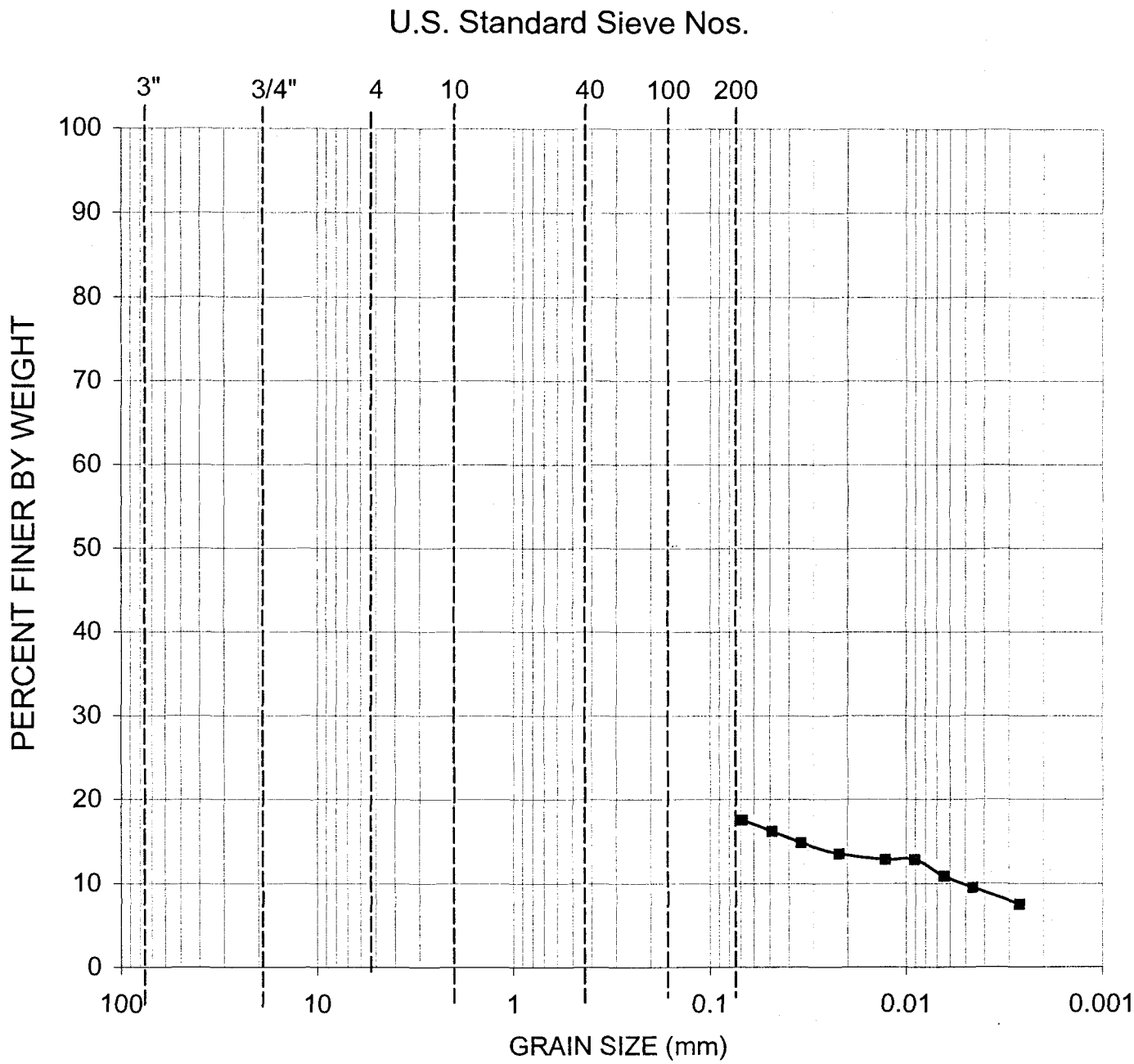
ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-9	
BORING/WELL LOCATION: Northeast corner of courtyard	
GEOLOGIST/ENGINEER: RWT/BJL	
DRILLING METHOD: Hand Auger	
PROJECT NUMBER: 12-776	DATE: 9/3/03
PROJECT NAME: Charleston Naval Complex	PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description	Well Construction
0								Clayey sand, brown	
					SC				
2	<1	NA	<1					Clayey sand, brown	
					SC				
4	<1	NA	<1					Clayey sand, brown	
					SC				
6	<1	NA	<1						

WELL CONSTRUCTION DETAILS

BOREHOLE DIA.:	OUTER CASING	SCREEN	FILTER PACK	SEAL
INNER CASING Material: Diameter: Top Depth: Bottom Depth:	Material: Top Depth: Bottom Depth: Diameter: GROUT Type: Top Depth: Bottom Depth:	Diameter: Slot Size: Material: Top Depth: Bottom Depth:	Type: Quantity: Top Depth: Bottom Depth:	Type: Top Depth: Bottom Depth:



GRAVEL	SAND	SILT	CLAY

Key	Sample	Depth(ft.)	Sand	Silt	Clay
■			67.3	23.2	9.5
●					
▲					

Schnabel
Schnabel Engineering

Project:

Enviro Logistical Sol/ Naval Base

Contract No. 03191009.18

APPENDIX B

WELL CONSTRUCTION LOGS

DHEC

Water Well Record

2600 Bull Street, Columbia, SC 29201-1708; (803) 896-6240

1. WELL OWNER INFORMATION:

2. LOCATION OF WELL:

County: **Charleston**

Latitude: Longitude:

3. SYSTEM NAME: U.S. Naval Base **SYSTEM NUMBER:** #02228

4. CUTTING SAMPLES: ☑ Yes ☐ No

Geophysical Logs: ☐ Yes (please enclose) ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Brown F-C Silty Sand	12.0	12.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS: MW-1

6. PERMIT NUMBER:

7. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitoring Well ☑ Replacement

8. WELL DEPTH (completed) 12.0 ft. **Date Started:** 09/03/03 **Date Completed:** 09/03/03

9. ☐ Mud Rotary ☐ Cable tool ☐ Air Rotary ☑ Bored ☐ Dug ☐ Jetted ☐ Driven ☐ Other

10. CASING: ☑ Threaded ☐ Welded

Diam.: 2.0"

Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other

0 in. to 2.0 ft.

in. to ft.

Height: Above/Below Surface ft.

Weight lb./ft.

Drive Shoe? ☐ Yes ☑ No

11. SCREEN Type PVC **Diam.:** 2.0"

Slot/Gauge: #10 **Length:** 10.0'

Set Between: 12.0 ft. and 2.0 ft. **NOTE: MULTIPLE SCREENS**

ft. and ft. **USE SECOND SHEET**

Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL ft.

13. PUMPING LEVEL Below Land Surface.

ft. after hrs. Pumping G.P.M.

Pumping Test: ☐ Yes (please enclosed) ☑ No

Yield:

14. WATER QUALITY

Chemical Analysis ☑ Yes ☐ No **Bacterial Analysis** ☐ Yes ☑ No

Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No

Installed from 12.0 ft. to 1.0 ft.

Effective size "FX-50" Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No

☑ Neat Cement ☐ Sand Cement ☐ Concrete ☑ Other Bentonite

Depth: From 1.0 ft. to ground surface

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft in direction

Type well disinfected upon completion ☐ Yes ☐ No Type: Amount:

18. PUMP: Date installed: **Not installed** ☑

Mfr. Name: Model No.:

H.P. Volts Length of drop pipe ft. Capacity gpm

TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Alan J. Hill **Cert. No.:** 1375

Force & Associates, Inc.

147 Vera Road, Suite A, Lexington, SC 29072

803-359-3200

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: 1647 Date: 10/2/03

Authorized Representative

DHEC

Water Well Record

2600 Bull Street, Columbia, SC 29201-1708; (803) 896-6240

1. WELL OWNER INFORMATION:

6. PERMIT NUMBER:

7. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitoring Well ☑ Replacement

8. WELL DEPTH (completed) 12.0 ft. **Date Started:** 09/03/03 **Date Completed:** 09/03/03

9. ☐ Mud Rotary ☐ Cable tool ☐ Air Rotary ☑ Bored ☐ Dug ☐ Jetted ☐ Driven ☐ Other

2. LOCATION OF WELL:

County: Charleston

Latitude: **Longitude:**

10. CASING: ☑ Threaded ☐ Welded

Diam.: 2.0"

Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other

0 in. to 2.0 ft.

in. to ft.

Height: Above/Below Surface ft.

Weight lb./ft.

Drive Shoe? ☐ Yes ☑ No

3. SYSTEM NAME: U.S. Naval Base **SYSTEM NUMBER:** #02228

11. SCREEN Type PVC **Diam.:** 2.0"

Slot/Gauge: #10 **Length:** 10.0'

Set Between: 12.0 ft. and 2.0 ft. **NOTE: MULTIPLE SCREENS** ft. and ft. **USE SECOND SHEET**

Sieve Analysis ☐ Yes (please enclose) ☑ No

4. CUTTING SAMPLES: ☑ Yes ☐ No

Geophysical Logs: ☐ Yes (please enclose) ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Brown F-C Silty Sand	12.0	12.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

12. STATIC WATER LEVEL ft.

13. PUMPING LEVEL Below Land Surface.

ft. after hrs. Pumping G.P.M.

Pumping Test: ☐ Yes (please enclosed) ☑ No

Yield:

14. WATER QUALITY

Chemical Analysis ☑ Yes ☐ No **Bacterial Analysis** ☐ Yes ☑ No

Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No

Installed from 12.0 ft. to 1.0 ft.

Effective size "FX-50" Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No

☑ Neat Cement ☐ Sand Cement ☐ Concrete ☑ Other Bentonite

Depth: From 1.0 ft. to ground surface

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft in direction

Type well disinfected ☐ Yes Type:

upon completion ☐ No Amount:

18. PUMP: Date installed: **Not installed** ☑

Mfr. Name: Model No.:

H.P. Volts Length of drop pipe ft. Capacity gpm

TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Alan J. Hill **Cert. No.:** 1375

Force & Associates, Inc.
147 Vera Road, Suite A, Lexington, SC 29072
803-359-3200

5. REMARKS: MW-2

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: [signature] 1047 Date: 10/2/03

Authorized Representative

DHEC	Water Well Record 2600 Bull Street, Columbia, SC 29201-1708; (803) 896-6240

1. WELL OWNER INFORMATION:

6. PERMIT NUMBER:

7. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitoring Well ☑ Replacement

8. WELL DEPTH (completed) 12.0 **ft.** **Date Started:** 09/03/03 **Date Completed:** 09/03/03

9. _ ☐ Mud Rotary ☐ Cable tool ☐ Air Rotary ☑ Bored ☐ Dug ☐ Jetted ☐ Driven ☐ Other

2. LOCATION OF WELL:

County: Charleston

Latitude: **Longitude:**

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2.0"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 2.0 ft.
____ in. to ____ ft.
Height: Above/Below Surface ____ **ft.**
Weight ____ **lb./ft.**
Drive Shoe? ☐ Yes ☑ No

3. SYSTEM NAME: U.S. Naval Base **SYSTEM NUMBER:** #02228

11. SCREEN **Type** PVC **Diam.:** 2.0"
Slot/Gauge: #10 **Length:** 10.0'
Set Between: 12.0 ft. and 2.0 ft. **NOTE: MULTIPLE SCREENS**
____ ft. and ____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☑ No

4. CUTTING SAMPLES: ☑ Yes ☐ No

Geophysical Logs: ☐ Yes (please enclose) ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Brown F-C Silty Sand	12.0	12.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

12. STATIC WATER LEVEL ____ ft.

13. PUMPING LEVEL Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclosed) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☑ Yes ☐ No **Bacterial Analysis** ☐ Yes ☑ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 12.0 ft. to 1.0 ft.
Effective size "FX-50" Uniformity Coefficient ____

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☑ Other Bentonite
Depth: From 1.0 ft. to ground surface

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ____ ft in ____ direction
____ Type well disinfected ☐ Yes Type: ____
____ upon completion ☐ No Amount: ____

18. PUMP: Date installed: ____ **Not installed** ☑
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Alan J. Hill **Cert. No.:** 1375
Force & Associates, Inc.
147 Vera Road, Suite A, Lexington, SC 29072
803-359-3200

5. REMARKS: MW-3

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: [signature] 1047
Authorized Representative

Date: 10/2/03

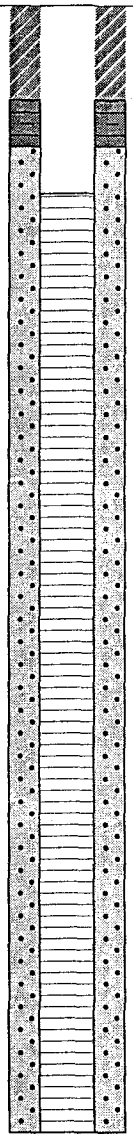
VISUAL CLASSIFICATION OF SOILS

ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-1/MW-1
BORING/WELL LOCATION: SW corner of Bldg 202
GEOLOGIST/ENGINEER: Thompson
DRILLING METHOD: Hand Auger
PROJECT NUMBER: 12-776-00
DATE: 9/3/03
PROJECT NAME: Former UST 202
PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description
0								SAND: fine sand, tan to brown loose
2	<1	NR	<1					
4	<1	NR	<1					CLAY AND SAND: sandy clay, Fe stained throughout, approximately 20% fine sand, medium stiff, dry
	<1	NR	<1			▼		
6								
8								
10								
12								

Well Construction



WELL CONSTRUCTION DETAILS

BOREHOLE DIA 4.25

INNER CASING
Material: Schedule 40 PVC
Diameter: 2 in.
Top Depth: land surface
Bottom Depth: 2 feet bls

OUTER CASING
Material: NA
Top Depth: NA
Bottom Depth: NA
Diameter: NA

GROUT
Type: Type 1
Top Depth: land surface
Bottom Depth: 1 foot bls

SCREEN
Diameter: 2 in.
Slot Size: 0.010 in.
Material: PVC
Top Depth: 2 feet bls
Bottom Depth: 12 feet bls

FILTER PACK
Type: 20/30
Quantity:
Top Depth: 1.5 feet bls
Bottom Depth: 12 feet bls

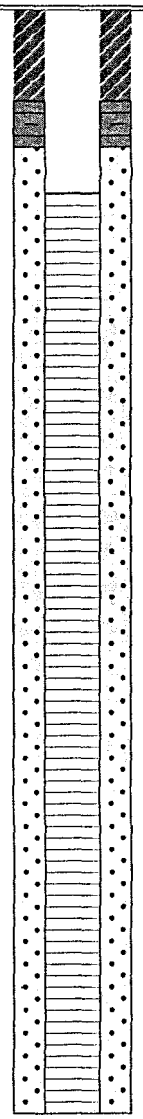
SEAL
Type: bentonite
Top Depth: 1 foot bls
Bottom Depth: 1.5 feet bls

VISUAL CLASSIFICATION OF SOILS

ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-2/MW-2
BORING/WELL LOCATION: NE corner of Bldg 202
GEOLOGIST/ENGINEER: Thompson
DRILLING METHOD: Hand Auger
PROJECT NUMBER: 12-776-00
DATE: 9/3/03
PROJECT NAME: Former UST 202
PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description	Well Construction
0								SAND: fine, brown approximately 10% clay, trace of shell material	
2	<1	NR	<1						
4	<1	NR	<1					CLAY AND SAND: approximately 20% clay and silt, wet a approximately 5.5 feet bls	
						▼			
6	<1	NR	<1						
8									
10									
12									



WELL CONSTRUCTION DETAILS

BOREHOLE DIA 4.25

INNER CASING
Material: Schedule 40 PVC
Diameter: 2 in.
Top Depth: land surface
Bottom Depth: 2 feet bls

OUTER CASING
Material: NA
Top Depth: NA
Bottom Depth: NA
Diameter: NA

GROUT
Type: Type 1
Top Depth: land surface
Bottom Depth: 1 foot bls

SCREEN
Diameter: 2 in.
Slot Size: 0.010 in.
Material: PVC
Top Depth: 2 feet bls
Bottom Depth: 12 feet bls

FILTER PACK
Type: 20/30
Quantity:
Top Depth: 1.5 feet bls
Bottom Depth: 12 feet bls

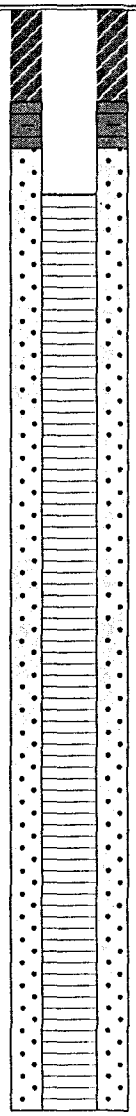
SEAL
Type: bentonite
Top Depth: 1 foot bls
Bottom Depth: 1.5 feet bls

VISUAL CLASSIFICATION OF SOILS

ENVIRO-LOGICAL SOLUTIONS, INC.

BORING/WELL NUMBER: SB-5/MW-3
BORING/WELL LOCATION: product line east of Former UST
GEOLOGIST/ENGINEER: Thompson
DRILLING METHOD: Hand Auger
PROJECT NUMBER: 12-776-00
DATE: 9/3/03
PROJECT NAME: Former UST 202
PAGE: 1 of 1

Depth (Ft)	Unfiltered FID (ppm)	Filtered FID (ppm)	Net FID (ppm)	Blow Counts	USCS	Water Level	Lithology	Sample Description	Well Construction
0								SAND: fine, brown approximately 10% clay, trace of shell material	
2	<1	NR	<1						
4	<1	NR	<1					CLAY AND SAND: approximately 20% clay and silt, wet a approximately 5.5 feet bls	
6	<1	NR	<1			▼			
8									
10									
12									



WELL CONSTRUCTION DETAILS

BOREHOLE DIA 4.25

INNER CASING
Material: Schedule 40 PVC
Diameter: 2 in.
Top Depth: land surface
Bottom Depth: 2 feet bls

OUTER CASING
Material: NA
Top Depth: NA
Bottom Depth: NA
Diameter: NA

GROUT
Type: Type 1
Top Depth: land surface
Bottom Depth: 1 foot bls

SCREEN
Diameter: 2 in.
Slot Size: 0.010 in.
Material: PVC
Top Depth: 2 feet bls
Bottom Depth: 12 feet bls

FILTER PACK
Type: 20/30
Quantity:
Top Depth: 1.5 feet bls
Bottom Depth: 12 feet bls

SEAL
Type: bentonite
Top Depth: 1 foot bls
Bottom Depth: 1.5 feet bls

APPENDIX C

CHAIN OF CUSTODY AND LABORATORY FORMS

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division

COOLER RECEIPT FORM BC# 345372

Client: Enviro-Logical Solutions

Cooler Received On: 9/4/03 And Opened On: 9/4/03 By: James Jacobs

(Signature)

1. Temperature of Cooler when opened 1.6 Degrees Celsius
2. Were custody seals on outside of cooler?.....YES...NO....NA
   a. If yes, how many, what kind and where: 2 Tape Front
3. Were custody seals on containers and intact?.....NO..YES...NA
4. Were the seals intact, signed, and dated correctly?.....YES...NO...NA
5. Were custody papers inside cooler?.....YES...NO...NA
6. Were custody papers properly filled out (ink,signed,etc)?.....YES....NO...NA
7. Did you sign the custody papers in the appropriate place?.....YES...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Other None
9. Cooling process: Ice Ice pack Ice(direct contact) Dry ice Other None
10. Did all containers arrive in good condition(unbroken)?.....YES..NO...NA
11. Were all container labels complete (#,date,signed,pres,etc)?.....YES...NO...NA
12. Did all container labels and tags agree with custody papers?.....YES...NO...NA
13. Were correct containers used for the analysis requested?.....YES...NO...NA
14. a. Were VOA vials received?.....YES...NO...NA
    b. Was there any observable head space present in any VOA vial?.....NO...YES..NA
15. Was sufficient amount of sample sent in each container?.....YES..NO...NA
16. Were correct preservatives used?.....YES..NO...NA
    If not, record standard ID of preservative used here_____
17. Was residual chlorine present?.....NO...YES..NA
18. See attached for resolution of non-conformance:

Fed-Ex UPS Velocity Airborne Route Off-street Misc.

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2960 Foster Creighton Drive • Nashville, Tennessee 37204
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9/10/03 CASE NARRATIVE

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

This report includes the analytical certificates of analysis for all samples listed below. These samples relate to your project identified below:

Project Name: UST 202
Project Number: 12-776-00.
Laboratory Project Number: 345372.

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. Any QC recoveries outside laboratory control limits are flagged individually with an #. Sample specific comments and quality control statements are included in the Laboratory notes section of the analytical report for each sample report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

Sample Identification	Lab Number	Collection Date
SB-1(4)	03-A137268	9/ 3/03
SB-2(4)	03-A137269	9/ 3/03
SB-3(4)	03-A137270	9/ 3/03
SB-5(2)	03-A137271	9/ 3/03
SB-6(4)	03-A137272	9/ 3/03
SB-4(2)	03-A137273	9/ 3/03
SB-7(4)	03-A137274	9/ 3/03
SB-8(4)	03-A137275	9/ 3/03
SB-9(4)	03-A137276	9/ 3/03

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Sample Identification	Lab Number	Collection Date

These results relate only to the items tested.
This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By: Roxanne L Connor Report Date: 9/10/03

Ashley Morris, Lab Director
Michael H. Dunn, M.S., QA/QC Director
Johnny A. Mitchell, Operations Manager Organics
Eric S. Smith, Assistant Technical Director
Roxanne L. Connor, Technical Services
Gail A. Lage, Technical Serv.
Glenn L. Norton, Technical Serv.
Kelly S. Comstock, Technical Serv.
Pamela A. Langford, Technical Serv.

Laboratory Certification Number: 84009

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345372

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: ELI, INC. Client #: 110226
Address: 13135 N. Dale Mabry
City/State/Zip Code: Tampa, FL 33618
Project Manager: R. Thompson
Telephone Number: 813-963-0811 ext. 115 Fax: 963-2864
Sampler Name: (Print Name) Robert Thompson
Sampler Signature: Robert Thompson

Project Name: UST 202
Project #: 12-776-00
Site/Location ID: 3331 Hoban Avenue #002276 State: SC
Report To: R. Thompson
Invoice To: Same
Quote #: PO#:

TAT: X Standard; ___ Rush (surcharges may apply)
Date Needed: 9/10/03
Fax Results: Y N

QC Deliverables: ___ None; X Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: _____

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	BTEX, Nap. Eth. B	PAH 8270C	TPH (D20)			TCL					REMARKS
~~SB-1 (4)~~	9/3/03	1000	✓		S					✓	✓	✓	✓	✓	✓			✓					
SB-2 (4)	9/3/03	1205	✓		S					✓	✓	✓	✓	✓	X					137	269		No TPH
SB-1 (4)	9/3/03	1000	✓		S													✓		137	268		
SB-3 (4)	9/3/03	1220	✓		S					✓	✓	✓	✓	✓	X						270		No TPH
SB-5 (4)	"	1445	✓		S					✓	✓	✓	✓	✓	✓						271		
SB-6 (4)	"	1300	✓		S					✓	✓	✓	✓	✓							272		
SB-4 (4)	"	1315	✓		S					✓	✓	✓	✓	✓							273		
SB-7 (4)	"	1340	✓		S					✓	✓	✓	✓	✓							274		
SB-8 (4)	"	1550	✓		S					✓	✓	✓	✓	✓							275		
SB-9 (4)	"	1400	✓		S					✓	✓	✓	✓	✓						137	276		

Special Instructions:

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Barry [illegible]	9/3/03	1455	[illegible]	9/3/03	1455
[illegible]	9/5/03	1800	[illegible]	9/4/03	830
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: 1.6°C
Custody Seals: ⊘ N N/A
Bottles Supplied by Test America: Y N
Method of Shipment: 839309997106 FedEx to TA – Nashville

TestAmerica
ANALYTICAL TESTING CORPORATION

2960 Foster Creighton Drive • Nashville, Tennessee 37204
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ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202
Sampler: ROBERT THOMPSON

Lab Number: 03-A137268
Sample ID: SB-1(4)
Sample Type: Soil
Site ID:

Date Collected: 9/ 3/03
Time Collected: 10:00
Date Received: 9/ 4/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS									
TOC	7620	mg/kg	1000	1	9/ 5/03	15:06	M.Checolle	9060M	770

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
Extracted TOC result corrected for dry weight.

End of Sample Report.

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ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202
Sampler: ROBERT THOMPSON

Lab Number: 03-A137269
Sample ID: SB-2(4)
Sample Type: Soil
Site ID:

Date Collected: 9/ 3/03
Time Collected: 12:05
Date Received: 9/ 4/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS									
% Dry Weight	94.8	%		1	9/ 5/03	17:40	K. Turner	CLP	1047
ORGANIC PARAMETERS									
Naphthalene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Acenaphthene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Fluorene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Benzo(a)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Benzo(a)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Benzo(b)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Benzo(k)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Chrysene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Dibenzo(a,h)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Indeno(1,2,3-cd)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Acenaphthylene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Benzo(g,h,i)perylene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
Phenanthrene	<0.066	mg/kg	0.066	1	9/ 5/03	19:15	J.Saiyasak	8270C	2677
VOLATILE ORGANICS									
Benzene	0.0021	mg/kg	0.0017	1	9/ 6/03	22:58	J. Adams	8260B	4012
Ethylbenzene	<0.0017	mg/kg	0.0017	1	9/ 6/03	22:58	J. Adams	8260B	4012
Naphthalene	<0.00437	mg/kg	0.00437	1	9/ 6/03	22:58	J. Adams	8260B	4012
Toluene	<0.0017	mg/kg	0.0017	1	9/ 6/03	22:58	J. Adams	8260B	4012

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137269
Sample ID: SB-2(4)
Project: 12-776-00
Page 2

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Xylenes (Total)	<0.0017	mg/kg	0.0017	1	9/ 6/03	22:58	J. Adams	8260B	4012

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
BNA's	29.5 gm	1.0 ml	9/ 5/03		K. Turner	3550
Volatile Organics	5.72 g	5.0 ml	9/ 3/03	12:05	J. Adams	5035

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	118.	58. - 139.
VOA Surr Toluene-d8	108.	71. - 127.
VOA Surr, 4-BFB	99.	60. - 141.
VOA Surr, DBFM	113.	67. - 126.
BNA Surr-Nitrobenzene-d5	79.	44. - 99.
BNA Surr-2-Fluorobiphenyl	77.	45. - 94.
BNA Surr-Terphenyl-d14	84.	53. - 104.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
All results reported on a wet weight basis.

End of Sample Report.

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ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202
Sampler: ROBERT THOMPSON

Lab Number: 03-A137270
Sample ID: SB-3(4)
Sample Type: Soil
Site ID:

Date Collected: 9/ 3/03
Time Collected: 12:20
Date Received: 9/ 4/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS									
% Dry Weight	71.5	%		1	9/ 5/03	17:40	K. Turner	CLP	1047
ORGANIC PARAMETERS									
Naphthalene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Acenaphthene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Fluorene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Benzo(a)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Benzo(a)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Benzo(b)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Benzo(k)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Chrysene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Dibenzo(a,h)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Indeno(1,2,3-cd)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Acenaphthylene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Benzo(g,h,i)perylene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
Phenanthrene	<0.066	mg/kg	0.066	1	9/ 5/03	19:50	J.Saiyasak	8270C	2677
VOLATILE ORGANICS									
Benzene	< 0.0017	mg/kg	0.0017	1	9/ 9/03	14:09	J. Adams	8260B	5758
Ethylbenzene	< 0.0017	mg/kg	0.0017	1	9/ 9/03	14:09	J. Adams	8260B	5758
Naphthalene	<0.00424	mg/kg	0.00424	1	9/ 9/03	14:09	J. Adams	8260B	5758
Toluene	< 0.0017	mg/kg	0.0017	1	9/ 9/03	14:09	J. Adams	8260B	5758

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137270
Sample ID: SB-3(4)
Project: 12-776-00
Page 2

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Xylenes (Total)	< 0.0017	mg/kg	0.0017	1	9/ 9/03	14:09	J. Adams	8260B	5758

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
BNA's	29.7 gm	1.0 ml	9/ 5/03		K. Turner	3550
Volatile Organics	5.89 g	5.0 ml	9/ 3/03	12:20	J. Adams	5035

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	124.	58. - 139.
VOA Surr Toluene-d8	106.	71. - 127.
VOA Surr, 4-BFB	102.	60. - 141.
VOA Surr, DBFM	115.	67. - 126.
BNA Surr-Nitrobenzene-d5	81.	44. - 99.
BNA Surr-2-Fluorobiphenyl	78.	45. - 94.
BNA Surr-Terphenyl-d14	84.	53. - 104.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
All results reported on a wet weight basis.

End of Sample Report.

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ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202
Sampler: ROBERT THOMPSON

Lab Number: 03-A137271
Sample ID: SB-5(2)
Sample Type: Soil
Site ID:

Date Collected: 9/ 3/03
Time Collected: 12:45
Date Received: 9/ 4/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS									
% Dry Weight	88.2	%		1	9/ 5/03	17:40	K. Turner	CLP	1047
ORGANIC PARAMETERS									
TPH (Diesel Range)	<10	mg/kg	10	1	9/ 7/03	4:12	Weatherly	8015B	4149
Naphthalene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Acenaphthene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Fluorene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Benzo(a)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Benzo(a)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Benzo(b)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Benzo(k)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Chrysene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Dibenzo(a,h)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Indeno(1,2,3-cd)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Acenaphthylene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Benzo(g,h,i)perylene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
Phenanthrene	<0.066	mg/kg	0.066	1	9/ 5/03	20:26	J.Saiyasak	8270C	2677
VOLATILE ORGANICS									
Benzene	0.0031	mg/kg	0.0021	1	9/ 6/03	23:58	J. Adams	8260B	4012
Ethylbenzene	0.0063	mg/kg	0.0021	1	9/ 6/03	23:58	J. Adams	8260B	4012
Naphthalene	< 0.0052	mg/kg	0.0052	1	9/ 6/03	23:58	J. Adams	8260B	4012

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137271
Sample ID: SB-5(2)
Project: 12-776-00

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Toluene	0.0052	mg/kg	0.0021	1	9/ 6/03	23:58	J. Adams	8260B	4012
Xylenes (Total)	< 0.0021	mg/kg	0.0021	1	9/ 6/03	23:58	J. Adams	8260B	4012

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
BNA's	29.8 gm	1.0 ml	9/ 5/03		K. Turner	3550
EPH/DRO	25.0 gm	1.0 ml	9/ 5/03		K. Turner	3550
Volatile Organics	4.81 g	5.0 ml	9/ 3/03	12:45	J. Adams	5035

Surrogate	% Recovery	Target Range
TPH Hi Surr., o-Terphenyl	119.	35. - 135.
VOA Surr 1,2-DCA-d4	127.	58. - 139.
VOA Surr Toluene-d8	107.	71. - 127.
VOA Surr, 4-BFB	111.	60. - 141.
VOA Surr, DBFM	121.	67. - 126.
BNA Surr-Nitrobenzene-d5	85.	44. - 99.
BNA Surr-2-Fluorobiphenyl	85.	45. - 94.
BNA Surr-Terphenyl-d14	91.	53. - 104.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
All results reported on a wet weight basis.

End of Sample Report.

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ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202
Sampler: ROBERT THOMPSON

Lab Number: 03-A137272
Sample ID: SB-6(4)
Sample Type: Soil
Site ID:

Date Collected: 9/ 3/03
Time Collected: 13:00
Date Received: 9/ 4/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS									
% Dry Weight	80.1	%		1	9/ 5/03	17:40	K. Turner	CLP	1047
ORGANIC PARAMETERS									
Naphthalene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Acenaphthene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Fluorene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Benzo(a)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Benzo(a)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Benzo(b)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Benzo(k)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Chrysene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Dibenzo(a,h)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Indeno(1,2,3-cd)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Acenaphthylene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Benzo(g,h,i)perylene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
Phenanthrene	<0.066	mg/kg	0.066	1	9/ 5/03	21:01	J.Saiyasak	8270C	2677
VOLATILE ORGANICS									
Benzene	0.0033	mg/kg	0.0021	1	9/ 9/03	14:39	J. Adams	8260B	5758
Ethylbenzene	0.0108	mg/kg	0.0021	1	9/ 9/03	14:39	J. Adams	8260B	5758
Naphthalene	<0.00515	mg/kg	0.00515	1	9/ 9/03	14:39	J. Adams	8260B	5758
Toluene	0.0069	mg/kg	0.0021	1	9/ 9/03	14:39	J. Adams	8260B	5758

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137272
Sample ID: SB-6(4)
Project: 12-776-00

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Xylenes (Total)	< 0.00J1	mg/kg	0.0021	1	9/ 9/03	14:39	J. Adams	8260B	5758

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
BNA's	30.2 gm	1.0 ml	9/ 5/03		K. Turner	3550
Volatile Organics	4.85 g	5.0 ml	9/ 3/03	13:00	J. Adams	5035

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	66.	58. - 139.
VOA Surr Toluene-d8	111.	71. - 127.
VOA Surr, 4-BFB	123.	60. - 141.
VOA Surr, DBFM	57. #	67. - 126.
BNA Surr-Nitrobenzene-d5	87.	44. - 99.
BNA Surr-2-Fluorobiphenyl	85.	45. - 94.
BNA Surr-Terphenyl-d14	93.	53. - 104.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
All results reported on a wet weight basis.
8260 surrogate(s) outside QC range due to sample matrix. Confirmed by repeat analysis.

End of Sample Report.

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ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202
Sampler: ROBERT THOMPSON

Lab Number: 03-A137273
Sample ID: SB-4(2)
Sample Type: Soil
Site ID:

Date Collected: 9/ 3/03
Time Collected: 13:15
Date Received: 9/ 4/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS									
% Dry Weight	89.1	%		1	9/ 5/03	17:40	K. Turner	CLP	1047
ORGANIC PARAMETERS									
Naphthalene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Acenaphthene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Fluorene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Benzo(a)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Benzo(a)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Benzo(b)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Benzo(k)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Chrysene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Dibenzo(a,h)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Indeno(1,2,3-cd)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Acenaphthylene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Benzo(g,h,i)perylene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
Phenanthrene	<0.066	mg/kg	0.066	1	9/ 5/03	21:37	J.Saiyasak	8270C	2677
VOLATILE ORGANICS									
Benzene	<0.0022	mg/kg	0.0022	1	9/ 7/03	0:57	J. Adams	8260B	4012
Ethylbenzene	<0.0022	mg/kg	0.0022	1	9/ 7/03	0:57	J. Adams	8260B	4012
Naphthalene	<0.00558	mg/kg	0.00558	1	9/ 7/03	0:57	J. Adams	8260B	4012
Toluene	<0.0022	mg/kg	0.0022	1	9/ 7/03	0:57	J. Adams	8260B	4012

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137273
Sample ID: SB-4(2)
Project: 12-776-00

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Xylenes (Total)	<0.0022	mg/kg	0.0022	1	9/ 7/03	0:57	J. Adams	8260B	4012

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
BNA's	30.2 gm	1.0 ml	9/ 5/03		K. Turner	3550
Volatile Organics	4.48 g	5.0 ml	9/ 3/03	13:15	J. Adams	5035

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	120.	58. - 139.
VOA Surr Toluene-d8	103.	71. - 127.
VOA Surr, 4-BFB	103.	60. - 141.
VOA Surr, DBFM	117.	67. - 126.
BNA Surr-Nitrobenzene-d5	95.	44. - 99.
BNA Surr-2-Fluorobiphenyl	92.	45. - 94.
BNA Surr-Terphenyl-d14	99.	53. - 104.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
All results reported on a wet weight basis.

End of Sample Report.

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ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202
Sampler: ROBERT THOMPSON

Lab Number: 03-A137274
Sample ID: SB-7(4)
Sample Type: Soil
Site ID:

Date Collected: 9/ 3/03
Time Collected: 13:40
Date Received: 9/ 4/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS									
% Dry Weight	91.0	%		1	9/ 5/03	17:40	K. Turner	CLP	1047
ORGANIC PARAMETERS									
Naphthalene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Acenaphthene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Anthracene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Fluoranthene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Fluorene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Pyrene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Benzo(a)anthracene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Benzo(a)pyrene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Benzo(b)fluoranthene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Benzo(k)fluoranthene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Chrysene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Dibenzo(a,h)anthracene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Indeno(1,2,3-cd)pyrene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Acenaphthylene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Benzo(g,h,i)perylene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
Phenanthrene	<0.132	mg/kg	0.132	2	9/ 5/03	22:12	J.Saiyasak	8270C	2677
VOLATILE ORGANICS									
Benzene	0.0041	mg/kg	0.0019	1	9/ 7/03	1:27	J. Adams	8260B	4012
Ethylbenzene	0.0056	mg/kg	0.0019	1	9/ 7/03	1:27	J. Adams	8260B	4012
Naphthalene	< 0.00466	mg/kg	0.00466	1	9/ 7/03	1:27	J. Adams	8260B	4012
Toluene	0.0052	mg/kg	0.0019	1	9/ 7/03	1:27	J. Adams	8260B	4012

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137274
Sample ID: SB-7(4)
Project: 12-776-00
Page 2

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Xylenes (Total)	< 0.0019	mg/kg	0.0019	1	9/ 7/03	1:27	J. Adams	8260B	4012

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
BNA's	29.6 gm	1.0 ml	9/ 5/03		K. Turner	3550
Volatile Organics	5.37 g	5.0 ml	9/ 3/03	13:40	J. Adams	5035

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	103.	58. - 139.
VOA Surr Toluene-d8	110.	71. - 127.
VOA Surr, 4-BFB	115.	60. - 141.
VOA Surr, DBFM	98.	67. - 126.
BNA Surr-Nitrobenzene-d5	94.	44. - 99.
BNA Surr-2-Fluorobiphenyl	90.	45. - 94.
BNA Surr-Terphenyl-d14	94.	53. - 104.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
All results reported on a wet weight basis.

End of Sample Report.

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ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202
Sampler: ROBERT THOMPSON

Lab Number: 03-A137275
Sample ID: SB-8(4)
Sample Type: Soil
Site ID:

Date Collected: 9/ 3/03
Time Collected: 13:50
Date Received: 9/ 4/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS									
% Dry Weight	82.3	%		1	9/ 5/03	17:40	K. Turner	CLP	1047
ORGANIC PARAMETERS									
Naphthalene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Acenaphthene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Fluorene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Benzo(a)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Benzo(a)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Benzo(b)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Benzo(k)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Chrysene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Dibenzo(a,h)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Indeno(1,2,3-cd)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Acenaphthylene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Benzo(g,h,i)perylene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
Phenanthrene	<0.066	mg/kg	0.066	1	9/ 5/03	22:48	J.Saiyasak	8270C	2677
VOLATILE ORGANICS									
Benzene	0.0022	mg/kg	0.002	1	9/ 9/03	15:09	J. Adams	8260B	5758
Ethylbenzene	0.0046	mg/kg	0.002	1	9/ 9/03	15:09	J. Adams	8260B	5758
Naphthalene	<0.00492	mg/kg	0.00492	1	9/ 9/03	15:09	J. Adams	8260B	5758
Toluene	0.0039	mg/kg	0.002	1	9/ 9/03	15:09	J. Adams	8260B	5758

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137275
Sample ID: SB-8(4)
Project: 12-776-00

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Xylenes (Total)	< 0.00J	mg/kg	0.002	1	9/ 9/03	15:09	J. Adams	8260B	5758

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
BNA's	29.9 gm	1.0 ml	9/ 5/03		K. Turner	3550
Volatile Organics	5.08 g	5.0 ml	9/ 3/03	13:50	J. Adams	5035

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	45. #	58. - 139.
VOA Surr Toluene-d8	104.	71. - 127.
VOA Surr, 4-BFB	103.	60. - 141.
VOA Surr, DBFM	34. #	67. - 126.
BNA Surr-Nitrobenzene-d5	86.	44. - 99.
BNA Surr-2-Fluorobiphenyl	87.	45. - 94.
BNA Surr-Terphenyl-d14	94.	53. - 104.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
All results reported on a wet weight basis.
8260 surrogate(s) outside QC range due to sample matrix. Confirmed by repeat analysis.

End of Sample Report.

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ANALYTICAL TESTING CORPORATION

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800-765-0980 • 615-726-3404 Fax

ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202
Sampler: ROBERT THOMPSON

Lab Number: 03-A137276
Sample ID: SB-9(4)
Sample Type: Soil
Site ID:

Date Collected: 9/ 3/03
Time Collected: 14:00
Date Received: 9/ 4/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS									
% Dry Weight	73.7	%		1	9/ 5/03	17:40	K. Turner	CLP	1047
ORGANIC PARAMETERS									
Naphthalene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Acenaphthene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Fluorene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Benzo(a)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Benzo(a)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Benzo(b)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Benzo(k)fluoranthene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Chrysene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Dibenzo(a,h)anthracene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Indeno(1,2,3-cd)pyrene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Acenaphthylene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Benzo(g,h,i)perylene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
Phenanthrene	<0.066	mg/kg	0.066	1	9/ 5/03	23:23	J.Saiyasak	8270C	2677
VOLATILE ORGANICS									
Benzene	0.0023	mg/kg	0.0023	1	9/ 7/03	2:27	J. Adams	8260B	4012
Ethylbenzene	<0.0023	mg/kg	0.0023	1	9/ 7/03	2:27	J. Adams	8260B	4012
Naphthalene	< 0.00566	mg/kg	0.00566	1	9/ 7/03	2:27	J. Adams	8260B	4012
Toluene	<0.0023	mg/kg	0.0023	1	9/ 7/03	2:27	J. Adams	8260B	4012

Sample report continued . . .

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Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Xylenes (Total)	< 0.0023	mg/kg	0.0023	1	9/ 7/03	2:27	J. Adams	8260B	4012

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
BNA's	29.8 gm	1.0 ml	9/ 5/03		K. Turner	3550
Volatile Organics	4.42 g	5.0 ml	9/ 3/03	14:00	J. Adams	5035

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	128.	58. - 139.
VOA Surr Toluene-d8	106.	71. - 127.
VOA Surr, 4-BFB	105.	60. - 141.
VOA Surr, DBFM	120.	67. - 126.
BNA Surr-Nitrobenzene-d5	79.	44. - 99.
BNA Surr-2-Fluorobiphenyl	78.	45. - 94.
BNA Surr-Terphenyl-d14	94.	53. - 104.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
All results reported on a wet weight basis.

End of Sample Report.

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Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for the defined analytical batch for MS/MSD analysis on an true sample matrix. Laboratory reagent water was used for QC purposes.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
UST ANALYSIS								
TPH (Diesel Range)	mg/kg	< 10.0	35.4	40.0	88	50. - 129.	4149	blank
Naphthalene	mg/kg	< 0.066	1.45	1.67	87	34. - 111.	2677	03-A137269
Acenaphthene	mg/kg	< 0.066	1.55	1.67	93	39. - 116.	2677	03-A137269
Anthracene	mg/kg	< 0.066	1.52	1.67	91	41. - 118.	2677	03-A137269
Fluoranthene	mg/kg	< 0.066	1.58	1.67	95	42. - 123.	2677	03-A137269
Fluorene	mg/kg	< 0.066	1.62	1.67	97	40. - 120.	2677	03-A137269
Pyrene	mg/kg	< 0.066	1.52	1.67	91	40. - 125.	2677	03-A137269
Benzo(a)anthracene	mg/kg	< 0.066	1.58	1.67	95	42. - 123.	2677	03-A137269
Benzo(a)pyrene	mg/kg	< 0.066	1.45	1.67	87	41. - 123.	2677	03-A137269
Benzo(b)fluoranthene	mg/kg	< 0.066	1.55	1.67	93	40. - 123.	2677	03-A137269
Benzo(k)fluoranthene	mg/kg	< 0.066	1.58	1.67	95	42. - 130.	2677	03-A137269
Chrysene	mg/kg	< 0.066	1.62	1.67	97	40. - 123.	2677	03-A137269
Dibenzo(a,h)anthracene	mg/kg	< 0.066	1.91	1.67	114	16. - 139.	2677	03-A137269
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.066	2.01	1.67	120	12. - 138.	2677	03-A137269
Acenaphthylene	mg/kg	< 0.066	1.42	1.67	85	39. - 116.	2677	03-A137269
Benzo(g,h,i)perylene	mg/kg	< 0.066	1.58	1.67	95	9. - 144.	2677	03-A137269
Phenanthrene	mg/kg	< 0.066	1.55	1.67	93	39. - 119.	2677	03-A137269
VOA PARAMETERS								
Benzene	mg/kg	< 0.0003	0.0406	0.0500	81	53 - 140	4012	blank
Benzene	mg/kg	< 0.0003	0.0446	0.0500	89	53 - 140	5758	blank
Toluene	mg/kg	< 0.0008	0.0382	0.0500	76	47 - 142	4012	blank
Toluene	mg/kg	< 0.0008	0.0404	0.0500	81	47 - 142	5758	blank
VOA Surr 1,2-DCA-d4	% Rec				111	58 - 139	4012	
VOA Surr 1,2-DCA-d4	% Rec				95	58 - 139	5758	
VOA Surr Toluene-d8	% Rec				105	71 - 127	4012	
VOA Surr Toluene-d8	% Rec				105	71 - 127	5758	

Project QC continued . . .

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Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for the defined analytical batch for MS/MSD analysis on an true sample matrix. Laboratory reagent water was used for QC purposes.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
VOA Surr, 4-BFB	% Rec				101	60 - 141	4012	
VOA Surr, 4-BFB	% Rec				99	60 - 141	5758	
VOA Surr, DBFM	% Rec				107	67 - 126	4012	
VOA Surr, DBFM	% Rec				99	67 - 126	5758	

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
UST PARAMETERS						
TPH (Diesel Range)	mg/kg	35.4	32.7	7.93	43.	4149
Naphthalene	mg/kg	1.45	1.48	2.05	38.	2677
Acenaphthene	mg/kg	1.55	1.52	1.95	40.	2677
Anthracene	mg/kg	1.52	1.48	2.67	34.	2677
Fluoranthene	mg/kg	1.58	1.58	0.00	42.	2677
Fluorene	mg/kg	1.62	1.55	4.42	40.	2677
Pyrene	mg/kg	1.52	1.52	0.00	37.	2677
Benzo(a)anthracene	mg/kg	1.58	1.55	1.92	35.	2677
Benzo(a)pyrene	mg/kg	1.45	1.45	0.00	36.	2677
Benzo(b)fluoranthene	mg/kg	1.55	1.58	1.92	40.	2677
Benzo(k)fluoranthene	mg/kg	1.58	1.55	1.92	36.	2677
Chrysene	mg/kg	1.62	1.58	2.50	34.	2677
Dibenzo(a,h)anthracene	mg/kg	1.91	1.88	1.58	37.	2677
Indeno(1,2,3-cd)pyrene	mg/kg	2.01	1.95	3.03	40.	2677
Acenaphthylene	mg/kg	1.42	1.42	0.00	42.	2677
Benzo(g,h,i)perylene	mg/kg	1.58	1.55	1.92	37.	2677
Phenanthrene	mg/kg	1.55	1.52	1.95	34.	2677

Project QC continued . . .

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VOA PARAMETERS						
Benzene	mg/kg	0.0406	0.0427	5.04	34.	4012
Benzene	mg/kg	0.0446	0.0402	10.38	34.	5758
Toluene	mg/kg	0.0382	0.0335	13.11	39.	4012
Toluene	mg/kg	0.0404	0.0363	10.69	39.	5758
VOA Surr 1,2-DCA-d4	% Rec		106.			4012
VOA Surr 1,2-DCA-d4	% Rec		97.			5758
VOA Surr Toluene-d8	% Rec		104.			4012
VOA Surr Toluene-d8	% Rec		107.			5758
VOA Surr, 4-BFB	% Rec		100.			4012
VOA Surr, 4-BFB	% Rec		100.			5758
VOA Surr, DBFM	% Rec		105.			4012
VOA Surr, DBFM	% Rec		102.			5758

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
UST PARAMETERS						
TPH (Diesel Range)	mg/kg	40.0	44.4	111	50 - 125	4149
UST PARAMETERS						
Naphthalene	mg/kg	1.67	1.55	93	34 - 111	2677
Acenaphthene	mg/kg	1.67	1.68	101	39 - 116	2677
Anthracene	mg/kg	1.67	1.68	101	41 - 118	2677
Fluoranthene	mg/kg	1.67	1.72	103	42 - 123	2677
Fluorene	mg/kg	1.67	1.72	103	40 - 120	2677
Pyrene	mg/kg	1.67	1.62	97	40 - 125	2677
Benzo(a)anthracene	mg/kg	1.67	1.68	101	42 - 123	2677
Benzo(a)pyrene	mg/kg	1.67	1.68	101	41 - 123	2677
Benzo(b)fluoranthene	mg/kg	1.67	1.72	103	40 - 123	2677
Benzo(k)fluoranthene	mg/kg	1.67	1.68	101	42 - 130	2677
Chrysene	mg/kg	1.67	1.72	103	40 - 123	2677
Dibenzo(a,h)anthracene	mg/kg	1.67	2.05	123	16 - 139	2677

Project QC continued . . .

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Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
Indeno(1,2,3-cd)pyrene	mg/kg	1.67	2.14	128	12 - 138	2677
Acenaphthylene	mg/kg	1.67	1.55	93	39 - 116	2677
Benzo(g,h,i)perylene	mg/kg	1.67	1.68	101	9 - 144	2677
Phenanthrene	mg/kg	1.67	1.65	99	39 - 119	2677
VOA PARAMETERS						
Benzene	mg/kg	0.0500	0.0448	90	75 - 127	4012
Benzene	mg/kg	0.0500	0.0422	84	75 - 127	5758
Ethylbenzene	mg/kg	0.0500	0.0446	89	69 - 128	4012
Ethylbenzene	mg/kg	0.0500	0.0460	92	69 - 128	5758
Naphthalene	mg/kg	0.0500	0.0496	99	58 - 143	4012
Naphthalene	mg/kg	0.0500	0.0430	86	58 - 143	5758
Toluene	mg/kg	0.0500	0.0456	91	72 - 128	4012
Toluene	mg/kg	0.0500	0.0496	99	72 - 128	5758
Xylenes (Total)	mg/kg	0.150	0.135	90	69 - 128	4012
Xylenes (Total)	mg/kg	0.150	0.138	92	69 - 128	5758
VOA Surr 1,2-DCA-d4	% Rec			98	58 - 139	4012
VOA Surr 1,2-DCA-d4	% Rec			87	58 - 139	5758
VOA Surr Toluene-d8	% Rec			111	71 - 127	4012
VOA Surr Toluene-d8	% Rec			119	71 - 127	5758
VOA Surr, 4-BFB	% Rec			98	60 - 141	4012
VOA Surr, 4-BFB	% Rec			100	60 - 141	5758
VOA Surr, DBFM	% Rec			95	67 - 126	4012
VOA Surr, DBFM	% Rec			88	67 - 126	5758
MISC PARAMETERS						
TOC	mg/kg	6430	5840	91	65 - 135	770

Project QC continued . . .

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Duplicates

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch	Sample Dup'd
TOC	mg/kg	2670	3200	18.06	25.	770	03-A135888

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
UST PARAMETERS					
TPH (Diesel Range)	< 10.0	mg/kg	4149	9/ 7/03	2:31
Naphthalene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Acenaphthene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Anthracene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Fluoranthene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Fluorene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Pyrene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Benzo(a)anthracene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Benzo(a)pyrene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Benzo(b)fluoranthene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Benzo(k)fluoranthene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Chrysene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Dibenzo(a,h)anthracene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Indeno(1,2,3-cd)pyrene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Acenaphthylene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Benzo(g,h,i)perylene	< 0.066	mg/kg	2677	9/ 5/03	16:52
Phenanthrene	< 0.066	mg/kg	2677	9/ 5/03	16:52

Project QC continued . . .

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VOA PARAMETERS					
Benzene	< 0.0003	mg/kg	4012	9/ 6/03	18:59
Benzene	< 0.0003	mg/kg	5758	9/ 9/03	12:36
Ethylbenzene	< 0.0005	mg/kg	4012	9/ 6/03	18:59
Ethylbenzene	< 0.0005	mg/kg	5758	9/ 9/03	12:36
Naphthalene	0.00130	mg/kg	4012	9/ 6/03	18:59
Naphthalene	0.00450	mg/kg	5758	9/ 9/03	12:36
Toluene	< 0.0008	mg/kg	4012	9/ 6/03	18:59
Toluene	< 0.0008	mg/kg	5758	9/ 9/03	12:36
Xylenes (Total)	< 0.0013	mg/kg	4012	9/ 6/03	18:59
Xylenes (Total)	< 0.0013	mg/kg	5758	9/ 9/03	12:36
VOA Surr 1,2-DCA-d4	109.	% Rec	4012	9/ 6/03	18:59
VOA Surr 1,2-DCA-d4	118.	% Rec	5758	9/ 9/03	12:36
VOA Surr Toluene-d8	111.	% Rec	4012	9/ 6/03	18:59
VOA Surr Toluene-d8	107.	% Rec	5758	9/ 9/03	12:36
VOA Surr, 4-BFB	103.	% Rec	4012	9/ 6/03	18:59
VOA Surr, 4-BFB	102.	% Rec	5758	9/ 9/03	12:36
VOA Surr, DBFM	104.	% Rec	4012	9/ 6/03	18:59
VOA Surr, DBFM	111.	% Rec	5758	9/ 9/03	12:36
MISC PARAMETERS					
TOC	< 1000	mg/kg	770	9/ 5/03	15:06

= Value outside Laboratory historical or method prescribed QC limits.

End of Report for Project 345372

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ANALYTICAL TESTING CORPORATION

Nashville Division

COOLER RECEIPT FORM BC# 345497

Client: Ecolog, Inc

Cooler Received On: 9/5/03 And Opened On: 9/5/03 By: Shane Gambill

(Signature)

1. Temperature of Cooler when opened 4.6 Degrees Celsius
2. Were custody seals on outside of cooler?.....YES...NO...NA
   a. If yes, how many, what kind and where: 1/2/3/4 FRONT/BACK/SIDE
3. Were custody seals on containers and intact?.....NO...YES...NA
4. Were the seals intact, signed, and dated correctly?.....YES...NO...NA
5. Were custody papers inside cooler?.....YES...NO...NA
6. Were custody papers properly filled out (ink,signed,etc)?.....YES...NO...NA
7. Did you sign the custody papers in the appropriate place?.....YES...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Other None
9. Cooling process: Ice Ice pack Ice(direct contact) Dry ice Other None
10. Did all containers arrive in good condition(unbroken)?.....YES...NO...NA
11. Were all container labels complete (#,date,signed,pres,etc)?.....YES...NO...NA
12. Did all container labels and tags agree with custody papers?.....YES...NO...NA
13. Were correct containers used for the analysis requested?.....YES...NO...NA
14. a. Were VOA vials received?.....YES...NO...NA
    b. Was there any observable head space present in any VOA vial?.....NO...YES...NA
15. Was sufficient amount of sample sent in each container?.....YES...NO...NA
16. Were correct preservatives used?.....YES...NO...NA
    If not, record standard ID of preservative used here_____
17. Was residual chlorine present?.....NO...YES...NA
18. See attached for resolution of non-conformance:

Fed-Ex UPS Velocity Airborne Route Off-street Misc.

TestAmerica
ANALYTICAL TESTING CORPORATION

345497

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: ELJ, Inc. Client #: 11026
Address: 1313 N. Dale Mabry
City/State/Zip Code: Tampa, FL 33618
Project Manager: R. Thompson
Telephone Number: 813-963-6811 Fax: 962-2804
Sampler Name: (Print Name) R. Thompson
Sampler Signature: Robert Thompson

Project Name: UST Act Tier 1
Project #: 11-776-00
Site/Location ID: Site # 00228 State: S.C.
Report To: R. Thompson
Invoice To: Same
Quote #: PO#:

TAT: ✓ Standard; ___ Rush (surcharges may apply)
Date Needed: 9/11/03
Fax Results: (Y) N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge DW - Drinking Water; GW - Groundwater S - Soil/Solid; WW - Wastewater Specify Other)	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	BTEX, MTBE, Naph. 8260B	EDB	PAH	COD	Ferrous Fe	Pb	Methane	Nitrate/Sulfate			REMARKS
MW-1	9/4/03	0935			GW	✓	✓						✓	✓	✓	✓	✓	✓	✓	✓	137749		
MW-2	"	0920			GW	✓	✓						✓	✓	✓	✓	✓	✓	✓	✓	750		
MW-3	"	0910			GW	✓	✓						✓	✓	✓	✓	✓	✓	✓	✓	751		

QC Deliverables: ___ None; ✓ Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: _____

Special Instructions:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp:
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment: 8393099 92117 FedEx to TA-Charleston

Relinquished By	Date	Time	Received By	Date	Time
Robert Thompson	9/4/03	0945	J. Brailsford	9/4/03	0945
J. Brailsford	9/4/03	1800			
Relinquished By:	Date:	Time:	Received By:	Date: 9/5/03	Time: 8:30

TestAmerica
INCORPORATED

Sample NonConformance/COC Revision Form

Initiated by:	Sgambill	Phone:		NC Closed	✓
Client Name:	Enviro-Logical Solu	Sample Range:	137749-751	Date Closed	9/5/2003
Client Contact:		SDG:	345497		
Client Account:	11026	Analyst:	249		
Date Created:	9/5/2003	Supervisor:			
NC #:	137751	NC Type:	NC Analytical 1		
Project Name:	UST 202 TIER 1	Terminal Manager:			
Project Number:	12-776-00				

Process: EDB Method?

Action:

Corrected By: Jennifer Huckaba

Closed: ✓ Kbundy

Comments:

Comment added by: Sgambill on 9/5/2003 2:14:24 PM
NC closed with out comments

****

Comment added by: Kbundy on 9/5/2003 2:13:30 PM
Per Bob Thomson runt EDB by 8260B

****

Comment added by: Jhuckaba on 9/5/2003 11:04:28 AM
Sending to Kenny Bundy (FLA client).

****

Added Without Comments

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9/11/03 CASE NARRATIVE

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

This report includes the analytical certificates of analysis for all samples listed below. These samples relate to your project identified below:

Project Name: UST 202 TIER 1
Project Number: 12-776-00.
Laboratory Project Number: 345497.

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. Any QC recoveries outside laboratory control limits are flagged individually with an #. Sample specific comments and quality control statements are included in the Laboratory notes section of the analytical report for each sample report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

Sample Identification	Lab Number	Collection Date
MW-1	03-A137749	9/ 4/03
MW-2	03-A137750	9/ 4/03
MW-3	03-A137751	9/ 4/03

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Sample Identification	Lab Number	Collection Date

These results relate only to the items tested.
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Report Approved By: Gail A. Lage Report Date: 9/11/03

Ashley Morris, Lab Director
Michael H. Dunn, M.S., QA/QC Director
Johnny A. Mitchell, Operations Manager Organics
Eric S. Smith, Assistant Technical Director
Roxanne L. Connor, Technical Services
Gail A. Lage, Technical Serv.
Glenn L. Norton, Technical Serv.
Kelly S. Comstock, Technical Serv.
Pamela A. Langford, Technical Serv.

Laboratory Certification Number: 84009

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ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202 TIER 1
Sampler: R.T.

Lab Number: 03-A137749
Sample ID: MW-1
Sample Type: Water
Site ID:

Date Collected: 9/ 4/03
Time Collected: 9:35
Date Received: 9/ 5/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
ORGANIC PARAMETERS									
Naphthalene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Acenaphthene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Anthracene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Fluoranthene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Fluorene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Pyrene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Benzo(a)anthracene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Benzo(a)pyrene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Benzo(b)fluoranthene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Benzo(k)fluoranthene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Chrysene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Dibenzo(a,h)anthracene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Indeno(1,2,3-cd)pyrene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Acenaphthylene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Benzo(g,h,i)perylene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
Phenanthrene	<2.0	ug/L	2.0	1.0	9/ 6/03	20:55	J.Saiyasak	8270C	3353
VOLATILE ORGANICS									
Benzene	<1.0	ug/L	1.0	1.0	9/11/03	9:27	S. Davis	8260B	7148
Toluene	<1.0	ug/L	1.0	1.0	9/11/03	9:27	S. Davis	8260B	7148
Ethylbenzene	<1.0	ug/L	1.0	1.0	9/11/03	9:27	S. Davis	8260B	7148
Xylenes (Total)	<1.0	ug/L	1.0	1.0	9/11/03	9:27	S. Davis	8260B	7148
1,2-Dibromoethane	<1.00	ug/L	1.00	1.0	9/11/03	9:27	S. Davis	8260B	7148
Methyl-t-butyl ether	<1.0	ug/L	1.0	1.0	9/11/03	9:27	S. Davis	8260B	7148
Naphthalene	< 5.00	ug/L	5.00	1.0	9/11/03	9:27	S. Davis	8260B	7148

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137749
Sample ID: MW-1
Project: 12-776-00

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS GC PARAMETERS									
Methane	136.	ug/L	26.	1.0	9/ 8/03	17:36	Carmichael	RSK175M	3448
Carbon Dioxide	30800	ug/L	3000	1.0	9/ 5/03	2:02	T. Beverly	SM4500CO2C	1868
METALS									
Ferrous Iron	<100.	ug/L	100.	1.0	9/ 5/03	19:41	W. Choate	3500D	1784
Lead	<5.0	ug/L	5.0	1.0	9/ 8/03	17:08	G.McCord	6010B	1645
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	1.27	mg/L	0.100	1.0	9/ 5/03	15:08	S. Duncan	353.2	1940
Sulfate	25.1	mg/L	1.00	1.0	9/ 9/03	9:37	M.Shockley	9038	5730

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
BNA's	1000 ml	1.0 ml	9/ 6/03		K. Turner	3510/625

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	104.	70. - 133.
VOA Surr Toluene-d8	103.	76. - 123.
VOA Surr, 4-BFB	106.	71. - 132.
VOA Surr, DBFM	105.	74. - 128.
BNA Surr-Nitrobenzene-d5	78.	34. - 107.
BNA Surr-2-Fluorobiphenyl	70.	40. - 96.
BNA Surr-Terphenyl-d14	73.	26. - 106.

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137749
Sample ID: MW-1
Project: 12-776-00

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
M = Method RSK175M/8015BM modified for use with Headspace analyzer.
Sample for Ferrous Iron analysis received outside method prescribed holding time.

End of Sample Report.

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ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202 TIER 1
Sampler: R.T.

Lab Number: 03-A137750
Sample ID: MW-2
Sample Type: Water
Site ID:

Date Collected: 9/ 4/03
Time Collected: 8:30
Date Received: 9/ 5/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
ORGANIC PARAMETERS									
Naphthalene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Acenaphthene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Anthracene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Fluoranthene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Fluorene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Pyrene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Benzo(a)anthracene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Benzo(a)pyrene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Benzo(b)fluoranthene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Benzo(k)fluoranthene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Chrysene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Dibenzo(a,h)anthracene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Indeno(1,2,3-cd)pyrene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Acenaphthylene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Benzo(g,h,i)perylene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
Phenanthrene	<2.0	ug/L	2.0	1.0	9/ 6/03	21:31	J.Saiyasak	8270C	3353
VOLATILE ORGANICS									
Benzene	<1.0	ug/L	1.0	1.0	9/11/03	9:57	S. Davis	8260B	7148
Toluene	<1.0	ug/L	1.0	1.0	9/11/03	9:57	S. Davis	8260B	7148
Ethylbenzene	<1.0	ug/L	1.0	1.0	9/11/03	9:57	S. Davis	8260B	7148
Xylenes (Total)	<1.0	ug/L	1.0	1.0	9/11/03	9:57	S. Davis	8260B	7148
1,2-Dibromoethane	<1.00	ug/L	1.00	1.0	9/11/03	9:57	S. Davis	8260B	7148
Methyl-t-butyl ether	<1.0	ug/L	1.0	1.0	9/11/03	9:57	S. Davis	8260B	7148
Naphthalene	< 5.00	ug/L	5.00	1.0	9/11/03	9:57	S. Davis	8260B	7148

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137750
Sample ID: MW-2
Project: 12-776-00

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS GC PARAMETERS									
Methane	381.	ug/L	26.	1.0	9/ 8/03	17:39	Carmichael	RSK175M	3448
Carbon Dioxide	32200	ug/L	3000	1.0	9/ 5/03	2:02	T. Beverly	SM4500CO2C	1868
METALS									
Ferrous Iron	254.	ug/L	100.	1.0	9/ 5/03	19:41	W. Choate	3500D	1784
Lead	34.2	ug/L	5.0	1.0	9/ 8/03	17:08	G.McCord	6010B	1645
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	<0.100	mg/L	0.100	1.0	9/ 5/03	14:42	S. Duncan	353.2	1940
Sulfate	376.	mg/L	20.0	20.0	9/ 9/03	9:37	M.Shockley	9038	5730

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
BNA's	1000 ml	1.0 ml	9/ 6/03		K. Turner	3510/625

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	103.	70. - 133.
VOA Surr Toluene-d8	106.	76. - 123.
VOA Surr, 4-BFB	101.	71. - 132.
VOA Surr, DBFM	102.	74. - 128.
BNA Surr-Nitrobenzene-d5	76.	34. - 107.
BNA Surr-2-Fluorobiphenyl	70.	40. - 96.
BNA Surr-Terphenyl-d14	74.	26. - 106.

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137750
Sample ID: MW-2
Project: 12-776-00

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
M = Method RSK175M/8015BM modified for use with Headspace analyzer.
Sample for Ferrous Iron analysis received outside method prescribed holding time.

End of Sample Report.

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ANALYTICAL REPORT

Enviro-Logical Solutions 11026

13135 N. Dale Mabry Highway
Tampa, FL 33618

Project: 12-776-00
Project Name: UST 202 TIER 1
Sampler: R.T.

Lab Number: 03-A137751
Sample ID: MW-3
Sample Type: Water
Site ID:

Date Collected: 9/ 4/03
Time Collected: 9:10
Date Received: 9/ 5/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
ORGANIC PARAMETERS									
Naphthalene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Acenaphthene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Anthracene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Fluoranthene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Fluorene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Pyrene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Benzo(a)anthracene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Benzo(a)pyrene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Benzo(b)fluoranthene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Benzo(k)fluoranthene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Chrysene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Dibenzo(a,h)anthracene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Indeno(1,2,3-cd)pyrene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Acenaphthylene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Benzo(g,h,i)perylene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
Phenanthrene	<2.0	ug/L	2.0	1.0	9/ 6/03	22:07	J.Saiyasak	8270C	3353
VOLATILE ORGANICS									
Benzene	<1.0	ug/L	1.0	1.0	9/ 6/03	20:46	C. Spry	8260B	4701
Toluene	<1.0	ug/L	1.0	1.0	9/ 6/03	20:46	C. Spry	8260B	4701
Ethylbenzene	<1.0	ug/L	1.0	1.0	9/ 6/03	20:46	C. Spry	8260B	4701
Xylenes (Total)	<1.0	ug/L	1.0	1.0	9/ 6/03	20:46	C. Spry	8260B	4701
1,2-Dibromoethane	<1.00	ug/L	1.00	1.0	9/ 6/03	20:46	C. Spry	8260B	4701
Methyl-t-butyl ether	<1.0	ug/L	1.0	1.0	9/ 6/03	20:46	C. Spry	8260B	4701
Naphthalene	< 5.00	ug/L	5.00	1.0	9/ 6/03	20:46	C. Spry	8260B	4701

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137751
Sample ID: MW-3
Project: 12-776-00
Page 2

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS GC PARAMETERS									
Methane	134.	ug/L	26.	1.0	9/ 8/03	17:43	Carmichael	RSK175M	3448
Carbon Dioxide	33700	ug/L	3000	1.0	9/ 5/03	2:02	T. Beverly	SM4500CO2C	1868
METALS									
Ferrous Iron	3540	ug/L	100.	1.0	9/ 5/03	19:41	W. Choate	3500D	1784
Lead	<5.0	ug/L	5.0	1.0	9/ 8/03	8:42	G.McCord	6010B	1686
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	<0.100	mg/L	0.100	1.0	9/ 5/03	14:43	S. Duncan	353.2	1940
Sulfate	758.	mg/L	20.0	20.0	9/ 9/03	9:37	M.Shockley	9038	5730

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
BNA's	1000 ml	1.0 ml	9/ 6/03		K. Turner	3510/625

Surrogate	% Recovery	Target Range
VOA Surr 1,2-DCA-d4	112.	70. - 133.
VOA Surr Toluene-d8	96.	76. - 123.
VOA Surr, 4-BFB	108.	71. - 132.
VOA Surr, DBFM	100.	74. - 128.
BNA Surr-Nitrobenzene-d5	91.	34. - 107.
BNA Surr-2-Fluorobiphenyl	80.	40. - 96.
BNA Surr-Terphenyl-d14	65.	26. - 106.

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A137751
Sample ID: MW-3
Project: 12-776-00

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
M = Method RSK175M/8015BM modified for use with Headspace analyzer.
Sample for Ferrous Iron analysis received outside method prescribed holding time.

End of Sample Report.

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PROJECT QUALITY CONTROL DATA
Project Number: 12-776-00
Project Name: UST 202 TIER 1
Page: 1
Laboratory Receipt Date: 9/ 5/03

Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for the defined analytical batch for MS/MSD analysis on an true sample matrix. Laboratory reagent water was used for QC purposes.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
UST ANALYSIS								
Naphthalene	mg/l	< 0.0007	0.0320	0.0500	64	32. - 101.	3353	blank
Naphthalene	mg/l	< 0.0007	0.0320	0.0500	64	32. - 101.	3353	blank
Acenaphthene	mg/l	< 0.0008	0.0340	0.0500	68	40. - 113.	3353	blank
Anthracene	mg/l	< 0.0009	0.0470	0.0500	94	48. - 122.	3353	blank
Fluoranthene	mg/l	< 0.0008	0.0470	0.0500	94	48. - 127.	3353	blank
Fluorene	mg/l	< 0.0008	0.0370	0.0500	74	45. - 120.	3353	blank
Pyrene	mg/l	< 0.0009	0.0430	0.0500	86	49. - 127.	3353	blank
Benzo(a)anthracene	mg/l	< 0.0009	0.0420	0.0500	84	49. - 126.	3353	blank
Benzo(a)pyrene	mg/l	< 0.0008	0.0420	0.0500	84	48. - 126.	3353	blank
Benzo(b)fluoranthene	mg/l	< 0.0007	0.0430	0.0500	86	45. - 127.	3353	blank
Benzo(k)fluoranthene	mg/l	< 0.0009	0.0500	0.0500	100	46. - 134.	3353	blank
Chrysene	mg/l	< 0.0010	0.0400	0.0500	80	48. - 126.	3353	blank
Dibenzo(a,h)anthracene	mg/l	< 0.0008	0.0420	0.0500	84	31. - 149.	3353	blank
Indeno(1,2,3-cd)pyrene	mg/l	< 0.0008	0.0390	0.0500	78	26. - 147.	3353	blank
Acenaphthylene	mg/l	< 0.0008	0.0340	0.0500	68	41. - 112.	3353	blank
Benzo(g,h,i)perylene	mg/l	< 0.0007	0.0380	0.0500	76	26. - 152.	3353	blank
Phenanthrene	mg/l	< 0.0008	0.0460	0.0500	92	47. - 122.	3353	blank
VOA PARAMETERS								
Benzene	mg/l	< 0.0010	0.0498	0.0500	100	68 - 136	4701	03-A137908
Toluene	mg/l	< 0.0010	0.0574	0.0500	115	73 - 133	4701	03-A137908
Toluene	mg/l	< 0.0006	0.0473	0.0500	95	73 - 133	7148	03a139922
VOA Surr 1,2-DCA-d4	% Rec				96	70 - 133	4701	
VOA Surr 1,2-DCA-d4	% Rec				90	70 - 133	7148	
VOA Surr Toluene-d8	% Rec				99	76 - 123	4701	
VOA Surr Toluene-d8	% Rec				103	76 - 123	7148	
VOA Surr, 4-BFB	% Rec				101	71 - 132	4701	

Project QC continued . . .

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Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for the defined analytical batch for MS/MSD analysis on an true sample matrix. Laboratory reagent water was used for QC purposes.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
VOA Surr, 4-BFB	% Rec				101	71 - 132	7148	
VOA Surr, DBFM	% Rec				99	74 - 128	4701	
VOA Surr, DBFM	% Rec				98	74 - 128	7148	
BNA Surr-Nitrobenzene-d5	% Rec				83	34 - 107	3353	
BNA Surr-2-Fluorobiphenyl	% Rec				72	40 - 96	3353	
BNA Surr-Terphenyl-d14	% Rec				84	26 - 106	3353	
METALS								
Lead	mg/l	< 0.0050	0.0510	0.0500	102	80 - 120	1645	Duplicate
Lead	mg/l	< 0.0050	0.0550	0.0500	110	80 - 120	1686	Duplicate
MISC PARAMETERS								
Nitrate-N as N	mg/l	0.240	11.4	12.0	93	80 - 120	1940	03-A137710
Nitrate-N as N	mg/l	0.240	11.0	12.0	90	80 - 120	1940	03-A137710
Sulfate	mg/l	25.1	65.6	40.0	101	80 - 120	5730	03-A137749
Methane	mg/L	< 0.026	1.36	1.33	102	40 - 140	3448	03-A137799

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
UST PARAMETERS						
Naphthalene	mg/l	0.0320	0.0300	6.45	44.	3353
Acenaphthene	mg/l	0.0340	0.0310	9.23	42.	3353
Anthracene	mg/l	0.0470	0.0460	2.15	35.	3353
Fluoranthene	mg/l	0.0470	0.0450	4.35	38.	3353
Fluorene	mg/l	0.0370	0.0340	8.45	38.	3353
Pyrene	mg/l	0.0430	0.0410	4.76	36.	3353
Benzo(a)anthracene	mg/l	0.0420	0.0400	4.88	37.	3353

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Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
Benzo(a)pyrene	mg/l	0.0420	0.0410	2.41	37.	3353
Benzo(b)fluoranthene	mg/l	0.0430	0.0410	4.76	38.	3353
Benzo(k)fluoranthene	mg/l	0.0500	0.0470	6.19	36.	3353
Chrysene	mg/l	0.0400	0.0380	5.13	38.	3353
Dibenzo(a,h)anthracene	mg/l	0.0420	0.0390	7.41	45.	3353
Indeno(1,2,3-cd)pyrene	mg/l	0.0390	0.0370	5.26	43.	3353
Acenaphthylene	mg/l	0.0340	0.0320	6.06	39.	3353
Benzo(g,h,i)perylene	mg/l	0.0380	0.0350	8.22	47.	3353
Phenanthrene	mg/l	0.0460	0.0440	4.44	38.	3353
VOA PARAMETERS						
Benzene	mg/l	0.0498	0.0492	1.21	22.	4701
Benzene	mg/l	0.0442	0.0461	4.21	22.	7148
Toluene	mg/l	0.0574	0.0558	2.83	22.	4701
Toluene	mg/l	0.0473	0.0482	1.88	22.	7148
VOA Surr 1,2-DCA-d4	% Rec		97.			4701
VOA Surr 1,2-DCA-d4	% Rec		92.			7148
VOA Surr Toluene-d8	% Rec		99.			4701
VOA Surr Toluene-d8	% Rec		100.			7148
VOA Surr, 4-BFB	% Rec		103.			4701
VOA Surr, 4-BFB	% Rec		101.			7148
VOA Surr, DBFM	% Rec		99.			4701
VOA Surr, DBFM	% Rec		100.			7148
BNA Surr-Nitrobenzene-d5	% Rec		77.			3353
BNA Surr-2-Fluorobiphenyl	% Rec		67.			3353
BNA Surr-Terphenyl-d14	% Rec		82.			3353
METALS						
Lead	mg/l	0.0510	0.0510	0.00	20	1645
Lead	mg/l	0.0550	0.0570	3.57	20	1686

Project QC continued . . .

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MISC PARAMETERS						
Methane	mg/L	1.36	1.31	3.75	50	3448
Nitrate-N as N	mg/l	11.4	11.0	3.57	20	1940
Sulfate	mg/l	65.6	65.2	0.61	20	5730

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
UST PARAMETERS						
Naphthalene	mg/l	0.0500	0.0330	66	32 - 101	3353
Acenaphthene	mg/l	0.0500	0.0340	68	40 - 113	3353
Anthracene	mg/l	0.0500	0.0480	96	48 - 122	3353
Fluoranthene	mg/l	0.0500	0.0490	98	48 - 127	3353
Fluorene	mg/l	0.0500	0.0370	74	45 - 120	3353
Pyrene	mg/l	0.0500	0.0430	86	49 - 127	3353
Benzo(a)anthracene	mg/l	0.0500	0.0420	84	49 - 126	3353
Benzo(a)pyrene	mg/l	0.0500	0.0430	86	48 - 126	3353
Benzo(b)fluoranthene	mg/l	0.0500	0.0430	86	45 - 127	3353
Benzo(k)fluoranthene	mg/l	0.0500	0.0480	96	46 - 134	3353
Chrysene	mg/l	0.0500	0.0400	80	48 - 126	3353
Dibenzo(a,h)anthracene	mg/l	0.0500	0.0420	84	31 - 149	3353
Indeno(1,2,3-cd)pyrene	mg/l	0.0500	0.0390	78	26 - 147	3353
Acenaphthylene	mg/l	0.0500	0.0350	70	41 - 112	3353
Benzo(g,h,i)perylene	mg/l	0.0500	0.0380	76	26 - 152	3353
Phenanthrene	mg/l	0.0500	0.0470	94	47 - 122	3353
VOA PARAMETERS						
Benzene	mg/l	0.0500	0.0427	85	78 - 125	4701
Benzene	mg/l	0.0500	0.0415	83	78 - 125	4701
Benzene	mg/l	0.0500	0.0532	106	78 - 125	7148
1,2-Dibromoethane	mg/l	0.0500	0.0502	100	77 - 128	4701
1,2-Dibromoethane	mg/l	0.0500	0.0492	98	77 - 128	4701
1,2-Dibromoethane	mg/l	0.0500	0.0530	106	77 - 128	7148

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Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
Ethylbenzene	mg/l	0.0500	0.0462	92	79 - 125	4701
Ethylbenzene	mg/l	0.0500	0.0453	91	79 - 125	4701
Ethylbenzene	mg/l	0.0500	0.0548	110	79 - 125	7148
Naphthalene	mg/l	0.0500	0.0562	112	62 - 142	4701
Naphthalene	mg/l	0.0500	0.0620	124	62 - 142	4701
Naphthalene	mg/l	0.0500	0.0488	98	62 - 142	7148
Toluene	mg/l	0.0500	0.0470	94	79 - 125	4701
Toluene	mg/l	0.0500	0.0468	94	79 - 125	4701
Toluene	mg/l	0.0500	0.0584	117	79 - 125	7148
Xylenes (Total)	mg/l	0.150	0.140	93	78 - 127	4701
Xylenes (Total)	mg/l	0.150	0.136	91	78 - 127	4701
Xylenes (Total)	mg/l	0.150	0.165	110	78 - 127	7148
Methyl-t-butyl ether	mg/l	0.0500	0.0420	84	71 - 135	4701
Methyl-t-butyl ether	mg/l	0.0500	0.0406	81	71 - 135	4701
Methyl-t-butyl ether	mg/l	0.0500	0.0517	103	71 - 135	7148
Methane	mg/L	1.33	1.26	95	79 - 121	3448
VOA Surr 1,2-DCA-d4	% Rec			103	70 - 133	4701
VOA Surr 1,2-DCA-d4	% Rec			97	70 - 133	4701
VOA Surr 1,2-DCA-d4	% Rec			94	70 - 133	7148
VOA Surr Toluene-d8	% Rec			101	76 - 123	4701
VOA Surr Toluene-d8	% Rec			100	76 - 123	4701
VOA Surr Toluene-d8	% Rec			108	76 - 123	7148
VOA Surr, 4-BFB	% Rec			102	71 - 132	4701
VOA Surr, 4-BFB	% Rec			102	71 - 132	4701
VOA Surr, 4-BFB	% Rec			101	71 - 132	7148
VOA Surr, DBFM	% Rec			99	74 - 128	4701
VOA Surr, DBFM	% Rec			101	74 - 128	4701
VOA Surr, DBFM	% Rec			100	74 - 128	7148

Project QC continued . . .

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BNA Surr-Nitrobenzene-d5	% Rec			82	34 - 107	3353
BNA Surr-2-Fluorobiphenyl	% Rec			72	40 - 96	3353
BNA Surr-Terphenyl-d14	% Rec			80	26 - 106	3353
METALS						
Lead	mg/l	0.0500	0.0490	98	80 - 120	1645
Lead	mg/l	0.0500	0.0510	102	80 - 120	1686
MISC PARAMETERS						
Nitrate-N as N	mg/l	6.00	6.10	102	88 - 113	1940
Sulfate	mg/l	25.0	27.3	109 #	91 - 105	5730

Duplicates

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch	Sample Dup'd
Nitrate-N as N	mg/l	< 0.100	< 0.100	N/A	15.	1940	03-A137812
Sulfate	mg/l	22.2	22.3	0.45	15.	5730	03-A138634

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
UST PARAMETERS					
Naphthalene	< 0.0007	mg/l	3353	9/ 6/03	19:06
Acenaphthene	< 0.0008	mg/l	3353	9/ 6/03	19:06
Anthracene	< 0.0009	mg/l	3353	9/ 6/03	19:06
Fluoranthene	< 0.0008	mg/l	3353	9/ 6/03	19:06
Fluorene	< 0.0008	mg/l	3353	9/ 6/03	19:06
Pyrene	< 0.0009	mg/l	3353	9/ 6/03	19:06
Benzo(a)anthracene	< 0.0009	mg/l	3353	9/ 6/03	19:06
Benzo(a)pyrene	< 0.0008	mg/l	3353	9/ 6/03	19:06

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Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Analysis Date	Analysis Time
Benzo(b)fluoranthene	< 0.0007	mg/l	3353	9/ 6/03	19:06
Benzo(k)fluoranthene	< 0.0009	mg/l	3353	9/ 6/03	19:06
Chrysene	< 0.0010	mg/l	3353	9/ 6/03	19:06
Dibenzo(a,h)anthracene	< 0.0008	mg/l	3353	9/ 6/03	19:06
Indeno(1,2,3-cd)pyrene	< 0.0008	mg/l	3353	9/ 6/03	19:06
Acenaphthylene	< 0.0008	mg/l	3353	9/ 6/03	19:06
Benzo(g,h,i)perylene	< 0.0007	mg/l	3353	9/ 6/03	19:06
Phenanthrene	< 0.0008	mg/l	3353	9/ 6/03	19:06
VOA PARAMETERS					
Benzene	< 0.0005	mg/l	4701	9/ 6/03	18:42
Benzene	< 0.0005	mg/l	4701	9/ 7/03	7:03
Benzene	< 0.0005	mg/l	7148	9/11/03	8:58
1,2-Dibromoethane	< 0.00040	mg/l	4701	9/ 6/03	18:42
1,2-Dibromoethane	< 0.00040	mg/l	4701	9/ 7/03	7:03
1,2-Dibromoethane	< 0.00040	mg/l	7148	9/11/03	8:58
Ethylbenzene	< 0.0003	mg/l	4701	9/ 6/03	18:42
Ethylbenzene	0.0003	mg/l	4701	9/ 7/03	7:03
Ethylbenzene	< 0.0003	mg/l	7148	9/11/03	8:58
Naphthalene	< 0.00120	mg/l	4701	9/ 6/03	18:42
Naphthalene	0.00250	mg/l	4701	9/ 7/03	7:03
Naphthalene	< 0.00120	mg/l	7148	9/11/03	8:58
Toluene	< 0.0006	mg/l	4701	9/ 6/03	18:42
Toluene	< 0.0006	mg/l	4701	9/ 7/03	7:03
Toluene	< 0.0006	mg/l	7148	9/11/03	8:58
Xylenes (Total)	< 0.0009	mg/l	4701	9/ 6/03	18:42
Xylenes (Total)	0.0018	mg/l	4701	9/ 7/03	7:03
Xylenes (Total)	< 0.0009	mg/l	7148	9/11/03	8:58
Methyl-t-butyl ether	< 0.0005	mg/l	4701	9/ 6/03	18:42
Methyl-t-butyl ether	< 0.0005	mg/l	4701	9/ 7/03	7:03
Methyl-t-butyl ether	< 0.0005	mg/l	7148	9/11/03	8:58

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VOA Surr 1,2-DCA-d4	112.	% Rec	4701	9/ 6/03	18:42
VOA Surr 1,2-DCA-d4	103.	% Rec	4701	9/ 7/03	7:03
VOA Surr 1,2-DCA-d4	100.	% Rec	7148	9/11/03	8:58
VOA Surr Toluene-d8	96.	% Rec	4701	9/ 6/03	18:42
VOA Surr Toluene-d8	96.	% Rec	4701	9/ 7/03	7:03
VOA Surr Toluene-d8	102.	% Rec	7148	9/11/03	8:58
VOA Surr, 4-BFB	108.	% Rec	4701	9/ 6/03	18:42
VOA Surr, 4-BFB	104.	% Rec	4701	9/ 7/03	7:03
VOA Surr, 4-BFB	105.	% Rec	7148	9/11/03	8:58
VOA Surr, DBFM	101.	% Rec	4701	9/ 6/03	18:42
VOA Surr, DBFM	100.	% Rec	4701	9/ 7/03	7:03
VOA Surr, DBFM	101.	% Rec	7148	9/11/03	8:58
BNA Surr-Nitrobenzene-d5	80.	% Rec	3353	9/ 6/03	19:06
BNA Surr-2-Fluorobiphenyl	69.	% Rec	3353	9/ 6/03	19:06
BNA Surr-Terphenyl-d14	79.	% Rec	3353	9/ 6/03	19:06
METALS					
Lead	< 0.0029	mg/l	1645	9/ 8/03	17:08
Lead	< 0.0029	mg/l	1686	9/ 8/03	8:42
MISC PARAMETERS					
Nitrate-N as N	< 0.100	mg/l	1940	9/ 5/03	14:37
Sulfate	< 1.00	mg/l	5730	9/ 9/03	9:37
Methane	< 0.026	mg/L	3448	9/ 8/03	16:52

= Value outside Laboratory historical or method prescribed QC limits.

End of Report for Project 345497

SITE NAME: UST 202	SITE LOCATION: 2231 S. Hobson Avenue, Charleston Naval Complex	
WELL NO: MW-1	SAMPLE ID: MW-1	DATE: 9/4/03

PURGING DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 12	STATIC DEPTH TO WATER (ft): 5.41	WELL CAPACITY (gal/ft): .16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) X WELL CAPACITY =

=(12 – 5.41)X .16 = 1.05

PURGE METHOD: Peristaltic Pump	PURGE INITIATED AT: 0910	PURGE ENDED AT: 0925	TOTAL VOL. PURGED (gal): 3.75

TIME	VOLUME PURGED (gal)	CUMUL. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP. (°C)	COND. (µmhos)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR
0915	1.25		.25	6.11	8.39	24.7	440	.07		None	None
0920		2.50	.25	6.22	7.1	24.5	394	.05	9.89	None	None
0925		3.75	.25	6.18	7.2	24.3	367	.05	4.81	None	None

WELL CAPACITY (Gallons per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: ELS, Inc.	SAMPLER(S) SIGNATURE(S): [illegible]	
SAMPLING METHOD(S): disposable bailer	SAMPLING INITIATED AT: 0910	SAMPLING ENDED AT: 0935
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (mL)	FINAL pH	
2	AG	40 ml	HCl	None		BTEX, MTBE, Naphthalene
2	AG	40 ml	HCl			EDB
1	AG	liter	NA			PAH
2	AG	40 ml	NA			CO_2
1	PE	250 ml	HCl			Ferrous Fe
1	PE	250 ml	HNO_3			Pb
2	AG	40 ml	HCl			Methane
1	PE	500 ml	NA			Nitrates/Sulfates

REMARKS:

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

SITE NAME: UST 202	SITE LOCATION: 2231 S. Hobson Avenue, Charleston Naval Complex	
WELL NO: MW-2	SAMPLE ID: MW-2	DATE: 9/4/03

PURGING DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 12	STATIC DEPTH TO WATER (ft): 5.82	WELL CAPACITY (gal/ft): .16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) X WELL CAPACITY =

=(12 – 5.82)X .16 = .98

PURGE METHOD: Peristaltic Pump	PURGE INITIATED AT: 0750	PURGE ENDED AT: 0805	TOTAL VOL. PURGED (gal): 1.0

TIME	VOLUME PURGED (gal)	CUMUL. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP. (°C)	COND. (µmhos)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR
0755		.5	.10	8.98	7.19	23.7	1,408	2.15			
0800		1	.10	10.24	7.22	24.0	1,393	2.32	25		

WELL CAPACITY (Gallons per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: ELS, Inc.	SAMPLER(S) SIGNATURE(S): Robert Thomas	
SAMPLING METHOD(S): disposable bailer	SAMPLING INITIATED AT:	SAMPLING ENDED AT: 0830
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (mL)	FINAL pH	
2	AG	40ml	HCl	None		BTEX, MTBE, Naphthalene
2	AG	40ml	HCl			EDB
1	AG	liter	NA			AHI
2	AG	40ml	NA			CO_2
1	PE	250ml	HCl			Ferrous Fe
1	PE	250ml	HNO_3			Pb
2	AG	40ml	HCl			Methane
1	PE	500ml	NA			Nitrates/Sulfates

REMARKS:

well dry after pumping approx. 1 1/4 gallons, allow MW to recover prior to sample collection

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

SITE NAME: UST 202	SITE LOCATION: 2231 S. Hobson Avenue, Charleston Naval Complex	
WELL NO: MW-3	SAMPLE ID: MW-3	DATE: 9/4/03

PURGING DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 12	STATIC DEPTH TO WATER (ft): 5.91	WELL CAPACITY (gal/ft): .16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) X WELL CAPACITY =

=(12 – 5.91)X .16 = .97

PURGE METHOD: peristaltic pump	PURGE INITIATED AT: 0845	PURGE ENDED AT:	TOTAL VOL. PURGED (gal): 3.75

TIME	VOLUME PURGED (gal)	CUMUL. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP. (°C)	COND. (µmhos)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR
0850		1.25	.25	6.30	7.18	23.0	1,661	.10			
0855		2.50	.25	6.39	6.97	22.5	1,517	.13	22		
0900		3.75	.25	6.40	6.83	22.5	1,541	.09	18		

WELL CAPACITY (Gallons per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: ELS, Inc.	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): disposable bailer	SAMPLING INITIATED AT:	SAMPLING ENDED AT: 0910
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N)	DUPLICATE: Y (N)

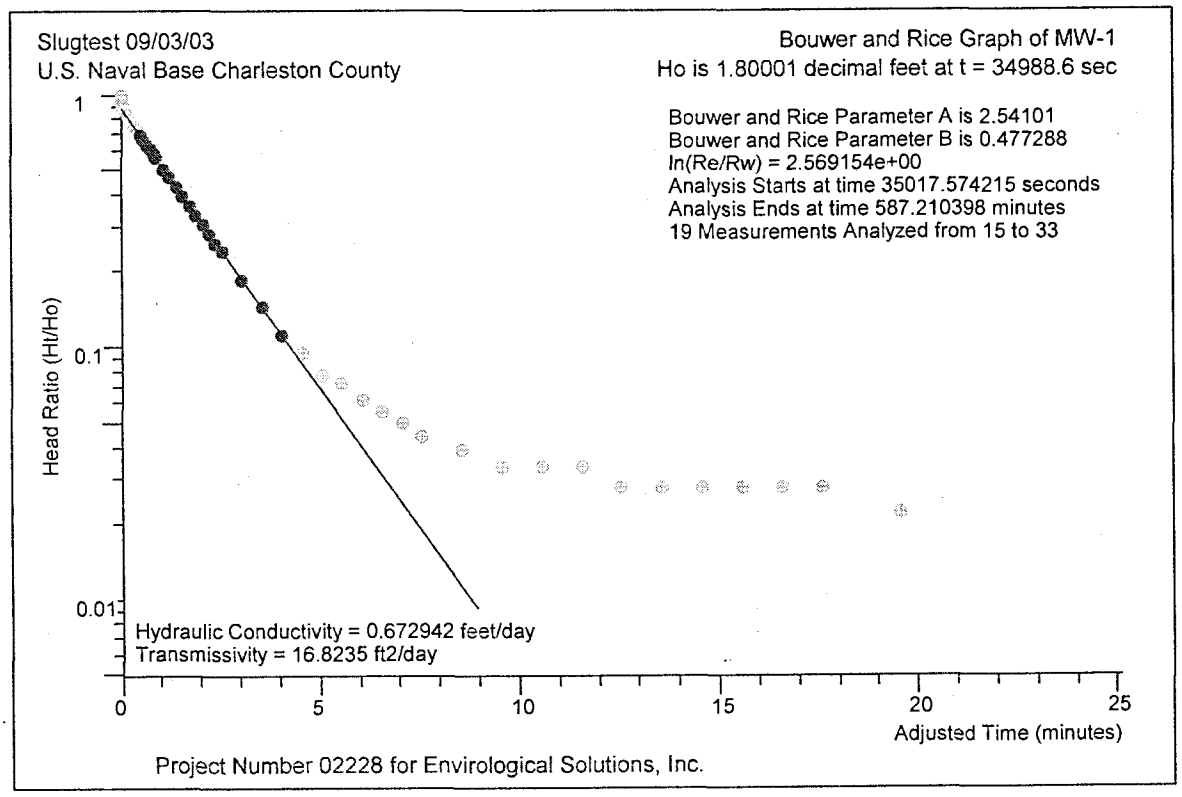
SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (mL)	FINAL pH	
2	AG	40ml	HCl	None		BTEX, MTBE, Naphthalene
2	AG	40ml	HCl			EDB
1	AG	liter	NA			PAH
2	AG	40ml	NA			CO_2
1	PE	250ml	HCl			Ferrous Fe
1	PE	250ml	HNO_3			Pb
2	AG	40ml	HCl			Methane
1	PE	500ml	NA			Nitrates/Sulfates

REMARKS:

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

APPENDIX D

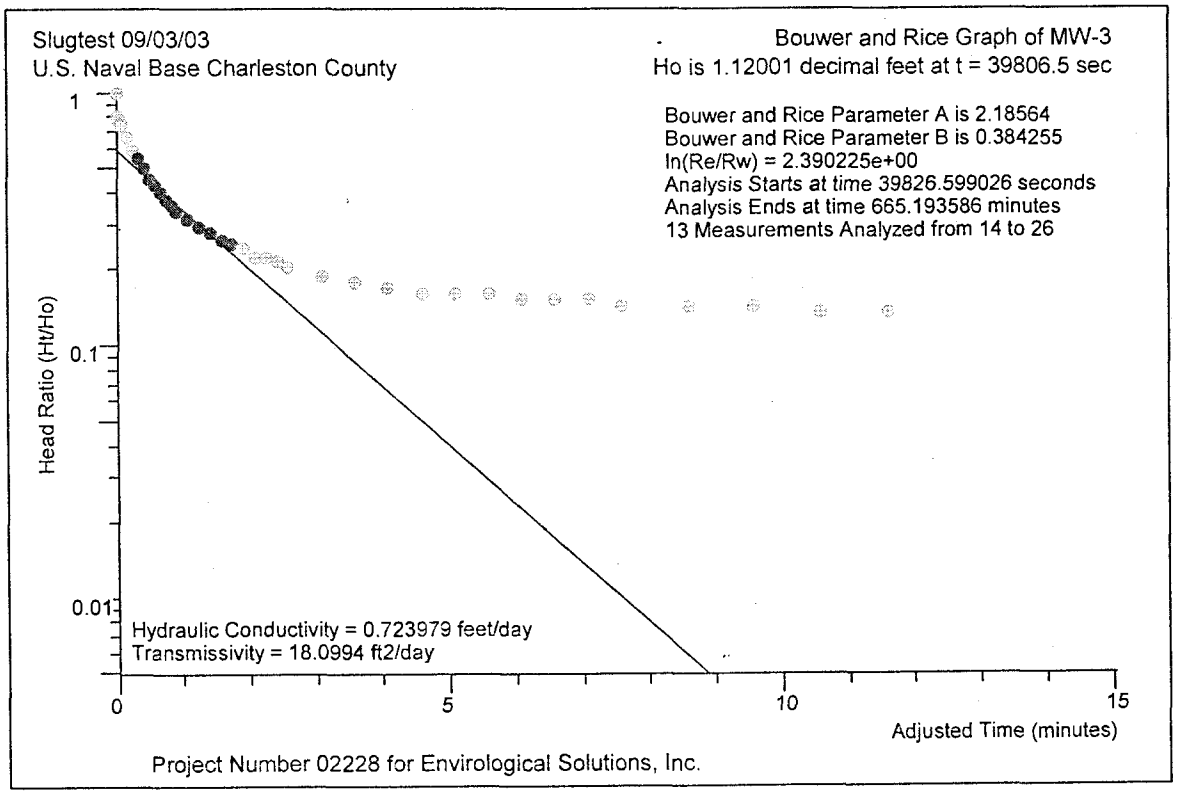
SLUG TEST DATA FORMS


Slugtest 09/03/03
U.S. Naval Base Charleston County
Bouwer and Rice Graph of MW-1
Ho is 1.80001 decimal feet at t = 34988.6 sec
Bouwer and Rice Parameter A is 2.54101
Bouwer and Rice Parameter B is 0.477288
ln(Re/Rw) = 2.569154e+00
Analysis Starts at time 35017.574215 seconds
Analysis Ends at time 587.210398 minutes
19 Measurements Analyzed from 15 to 33
Head Ratio (Ht/Ho)
1
0.1
0.01
Hydraulic Conductivity = 0.672942 feet/day
Transmissivity = 16.8235 ft2/day
0
5
10
15
20
25
Adjusted Time (minutes)
Project Number 02228 for Envirological Solutions, Inc.

Data from file: A:\USNMW1.SLG
Title: Slugtest
Site Name: U.S. Naval Base
Location: Charleston County
Client: Envirological Solutions, Inc.
Project Number: 02228
Test Date: 09/03/03
Well Number: MW-1
Casing Radius: 1 inches
Effective Well Radius: 2 inches
Aquifer Thickness: 25 feet
Water Table to Screen Bottom: 5.84999 feet
Screen Length: 10 feet
Static Water Level: 5.84999 decimal feet
K ratio is not entered
There are 51 time and drawdown measurements
Tests starts with trial 6
Time values will be adjusted by 0.404961 days (34988.629532 seconds)

Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
1	0.404903	-5.79953e-05	5.84999	0	0
2	0.404913	-4.79817e-05	5.84999	0	0
3	0.404926	-3.49879e-05	5.84999	0	0
4	0.404937	-2.39909e-05	5.84999	0	0
5	0.404948	-1.29938e-05	5.83999	0.0100063	0.00555904
6	0.404961	0	4.04998	1.80001	1
7	0.404972	1.09971e-05	4.14001	1.70999	0.949986
8	0.404983	2.20239e-05	4.20999	1.64001	0.911109
9	0.404995	3.40044e-05	4.23	1.61999	0.899991
10	0.405007	4.60148e-05	4.25999	1.59001	0.883332
11	0.405065	0.00010401	4.34001	1.50999	0.838877
12	0.405123	0.000162005	4.41999	1.43	0.794441
13	0.405181	0.000220001	4.49	1.35999	0.755545
14	0.405238	0.000277013	4.55001	1.29998	0.722209
15	0.405296	0.000335008	4.61002	1.23998	0.688873
16	0.405354	0.000393003	4.66002	1.18998	0.661095
17	0.405412	0.000450999	4.71001	1.13998	0.633318
18	0.40547	0.000509024	4.76001	1.08998	0.605541
19	0.405528	0.000567019	4.81001	1.03998	0.577764
20	0.405587	0.000625998	4.85001	0.999988	0.555545
21	0.405701	0.000740021	4.94	0.909995	0.50555
22	0.405817	0.000856012	5.01001	0.839983	0.466654
23	0.405933	0.000972003	5.07999	0.770004	0.427777
24	0.406049	0.00108802	5.14	0.709998	0.394441
25	0.406164	0.001203	5.2	0.649992	0.361105
26	0.40628	0.00131902	5.25	0.599993	0.333327
27	0.406396	0.00143501	5.3	0.549993	0.30555
28	0.406512	0.001551	5.35	0.499994	0.277773
29	0.406627	0.00166601	5.38999	0.460001	0.255555
30	0.406744	0.00178301	5.42001	0.429982	0.238877
31	0.40709	0.00212902	5.52001	0.329983	0.183323
32	0.407438	0.00247702	5.58999	0.260003	0.144445
33	0.407785	0.00282401	5.65	0.199998	0.111109
34	0.408132	0.003171	5.67998	0.170011	0.0944501
35	0.408479	0.00351802	5.71	0.139992	0.0777727
36	0.408826	0.003865	5.72001	0.129985	0.0722137
37	0.409174	0.00421301	5.73999	0.110005	0.0611136
38	0.409521	0.00456002	5.75	0.0999989	0.0555546
39	0.409868	0.00490701	5.76	0.0899925	0.0499955
40	0.410216	0.00525501	5.77001	0.0799858	0.0444363
41	0.41091	0.00594902	5.78002	0.0699795	0.0388772
42	0.411604	0.006643	5.78999	0.060006	0.0333364
43	0.412299	0.00733802	5.78999	0.060006	0.0333364

Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
44	0.412993	0.00803202	5.78999	0.060006	0.0333364
45	0.413687	0.008726	5.8	0.0499992	0.0277772
46	0.414382	0.00942102	5.8	0.0499992	0.0277772
47	0.415076	0.010115	5.8	0.0499992	0.0277772
48	0.415771	0.01081	5.8	0.0499992	0.0277772
49	0.416465	0.011504	5.8	0.0499992	0.0277772
50	0.417161	0.0122	5.8	0.0499992	0.0277772
51	0.418549	0.013588	5.81	0.0399929	0.0222181


Slugtest 09/03/03
U.S. Naval Base Charleston County
Bouwer and Rice Graph of MW-3
Ho is 1.12001 decimal feet at t = 39806.5 sec
Bouwer and Rice Parameter A is 2.18564
Bouwer and Rice Parameter B is 0.384255
ln(Re/Rw) = 2.390225e+00
Analysis Starts at time 39826.599026 seconds
Analysis Ends at time 665.193586 minutes
13 Measurements Analyzed from 14 to 26
Head Ratio (Ht/Ho)
1
0.1
0.01
Hydraulic Conductivity = 0.723979 feet/day
Transmissivity = 18.0994 ft2/day
0
5
10
15
Adjusted Time (minutes)
Project Number 02228 for Envirological Solutions, Inc.

Data from file:	A:\USNMW3.SLG
Title:	Slugtest
Site Name:	U.S. Naval Base
Location:	Charleston County
Client:	Envirological Solutions, Inc.
Project Number:	02228
Test Date:	09/03/03
Well Number:	MW-3
Casing Radius:	1 inches
Effective Well Radius:	2 inches
Aquifer Thickness:	25 feet
Water Table to Screen Bottom:	3.83001 feet
Screen Length:	10 feet
Static Water Level:	3.83001 decimal feet

K ratio is not entered
There are 45 time and drawdown measurements
Tests starts with trial 6
Time values will be adjusted by 0.460723 days (39806.468296 seconds)

Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
1	0.460666	-5.70118e-05	3.83001	0	0
2	0.460677	-4.60148e-05	3.83001	0	0
3	0.460689	-3.40044e-05	3.83001	0	0
4	0.460701	-2.20239e-05	3.83001	0	0
5	0.460712	-1.10269e-05	3.83001	0	0
6	0.460723	0	2.71	1.12001	1
7	0.460735	1.19805e-05	2.93	0.900006	0.803572
8	0.460748	2.49743e-05	2.96	0.870006	0.776787
9	0.460758	3.49879e-05	2.98	0.850006	0.75893
10	0.46077	4.69983e-05	2.99	0.840006	0.750001
11	0.460782	5.89788e-05	3.01	0.820006	0.732145
12	0.46084	0.000116974	3.08	0.750007	0.669646
13	0.460898	0.000174999	3.17	0.660005	0.589287
14	0.460956	0.000232995	3.22	0.610006	0.544645
15	0.461014	0.00029099	3.27	0.560006	0.500003
16	0.461072	0.000348985	3.32001	0.51	0.455355
17	0.46113	0.000406981	3.34999	0.480014	0.428581
18	0.461188	0.000464976	3.38001	0.449994	0.401778
19	0.461245	0.000521988	3.41	0.420008	0.375005
20	0.461303	0.000579983	3.43001	0.399995	0.357137
21	0.461362	0.000638992	3.44999	0.380015	0.339297
22	0.461477	0.000753999	3.48001	0.349996	0.312495
23	0.461593	0.000869989	3.49999	0.330016	0.294655
24	0.461708	0.000984997	3.52	0.310003	0.276787
25	0.461824	0.00110099	3.54002	0.28999	0.258918
26	0.46194	0.00121698	3.54999	0.280016	0.250013
27	0.462056	0.001333	3.56	0.27001	0.241079
28	0.462171	0.00144798	3.58001	0.249997	0.22321
29	0.462287	0.001564	3.58001	0.249997	0.22321
30	0.462403	0.00167999	3.59002	0.239991	0.214276
31	0.46252	0.00179699	3.59999	0.230017	0.205371
32	0.462866	0.002143	3.62	0.210004	0.187503
33	0.463213	0.00248998	3.63001	0.199998	0.178568
34	0.46356	0.00283697	3.64002	0.189991	0.169634
35	0.463907	0.00318399	3.64999	0.180018	0.160729
36	0.464255	0.00353199	3.64999	0.180018	0.160729
37	0.464602	0.00387898	3.64999	0.180018	0.160729
38	0.464949	0.004226	3.65999	0.170011	0.151795
39	0.465296	0.00457299	3.65999	0.170011	0.151795
40	0.465644	0.00492099	3.65999	0.170011	0.151795
41	0.465992	0.00526899	3.67	0.160004	0.14286
42	0.466685	0.00596198	3.67	0.160004	0.14286
43	0.46738	0.00665697	3.67	0.160004	0.14286

Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
44	0.468074	0.00735098	3.68001	0.149998	0.133926
45	0.468769	0.008046	3.68001	0.149998	0.133926

APPENDIX E

SOIL AND WATER DISPOSAL MANIFESTS

WASTE MANAGEMENT

SPECIAL WASTE MANIFEST

WASTE ID # RC 0301002

EXPIRATION DATE: JANUARY 6, 2004

RICHLAND LANDFILL
1047 Highway Church Road
Elgin, SC 29045
(803) 788-3054
(803) 736-0995 Fax

GENERATOR OF WASTE: FORCE & ASSOCIATES

CUSTOMER ACCOUNT: FORCE & ASSOCIATES 820-436

LOCATION OF WASTE : CHEAP-O'S (1 DRUM), Sonny's 1 DRUM, Blacksburg Space 1 DRUM, Don's Auto (10) Naval Base (1)

PHONE # 803-359-3200 CONTACT: SANDRA SEWARD

FAX # 803-359-6682

GENERATOR'S SIGNATURE _____ DATE: _____

TRANSPORTER OF WASTE _____

DATE: 9/20/03 TRUCK NO. 1

DRIVER'S SIGNATURE Gary P Gibbs

**** TO BE COMPLETED BY RICHLAND LANDFILL ****

DISPOSAL SITE: RICHLAND LANDFILL ELGIN, SC

DESCRIPTION OF WASTE SOIL BORINGS FOR SCDHEC ASSESSMENT PROGRAM (SOIL)

TICKET NO.# 480843 TONNAGE 3.12

RECEIVED BY RUS

APPENDIX F

LOCAL ZONING REGULATIONS

CHARLESTON COUNTY
ZONING ORDINANCES

Name:

Phone number:

Business Address:

Relevant Info: Does not apply. Site is under military jurisdiction.

APPENDIX G

TAX MAP DATA

Tax map is not available for this facility.

CHARLESTON COUNTY Online Tax System

- MAIN MENU
- CONTACTS
- EXIT

- Billing Information -

Account (PID):	400-00-00-051	Appraised (FMV):		NA
Tax Year:	2003	Assessment:		0
Prior Year:	NA	Mills:	x	0
Status:	Current			
Receipt:	2003-023335	Base Tax:		0.00
Previous Receipt:	NA	Penalties:	+	0.00
Next Receipt:	NA	Interest:	+	0.00
Billed:	09-30-2003	Credits:	-	0.00
Paid Date:	NA	User Fee:	+(Other)	
Actual Date:	NA			
		Net Tax:		0.00
Mortgage Co:	NA	Amount Paid:	-	0.00
		Nulla Bona Amount:	-	0.00
MLOD Factor:	0.00			
		Refund Amount:	-	0.00
		Transfer Amount:	-	0.00
		CURR Due:		0.00

- Property Information -

Legal Description:	HOBSON AVENUE - EDC PHASE I S PART OF CHAS NAVAL COMPLEX US NAVAL BASE
Subdivision:	NA
Deed:	11-15-2002 W425-593
Plat:	EG-137
Land Use:	OTHER JURISDICTION
General Use:	
Parcel:	

Buildings	Appraisal	Assessment

Totals:

Acreage		Appraisal	
High:	48.55	Land:	0
Marsh:	0.00	Improvements:	0
Swamp:	0.00	Buildings:	0
Total:	48.55	Total:	0

- Owner Information -

Current Owner:	CHARLESTON NAVAL COMPLEX	Tax Address:	HOBSON AVENUE
Current Co-Owner:	REDEVELOPMENT AUTHORITY		
Tax District:	43	Mail Address:	1360 TRUXTUN AVE
Jurisdiction:	08	City State Zip:	CHARLESTON SC 29405

Selections | Tax Record | Credits | Main Menu

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CHARLESTON COUNTY Online Tax System

- MAIN MENU
- CONTACTS
- EXIT

- Billing Information -

Account (PID):	400-00-00-043	Appraised (FMV):		NA
Tax Year:	2003	Assessment:		0
Prior Year:	NA	Mills:	x	0
Status:	Current			---
Receipt:	2003-023328	Base Tax:		0.00
Previous Receipt:	NA	Penalties:	+	0.00
Next Receipt:	NA	Interest:	+	0.00
Billed:	09-30-2003	Credits:	-	0.00
Paid Date:	NA	User Fee:		+(Other)
Actual Date:	NA			---
		Net Tax:		0.00
Mortgage Co:	NA	Amount Paid:	-	0.00
		Nulla Bona Amount:	-	0.00
MLOD Factor:	0.00			
		Refund Amount:	-	0.00
		Transfer Amount:	-	0.00

		CURR Due:		0.00

- Property Information -

Legal Description:	HOBSON AVE - EDC PHASE II S PT CHAS NAVAL COMPLEX US NAVAL BASE
Subdivision:	NA
Deed:	11-15-2002 W425-646
Plat:	EG-138
Land Use:	OTHER JURISDICTION
General Use:	
Parcel:	

Buildings	Appraisal	Assessment
Totals:		

Acreage		Appraisal	
High:	24.57	Land:	0
Marsh:	0.00	Improvements:	0
Swamp:	0.00	Buildings:	0
Total:	24.57	Total:	0

- Owner Information -

Current Owner:	CHARLESTON NAVAL COMPLEX	Tax Address:	HOBSON AVE
Current Co-Owner:	REDEVELOPMENT AUTHORITY		
Tax District:	43	Mail Address:	1360 TRUXTUN AVE
Jurisdiction:	08	City State Zip:	N CHAS SC 29405

Selections | Tax Record | Credits | Main Menu

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PARCEL NUMBER: 400-00-00-051-
Could not be mapped.
Please contact the County GIS/Mapping Department
(843) 958-4173.

PARCEL NUMBER:	400-00-00-051-
ADDRESS:	HOBSON AVENUE
PROP SITE NM:	
GENERAL USE:	
SUBDIVISION:	
LEGAL DESC:	EDC PHASE I S PART OF CHAS NAVAL COMPLEX US NAVAL BASE
LGL HI ACRS:	48.55
LGL MAR ACRS:	
LGL WATER ACRS:	
LGL SWP ACRS:	
LGL TOT ACRS:	48.55
TAX DISTRICT:	T.D. 4-3 N-CHARLESTON
JURISDTN COD:	STATE-EXEMPT
PLAT DB PAG:	EG-137
OWNER ON 1ST:	CHARLESTON NAVAL COMPLEX REDEVELOPMENT AUTHORITY
CURRENT OWNER 1ST:	
SALE DATE:	09/11/2002
DEED BOOK:	W425593
TITL WILL CD:	
TITL WILL DT:	
C O NAME:	
MAILING ADDRESS:	1360 TRUXTUN AVE 300 CHARLESTON SC 29405-2005
SALE PRICE:	
MULT LOT:	
SPLIT CODE:	
MLOD GROUP:	
FINAL VALUE:	0
BUILD COUNT:	
AG USE VAL:	
AG MARKT TOTAL:	
LR APPROVE:	
YEAR BUILT:	
NUM BEDROOMS:	
FULL BATHS:	
THREE QTR BATHS:	
HALF BATHS:	
TOTL FN AREA:	
FIN LIV AREA:	
FULL BEDROOM:	
FULL BATHS:	
HALF BATHS:	
YEAR BUILT:	
CAP VALUE:	
CAP ASSESMENT:	

PARCEL NUMBER: 400-00-00-043-
Could not be mapped.
Please contact the County GIS/Mapping Department
(843) 958-4173.

PARCEL NUMBER:	400-00-00-043-
ADDRESS:	HOBSON AVE
PROP SITE NM:	
GENERAL USE:	
SUBDIVISION:	
LEGAL DESC:	EDC PHASE II S PT CHAS NAVAL COMPLEX US NAVAL BASE
LGL HI ACRS:	24.57
LGL MAR ACRS:	
LGL WATER ACRS:	
LGL SWP ACRS:	
LGL TOT ACRS:	24.57
TAX DISTRICT:	T.D. 4-3 N-CHARLESTON
JURISDTN COD:	STATE-EXEMPT
PLAT DB PAG:	EG-138
OWNER ON 1ST:	CHARLESTON NAVAL COMPLEX REDEVELOPMENT AUTHORITY
CURRENT OWNER 1ST:	
SALE DATE:	11/15/2002
DEED BOOK:	W425646
TITL WILL CD:	
TITL WILL DT:	
C O NAME:	
MAILING ADDRESS:	1360 TRUXTUN AVE STE N CHAS SC 29405-2005
SALE PRICE:	
MULT LOT:	
SPLIT CODE:	
MLOD GROUP:	
FINAL VALUE:	0
BUILD COUNT:	
AG USE VAL:	
AG MARKT TOTAL:	
LR APPROVE:	
YEAR BUILT:	
NUM BEDROOMS:	
FULL BATHS:	
THREE QTR BATHS:	
HALF BATHS:	
TOTL FN AREA:	
FIN LIV AREA:	
FULL BEDROOM:	
FULL BATHS:	
HALF BATHS:	
YEAR BUILT:	
CAP VALUE:	
CAP ASSESMENT:	

BOARD:
Elizabeth M. Hagood
Chairman

Mark B. Kent
Vice Chairman

Howard L. Brilliant, MD
Secretary

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

BOARD:
Carl L. Brazell

Louisiana W. Wright

L. Michael Blackmon

Coleman F. Buckhouse, MD

31 December 2003

Commander
NAVFACENGCOM Southern Division
Attn: Code ES24 (Gabriel Magwood)
P.O. Box 190010
North Charleston, SC 29419-9010

Re: CNB – BLDG 202
Site Identification # 02228
Tier I Report received 23 December 2003
Charleston County

Dear Mr. Magwood:

The Department has reviewed the referenced assessment report. As submitted, the report documents current and historical efforts to monitor soil and groundwater for hydrocarbon contamination at the subject site. Based on this review, it appears that identified contamination at this site is below established maximum contaminant levels.

Based on the information and analytical data submitted, the Department recognizes that the Department of the Navy has adequately addressed the known environmental contamination identified on the property to date in accordance with the approved scope of work. Consequently, no further investigation is required at this time. Please note, this statement pertains only to the portion of the site addressed in the referenced report and does not apply to other areas of the site and/or any other potential regulatory violations. Furthermore, the Department retains the right to request further investigation if deemed necessary.

The monitoring well(s) may be permanently abandoned by a certified well driller licensed in South Carolina in accordance with the South Carolina Well Standards and Regulations, R.61-71 or properly maintained. Should you choose to abandon the well, please submit a well abandonment record to my attention no later than 31 March 2004. Should you choose to properly maintain the monitoring well, please notify me within 14 days of this correspondence.

Should you have any questions please contact me at (803) 898-3553 (office phone), (803) 898-2893 (fax) or by e-mail bishopma@dhec.sc.gov.

Sincerely,

Michael A. Bishop, Hydrogeologist
Groundwater Quality Section
Bureau of Water

Tom Knight, Manager
Groundwater Quality Section
Bureau of Water

cc: Trident District EQC
Jed Heames, 1849 Ave. F, N. Charleston SC, 29405
Jerry Stamps, SCDHEC-BLWM
Technical File