

Initial Abatement Action Report

6 Initial Abatement Action Report

In addition to reporting initial response and abatement actions and assessment actions and presenting initial site characterization, this newly-created Initial Abatement Action Report must fulfill the requirements, when a release has been discovered, for the following individual reports:

- x Site Check Report (Section C) **Section 3.0**
- x UST Closure Report (UST-12) with UST-2 Form (Section D) **Section 4.0**
- x Post-Excavation Soil Contamination Assessment Report (Section H) **Section 8.0**
- x Free Product Recovery Report (Section E) **Section 5.0**

Check the applicable report(s). Complete Sections A-L, as required, including the sections specifically designated for the reports you have indicated. The Initial Abatement Action Report must be submitted to the appropriate regional office within 90 days following discovery of release.

A. Site Information

1. Site Identification

- Date of Report: 04/30/2008
- Facility I.D.: 3259 UST Incident Number (if known): N/A
- Site Name: NCDOT Parcel 50 – Pansey Earnest Property
- Site Street Address: 3585 US Highway 1
- City/Town: Hoffman Zip Code: 28347 County: Richmond
- Description of Geographical Data Point (e.g., diesel fill port): Underground Storage Tank
- Location Method (GPS, topographical map, other): GPS
- Latitude (decimal degrees): 35.0308 Longitude (decimal degrees): 79.55077

2. Information about Contacts Associated with the Leaking UST System (Addresses must include street, city, state, zip code and mailing address, if different).

- UST Owner: Orphaned
- Address: _____ Tel: Unknown
- UST Operator: Unknown
- Address: _____ Tel: Unknown
- Property Owner: NCDOT by Permanent Easement
- Address: 3585 US Highway 1 Tel: Unknown
- Property Occupant: None
- Address: _____ Tel: _____
- Consultant/Contractor: Solutions-IES, Inc.,
- Address: 1101 Nowell Road, Raleigh, NC 27607 Tel: (919) 873-1060
- Analytical Laboratory: Prism Laboratories, Inc. State Certification No. 37735
- Address: 449 Springbrook Road, Charlotte, NC 28224 Tel: (800) 529-6364

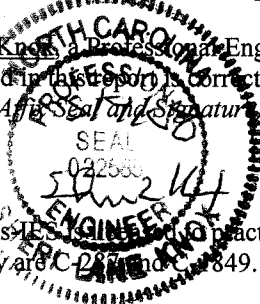
3. Information about Release

- Date Discovered: UST Closure 03/24/08
- Estimated Quantity of Release: Unknown
- Cause of Release: Unknown
- Source of Release (Dispenser/Piping/UST): Unknown
- Sizes and contents of UST system(s) from which the release occurred: 2-550-gallon gasoline

4. Certification (*The title page must display the seal and signature of the certifying P.E. or L.G. and the name and certification number of the company or corporation, if applicable [See 15A NCAC 2L .0103(e)].*)

I, Sheri Knight, Professional Engineer/Licensed Geologist (circle one) for Solutions-IES, do certify that the information contained in this report is correct and accurate to the best of my knowledge.

(Please Affix Seal and Signature)



Solutions-IES, Inc. shall practice geology and engineering in North Carolina. The certification numbers of the company are C-249 and L-849.

**INITIAL ABATEMENT ACTION REPORT
NCDOT PARCEL 50, PANSY EARNEST PROPERTY
3585 US HIGHWAY 1
HOFFMAN, RICHMOND COUNTY
NORTH CAROLINA, 28347
WBS ELEMENT: 34438.1.1
NCDOT PROJECT: R-2502A**

Prepared for:

**NC Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section
1589 Mail Service Center
Raleigh, North Carolina 27699-1589**

Prepared by

**Solutions-IES, Inc.
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Raleigh, NC 27607
www.solutions-ies.com**

Solutions-IES Project No. 6000.082.NDOT

April 30, 2008



Carrie A. Ruhlman
Environmental Scientist



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Figure 1	Site Location Map
Figure 2	Site Map
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Figure 4	Confirmation Sample Locations

APPENDICES

Appendix A	UST-2 Form "Site Investigation Report for Permanent Closure or Change-In-Service of UST" UST-3 Form "Notice of Intent: UST Permanent Closure or Change-In-Service" UST-61 Form "24-Hour Release and UST Leak Reporting"
Appendix B	Site-Specific Health and Safety Plan
Appendix C	Records of Certificates of USTs and Residuals Disposal, Disposal Manifests
Appendix D	Laboratory Analytical Report and Chain-of-Custody Forms
Appendix E	Photographs

1.0 INTRODUCTION

The North Carolina Department of Transportation (NCDOT) is widening the existing alignment of US Highway 1 near the towns of Marston and Hoffman, located in Richmond County, North Carolina. Solutions-IES, Inc. (Solutions-IES) was retained by NCDOT to document closure of two underground storage tanks (USTs) at the Pansy Earnest property, NCDOT Parcel 50 (Site), located at 3585 US Highway 1 in Hoffman, Richmond County, North Carolina (**Figure 1**). This scope of work was initiated based on a Notice to Proceed issued by the NCDOT Geotechnical Engineering Unit dated February 22, 2008 under contract 7000008011, dated May 31, 2007. The USTs on the Pansey Earnest property are located within the proposed right-of-way and had to be removed prior to road construction. This Initial Abatement Action Report (IAAR) documents the UST closure activities and has been prepared according to the July 2007 *Underground Storage Tank Section Guidelines For Site Checks, Tank Closure, and Initial Response and Abatement “Guidelines”* published by the UST Section, North Carolina Department of Environment and Natural Resources (NCDENR) Division of Waste Management. Tables and figures have been numbered in general accordance with the system outlined in the *Guidelines*.

2.0 SITE HISTORY AND CHARACTERIZATION

2.1 UST OWNER AND OPERATOR INFORMATION

Table B-2 provides known tank owner and operator information.

2.2 UST INFORMATION

In August 2006, Solutions-IES conducted a preliminary site assessment (PSA)¹ of Parcel 50. A geophysical survey was conducted on July 26 and 28, 2006 that identified the presence of two buried tanks near the southwestern corner of the former block building at the Site.

Two USTs were closed by removal from the Site on March 24 and 25, 2008. **Table B-1** summarizes the available details of each UST and **Figure 2** illustrates their general location. Both of the tanks were single-walled and constructed of steel. They had a capacity of 550 gallons each, with dimensions of

¹ Solutions-IES, Inc. “Preliminary Site Assessment, Parcel # 50, Pansy Earnest property, 3585 US Highway 1, Richmond County, North Carolina, WBS Element: 34438.1.1; NCDOT Project: R-2502A”, September 8, 2006.

approximately 3.5 feet (ft) by 7 ft. One product line ran north of tank 2 and one product line ran west of tank 1.

2.3 NON-UST INFORMATION

No aboveground storage tanks or other potential petroleum release sources were identified at the Site.

2.4 RELEASE DESCRIPTION

According to the November 2007 NCDENR Regional UST (RUST) database, no releases have been reported at this Site. However, soil samples collected in the vicinity of the UST during the PSA conducted by Solutions-IES in August 2006 identified petroleum impacts to the subsurface in the area of the USTs.

Results of the closure activities conducted in March 2008 and documented in this IAAR revealed petroleum impacts from the USTs at this Site. Several elevated volatile vapors were detected during field screening with the Photovac Microfid flame ionization detector (FID) and three of the six closure soil samples contained total petroleum hydrocarbon (TPH) diesel range organics (DRO) and/or TPH gasoline range organics (GRO) concentrations greater than regulatory screening limit of 10 mg/kg specified in the *Guidelines*. Analytical results are discussed in **Section 4.5**.

2.5 SITE CHARACTERISTICS

The Site is located at the intersection of US Highway 1 and Tilley Street. A one-story cinder block building used to occupy the site but has been demolished. The former building housed a retail store (Little Grace's Variety Store). Most of the surface is covered with grass and small areas of gravel. Photographs of the UST removal activities are presented in **Appendix E**. Little information concerning historical use of the Site was provided to Solutions-IES, with the exception of information indicating that a UST was suspected to exist on the property.

A description of the surrounding properties is as follows:

- North – rural residential/commercial
- South – rural residential
- East – rural residential
- West – rural residential

2.6 HISTORICAL REGULATORY ACTIVITY SUMMARY

A review of the NCDENR RUST database indicated UST facility identification number # FA-3259 associated with this property. No incident number indicating historical releases was associated with this facility. The database identified the UST as orphaned. No other regulatory activity is associated with this location.

3.0 SITE CHECK REPORT

A site check summarizes the operating condition of the USTs in question if they remain in service. The two USTs were closed by removal, therefore site check requirements are not applicable.

4.0 UST CLOSURE REPORT

4.1 PREPARATION FOR UST CLOSURE

On March 3, 2008, the NCDENR was notified of UST closure activities by submitting a completed UST-3, "Notice of Intent: UST Permanent Closure or Change-in-Service" form (**Appendix A**). A site-specific Health and Safety Plan was prepared prior to the initiation of the field work and is included as **Appendix B**. Utilities were located prior to initiation of field activities. The soil and tank removal contractor, Soil Solutions, Inc. (SSI) of Winston-Salem, NC, obtained a permit from the County Fire Marshal prior to mobilizing to Site.

4.2 CLOSURE PROCEDURES

SSI was contracted by Solutions-IES to remove the USTs. On March 24, 2008, Solutions-IES and SSI mobilized to the site to begin excavation activities. The USTs were uncovered, and after residuals were removed from the tanks with a vacuum truck, dry ice was used to purge the USTs of potentially explosive vapors prior to initiating tank removal. The Lower Explosive Limit (LEL) and oxygen content (O₂) were confirmed as suitable prior to removing the tanks. Once the LEL reached zero in both tanks, they were removed using a trackhoe. Two soil closure samples were collected from beneath each UST and one closure sample was collected from beneath each product line for laboratory analysis. After sample collection, groundwater was noted in the excavation pit. **Figure 3** presents closure sample locations.

Both tanks were rusted with many holes. The bottom of each tank had large holes. Photographs of the UST

conditions and removal activities are provided in **Appendix E**; the Tanks Disposal Certificate is provided in **Appendix C**.

4.3 RESIDUAL MATERIAL REMOVED

A total of 349 gallons of residual liquid was pumped from the USTs prior to removal. SSI removed and disposed of the material. A certificate of disposal for the residual liquid is provided in **Appendix C**.

4.4 INITIAL RESPONSE ACTIONS

The UST-2 form “Site Investigation Report for Permanent Closure or Change-in-Service of UST” was submitted to the NCDENR on March 3, 2008. Due to elevated FID readings and analytical results exceeding the NCDENR screening levels, a UST-61 form “24-Hour Release and UST Leak Reporting” was submitted to NCDENR on April 15, 2007. Copies of both forms are provided in **Appendix A**.

4.5 CLOSURE INVESTIGATIONS

4.5.1 Field Screening of Soils

Soils were screened in the field using a FID. The FID was calibrated using 100-parts per million (ppm) methane calibration gas. Soil samples collected for field screening were placed in resealable plastic bags, and labeled with information identifying the sample name and/or location. Each sample was initially agitated to breakup the soil. The bags were sealed and time was allowed for volatile organic compounds (VOCs) trapped within the sample to volatilize into the headspace of the bag. After approximately 20 minutes, the probe of the FID was inserted into the headspace of the bag and the concentration of VOCs or volatile vapors present in the headspace was read in ppm on the FID display. FID readings ranged from not detected to 327 ppm. The FID readings of the samples submitted for laboratory analysis are summarized in **Table B-3A**.

4.5.2 Closure Soil Sampling

Closure sampling was conducted in accordance with Section 5.3 of the *Guidelines*. Based on the size of the tanks, two samples were collected from beneath each UST. Soil samples were collected as grab samples and screened with the FID as described in **Section 4.5.1**.

The closure samples were then transferred in laboratory-supplied glassware. The containers were labeled with the sample location information, date, time of collection and requested analyses. The samples were placed on ice in a cooler for delivery under chain-of-custody procedures to Prism Laboratories, Inc. (Prism Labs) in Charlotte, North Carolina on March 26, 2008.

4.5.3 Groundwater and Surface Water Samples

Though groundwater was encountered during tank closure activities, the collection of groundwater samples was not included in our scope of work. No surface water features were identified at the Site.

4.5.4 Quality Control Measures

All non-disposable sampling equipment was decontaminated by rinsing with potable water, washing with a LiquoNOX[®]/water solution and scrub brush, rinsing with potable water, rinsing with deionized water and air drying.

NCDOT does not routinely specify collection of additional field QC samples (i.e., blind duplicate, matrix and matrix spike, equipment rinse, field blank and trip blank) for tank closure activities. Samples submitted for laboratory analysis are collected using NCDENR-approved methods using pre-preserved laboratory-supplied containers as required by the analytical method. The containers were labeled with the sample location information, date and time of sample collection, and requested analyses. The containers were then placed on ice and handled under chain-of-custody procedures. The samples were delivered to Prism Labs via same day courier for analysis. Prism Labs is approved by the state of North Carolina (NC Certification Number 402) for analyses required for UST closure and corrective action. Laboratory QC results are included with the analytical results in **Appendix D**.

4.5.5 Sample Results

The closure samples were analyzed for low boiling point fuels as identified as TPH GRO with EPA Method 5030/Modified 8015 (California Method) and for high boiling point fuels identified as TPH DRO, by EPA Method 3545/Modified 8015 (California Method). The laboratory analytical results are summarized in **Table B-3B**. A copy of the analytical report is provided in **Appendix D**. Please note that the analytical report contains results for NCDOT Parcel 48 in addition to Parcel 50.

Closure samples 50-T2-1, 50-PL-1 and 50-T2-2 contained TPH DRO and/or TPH GRO at concentrations above the NCDENR screening level (10 mg/kg). Sample 50-T2-1 contained TPH DRO and TPH GRO concentrations of 14 mg/kg and 48 mg/kg, respectively. TPH GRO was detected in sample 50-T2-2 at a concentration of 62 mg/kg. The sample collected from beneath product line north of tank 2 (50-PL-1) had a concentration of 21 mg/kg TPH DRO. Laboratory analytical results for the closure samples are provided in **Appendix D**, and are summarized in **Table B-3B**.

5.0 FREE PRODUCT INVESTIGATION AND RECOVERY REPORT

Free product was removed from both tanks before removal. Details of free product recovery can be found in Section 4.2.

6.0 GROUNDWATER AND SURFACE WATER INVESTIGATION

No groundwater or surface water samples were collected during closure of the UST at this Site, therefore, Table B-4 “Summary of Groundwater and Surface Water Results” is not included in this report.

7.0 INITIAL RESPONSE AND ABATEMENT ACTION

As stated in **Section 4.4**, a UST-2 form “Site Investigation Report for Permanent Closure or Change-in-Service of UST Form” was submitted to the NCDENR on March 3, 2008. A UST-61 form “24-Hour Release and UST Leak Reporting Form” was submitted to the NCDENR on April 16, 2008. Both forms are included in **Appendix A**.

8.0 EXCAVATION OF CONTAMINATED SOIL

Both the condition of the tanks and the FID readings suggested the presence of impacted soil. Therefore, soil beyond that necessary to remove the tanks was excavated.

8.1 SOURCE AND EXTENT OF IMPACTED SOIL

After completing closure activities, additional excavation was performed in the vicinity of the USTs based upon elevated FID readings. SSI excavated petroleum-impacted soil and transported the material for disposal. The approximate lateral extent of the excavation is shown in **Figure 4**.

8.2 EXCAVATION PROCESS

SSI used a trackhoe to excavate the petroleum-impacted soil from around the USTs. Contaminated soil was hauled from the site for disposal by SSI. Lateral excavation limits were based on FID readings, visual inspection of the soil, and site constraints; the vertical excavation limit was bounded by the presence of water thought to be groundwater. Approximately 25.55 tons of soil were disposed of by SSI. The Certificate of Disposal and waste manifest for the excavated soils are provided in **Appendix C**.

8.3 POST-EXCAVATION CONFIRMATION SAMPLING

Confirmation soil samples were collected along each side of the excavation. The pit was then backfilled with soil provided by SSI from an off-site source to surface level. **Figure 4** shows the extent of excavation and the location of the confirmation samples. The samples were collected along the sidewalls at an interval of approximately 7 ft to 10 ft and a depth of approximately 6 ft bgs. Confirmation samples were screened with an FID as discussed in **Section 4.5.1**. The FID readings for the confirmation samples are summarized in **Table-3A**. Photographs of the closure activities are presented in **Appendix E**.

The confirmation samples were collected from the trackhoe bucket and then transferred to laboratory-supplied sample containers. The containers were labeled with the sample location information, including date, time of collection, and requested analyses. The filled containers were placed on ice pending delivery to Prism Labs. Samples were delivered under chain-of-custody procedures by laboratory courier on March 26, 2008. Confirmation samples were analyzed for VOCs, isopropyl ether, and methyl-tert-butyl ether by EPA Method 8260B/5035, semi-volatile organic compounds (SVOCs) by EPA Method 8270C, and petroleum hydrocarbons with the Massachusetts Department of Environmental Protection method MADEP EPH for aliphatics/aromatics and MADEP VPH for aliphatics/aromatics.

8.4 CONFIRMATION SAMPLE RESULTS

Laboratory analytical results for the confirmation samples are provided in **Table B-3B**. Laboratory analytical reports are provided in **Appendix D**. Samples collected from the sides of the excavation did not show impacts above the NCDENR maximum soil contaminant concentrations (MSCCs), suggesting that the limit of soil contamination had been reached.

9.0 CONCLUSIONS

Two 550-gallon USTs located at the Pansy Earnest property, NCDOT Parcel 50, were closed by removal on March 24-25, 2008. Residual free product was removed from the USTs prior to initiating removal of the tanks. Solutions-IES personnel collected two closure samples from beneath the tank and one from beneath each product line to determine whether or not a release had occurred from the USTs, and to document permanent closure of the USTs. Elevated volatile vapors were detected during field screening with the FID. Three closure soil samples contained concentrations of TPH DRO and TPH GRO above the NCDENR screening level of 10 mg/kg, however, the confirmation samples collected from the excavation did not exceed the applicable screening levels suggesting that the lateral limit of soil contamination had been reached. The vertical excavation limit was bounded by the presence of water at a depth of approximately 6 ft bgs.

TABLES

TABLE B-1
SITE HISTORY – UST SYSTEM INFORMATION
NCDOT Parcel 50 – Pansy Earnest Property
3585 US Hwy 1, Hoffman, Richmond County, North Carolina
WBS Element: 34438.1.1; NCDOT Project: R-2502A
Solutions-IES Project No. 6000.08A2.NDOT

Incident Number and Name: NA

UST ID Number	Current/Last Contents *	Previous Contents *	Depth (ft bgs)	Capacity (in gallons)	Construction Details **	Tank Dimensions	Description of Associated Piping and Pumps	Date Tank Installed	Status of UST ***	Was release associated with the UST System?
1	Gasoline	Unknown	2'	550	Single walled steel tank	3.5' x 7'	Steel Piping	Unknown	Permanently Closed 3/25/08	Yes
2	Gasoline	Unknown	2'	550	Single walled steel tank	3.5' x 7'	Steel Piping	Unknown	Permanently Closed 3/25/08	Yes

Note: UST ID Numbers correspond to UST locations on Figures 3 and 4

* Gasoline (unleaded or leaded), diesel, used oil, waste oil, aviation fuel, etc., or pesticides, non-halogenated or halogenated solvents, etc.

** Fiberglass (single- or double-walled), steel (single- or double-walled), steel with FRP (single- or double-walled), steel with liner, other, unknown.

*** Currently operational, not in use or temporarily closed (specify date), permanently closed in place (specify date), permanently closed by removal (specify date).

TABLE B-2
SITE HISTORY – UST OWNER AND OPERATOR INFORMATION
NCDOT Parcel 50 – Pansy Earnest Property
3585 US Hwy 1, Hoffman, Richmond County, North Carolina
WBS Element: 34438.1.1; NCDOT Project: R-2502A
Solutions-IES Project No. 6000.08A2.NDOT

Incident Number and Name: NA

UST ID Number	NA			Facility ID Number	FA-3259
Name of Owner			Dates of Operation		
NCDOT by Permanent Easement			Unknown		
Street Address					
3585 US Hwy 1					
City		State	Zip	Telephone Number	
Hoffman		NC	28347	Unknown	
Name of Operator			Dates of Operation (mm/dd/yy to mm/dd/yy)		
Unknown			Unknown		
Street Address					
3585 US Hwy 1					
City		State	Zip	Telephone Number	
Hoffman		NC	28347	Unknown	

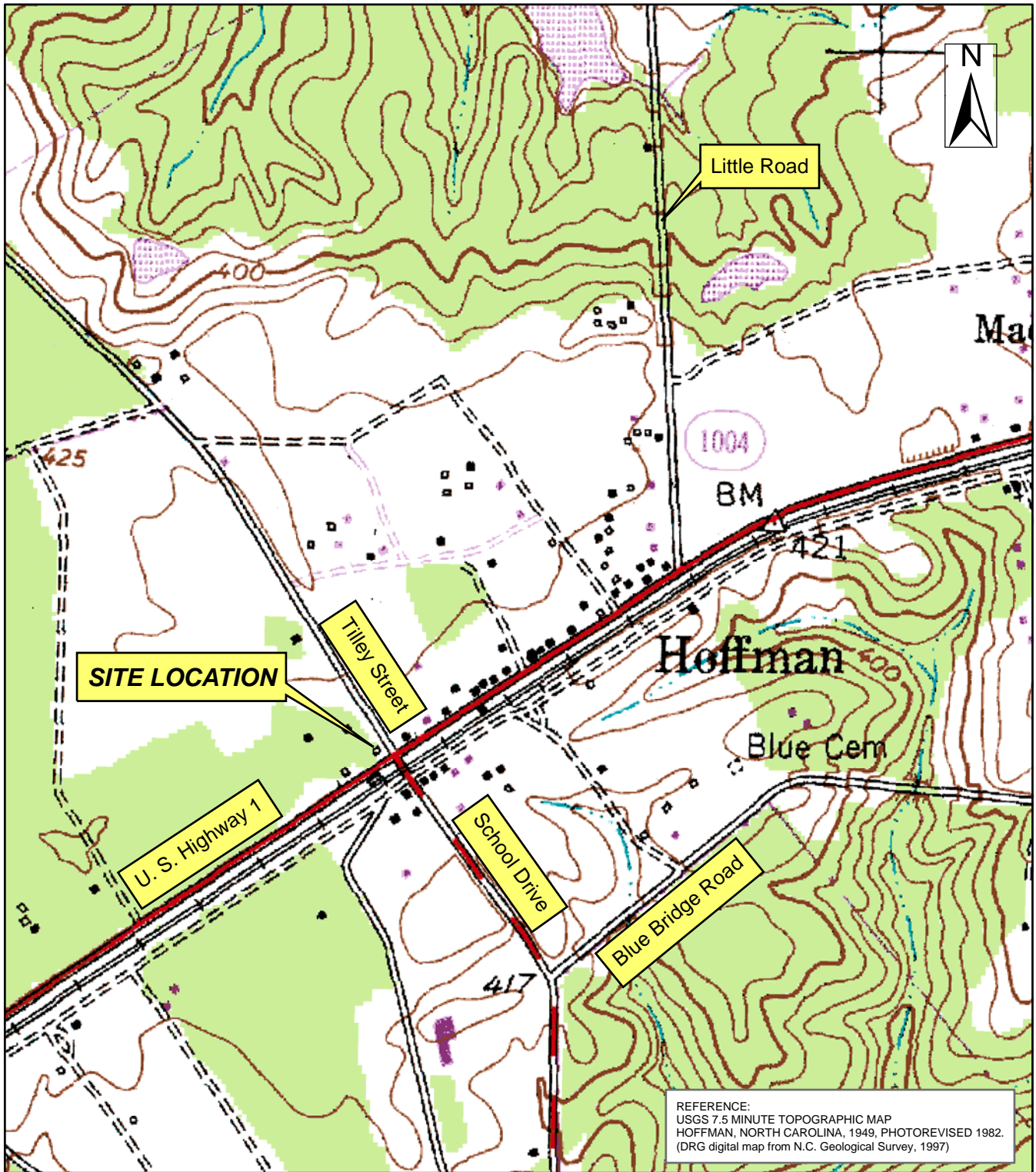
TABLE B-3A
SUMMARY OF FIELD SCREEN RESULTS
NCDOT Parcel 50 – Pansy Earnest Property
3585 US Hwy 1, Hoffman, Richmond County, North Carolina
WBS Element: 34438.1.1; NCDOT Project: R-2502A
Solutions-IES Project No. 6000.08A2.NDOT

Incident Number and Name: na

Sample ID	Depth (ft bgs)	Location	Sample Type	FID Reading (ppm)
50-N-2	6'	Northeast end of excavation	Soil	0.42
50-S-2	6'	Southeast end of excavation	Soil	0.19
50-S	6'	Southwest end of excavation	Soil	ND
50-N	6'	Northwest end of excavation	Soil	ND
50-E	6'	East end of excavation	Soil	0.60
50-W	6'	West end of excavation	Soil	ND
50-T2-1	6'	Tank pit 2 – east end of tank	Soil	327
50-PL-1	6'	Product line – north of tank 2	Soil	53.3
50-PL-2	6'	Product line – west of tank 1	Soil	ND
50-T1-1	6'	Tank pit 1 – south end of tank	Soil	1.30
50-T1-2	6'	Tank pit 1 – west end of tank	Soil	1.20
50-T2-2	6'	Tank pit 2 – north end of tank	Soil	232

ND = Not detected.

FIGURES

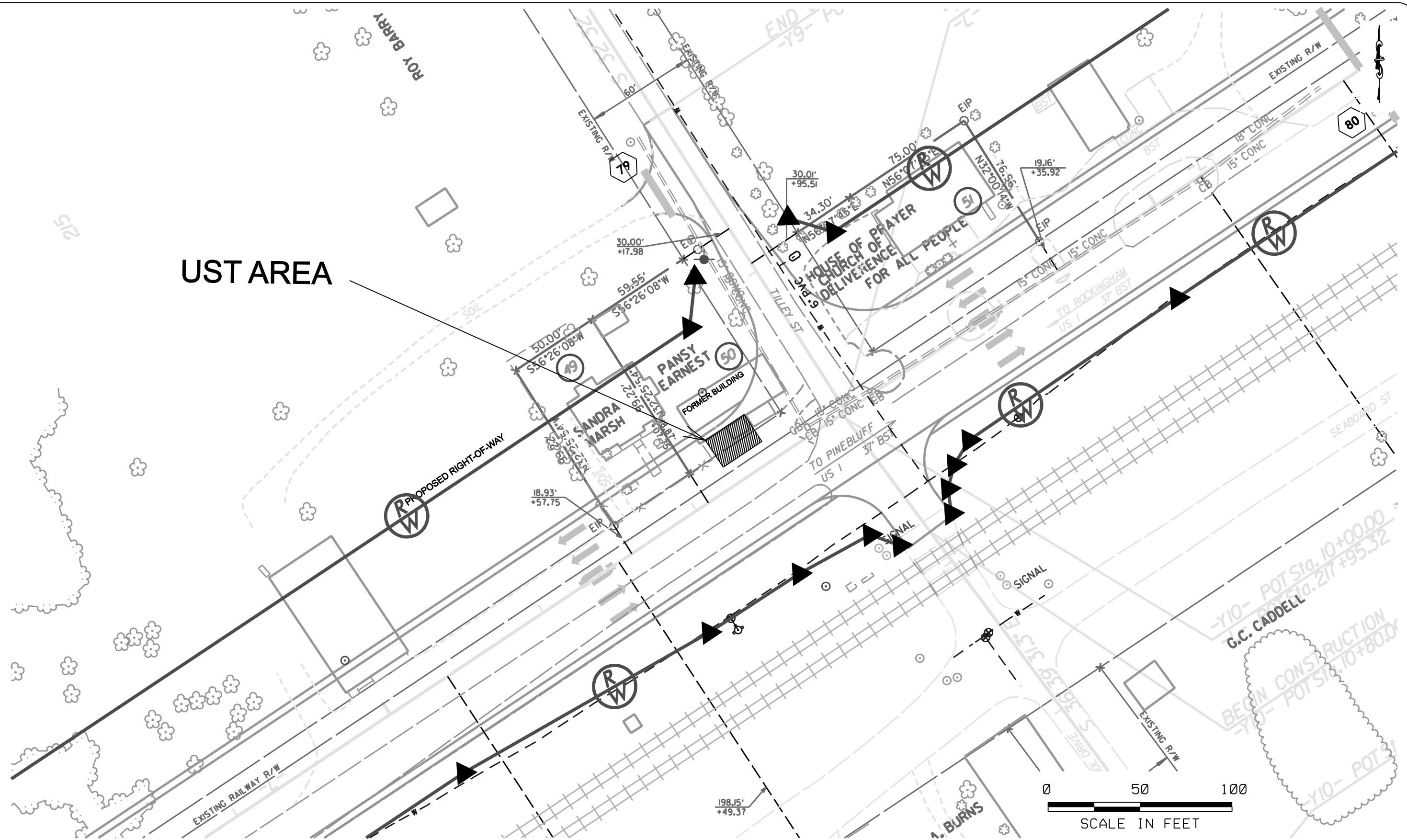


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SITE LOCATION MAP
 PARCEL 50
 PANSY EARNEST PROPERTY
 RICHMOND COUNTY, NORTH CAROLINA
 STATE PROJECT NO. R-2502 A, WBS ELEMENT# 34438.1.1



1101 Nowell Road, Raleigh, NC 27609 Phone (919) 873-1060, Fax (919) 873-1074	
Created by: JD	Project: 6000.08A2.NDOT
Checked by: SK	Date: APRIL 2008
File: Figure 1.mxd	
Software: ESRI ArcMap 9.1	FIGURE 1



PROJECT NUMBER
6000.08AZ.NDOT

DRAFTER
JC

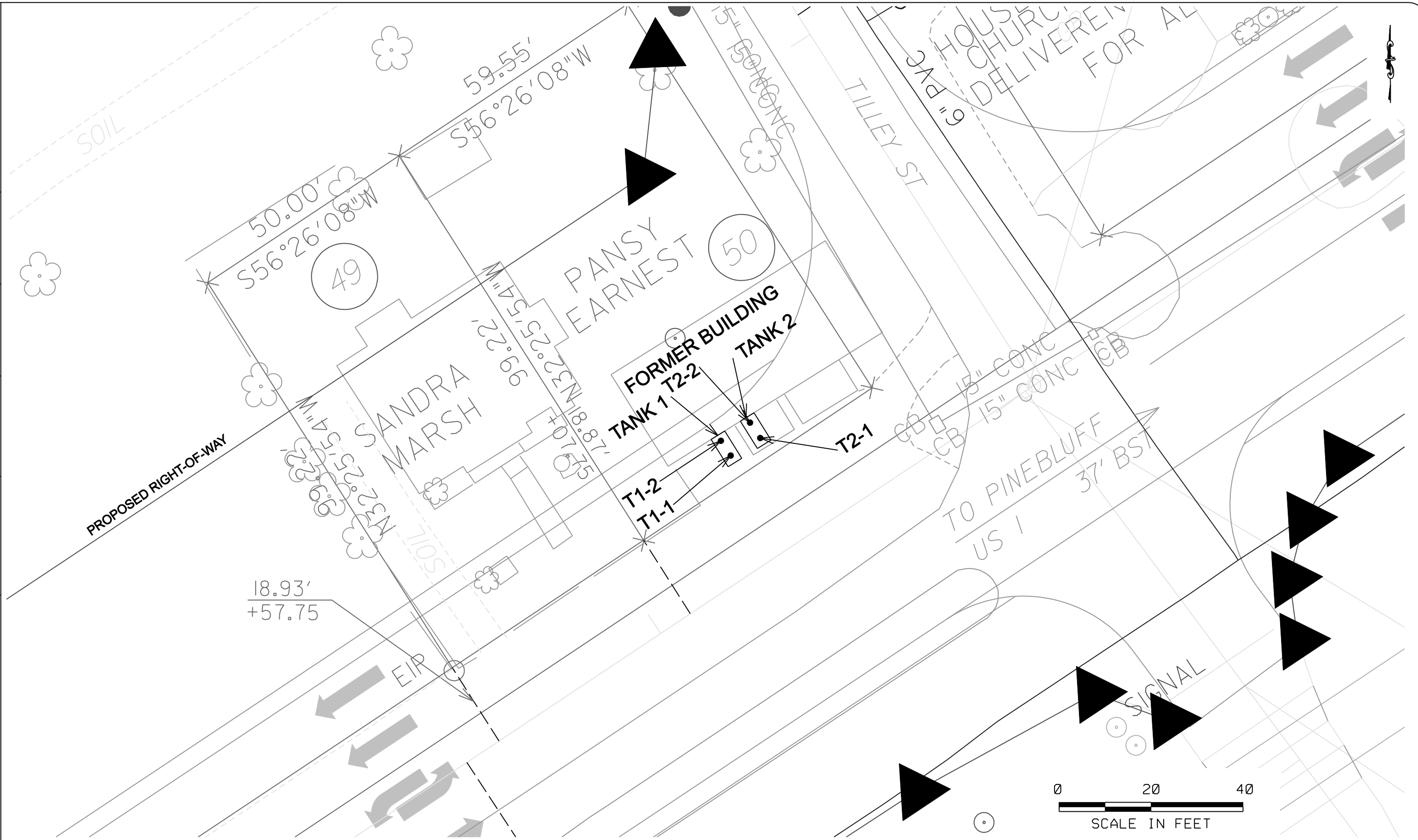
CHECKED BY
JD

PROJECT MANAGER
SK

DATE
APRIL 2008

FIGURE3.DWG

FILE



PROJECT NUMBER
6000.08AZ.NDOT

DRAFTER
JC

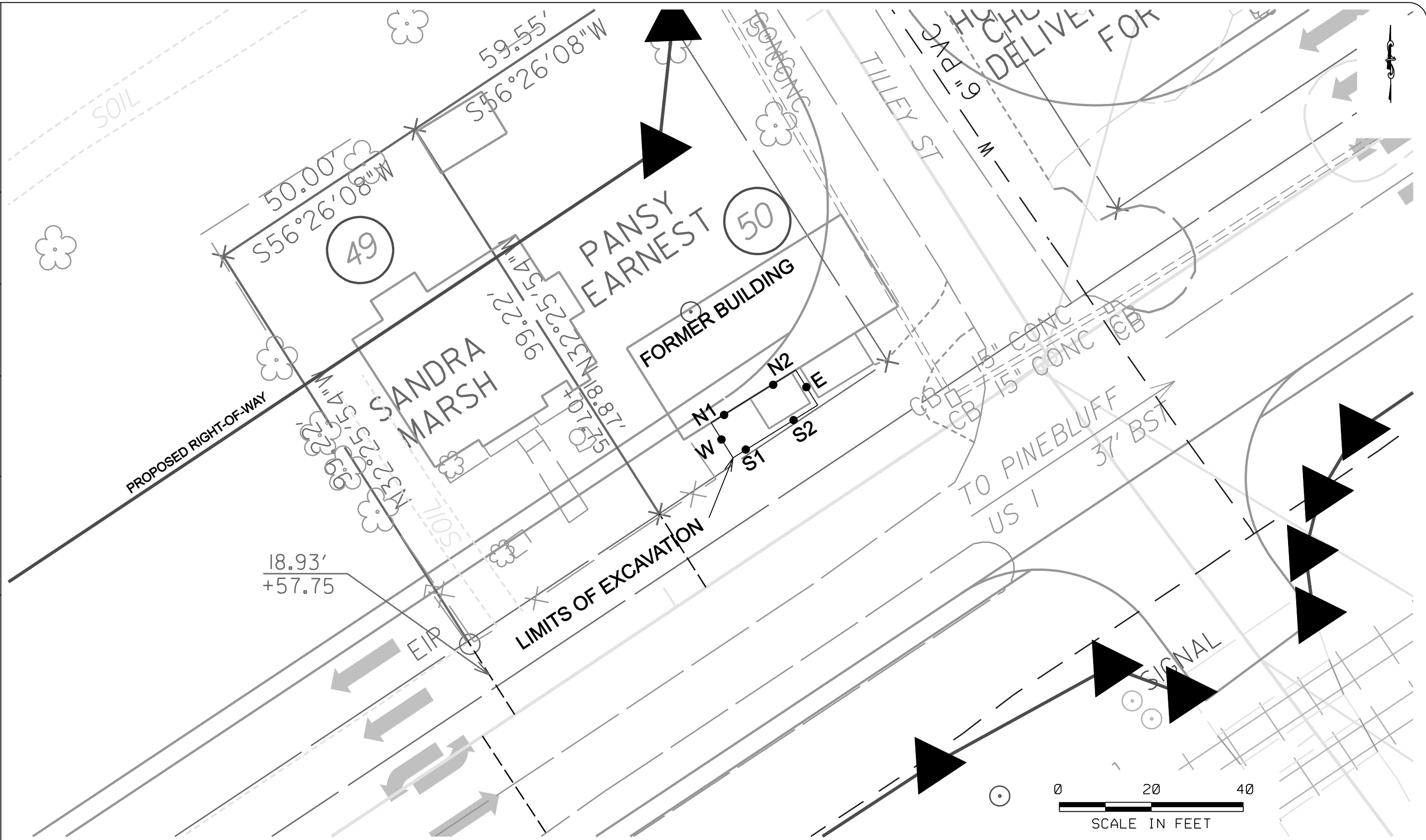
CHECKED BY
JD

PROJECT MANAGER
SK

DATE
APRIL 2008

FIGURE4.DGN

FILE



APPENDIX A

UST-2: “SITE INVESTIGATION REPORT FOR PERMANENT CLOSURE OR CHANGE-IN SERVICE OF UST”

UST-3: “NOTICE OF INTENT: UST PERMANENT CLOSURE OR CHANGE-IN-SERVICE”

UST-61: “24-HOUR RELEASE AND UST LEAK REPORTING”

UST-2 Site Investigation Report for Permanent Closure or Change-in-Service of UST

Return completed form to:

The DWM Regional Office located in the area where the facility is located. Send a copy to the Central Office in Raleigh so that the status of the tank may be changed to "PERMANENTLY CLOSED" and your tank fee account can be closed out. SEE MAP ON THE BACK OF THIS FORM FOR THE CENTRAL AND REGIONAL OFFICE ADDRESSES.

STATE USE ONLY:

I.D. # _____
Date Received _____

INSTRUCTIONS (READ THIS FIRST)

For more than five UST systems you may attach additional forms as needed.

Permanent closure – For permanent closure, complete all sections of this form.

Change-in-service – For change-in-service where UST systems will be converted from containing a regulated substance to storing a non-regulated substance, complete sections I, II, III, IV, and VIII

Effective February 1, 1995, all UST closure/change-in-service reports must be submitted in the format provided in the UST-12 form. UST closure and change-in-services must be completed in accordance with the latest version of the *Guidelines for Tank Closure*. A copy of the UST-12 form and the *Guidelines for Tank Closure* can be obtained at www.wastenotnc.org.

You must make sure that USTs removed from your property are disposed of properly. When choosing a closure contractor, ask where the tank(s) will be taken for disposal. Usually, USTs are cleaned and cut up for scrap metal. This is dangerous work and must be performed by a qualified company. Tanks disposed of illegally in fields or other dumpsites can leak petroleum products and sludge into the environment. If your tanks are disposed of improperly, you could be held responsible for the cleanup of any environmental damage that occurs.

NOTE: If a release from the tank(s) has occurred, the site assessment portion of the tank closure must be conducted under the supervision of a P.E. or L.G., with all closure site assessment reports bearing the signature and seal of the P.E. or L.G.

I. OWNERSHIP OF TANKS				II. LOCATION OF TANKS			
Owner Name (Corporation, Individual, Public Agency, or Other Entity) NCDOT by Permanent Easement				Facility Name or Company			
Street Address 3585 US Highway 1				Facility ID # (If known)			
City Hoffman		County Richmond		Street Address 3585 US Highway 1			
State NC		Zip Code 28347		City Hoffman		County Richmond	Zip Code 28347
Phone Number none				Phone Number none			

III. CONTACT PERSONNEL

Contact for Facility: Mr. Cyrus F. Parker, LG, PE NCDOT Geoenvironmental Unit			Job Title: Project Manager			Phone. No: 919-250-4088		
Closure Contractor Name: Tony Disher		Closure Contractor Company: Soil Solutions, Inc..		Address: 1703 Vargrave St, Winston-Salem, NC			Phone. No: 336-725-5844	
Primary Consultant Name: Jessica L. Dehart, P.G.		Primary Consultant Company: Solutions-IES, Inc.		Address: 1101 Nowell Rd., Raleigh, NC			Phone. No: 919-873-1060	

IV. UST INFORMATION FOR REGISTERED UST SYSTEMS							V. EXCAVATION CONDITION					
Tank ID No.	Size in Gallons	Tank Dimensions	Last Contents	Last Use Date	Permanent Close Date	Change-in-Service Date	Water in excavation		Free product		Notable odor or visible soil contamination	
							Yes	No	Yes	No	Yes	No
1	550	3.5' x 7'	Gasoline, Ga	unknown	03/24/08		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	550	3.5' x 7'	Gasoline, Ga	unknown	03/24/08		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VI. UST INFORMATION FOR UNREGISTERED UST SYSTEMS							VII. EXCAVATION CONDITION					
Tank ID No.	Size in Gallons	Tank Dimensions	Last Contents	Last Use Date	Permanent Close Date	Tank Owner Name *	Water in excavation		Free product		Notable odor or visible soil contamination	
							Yes	No	Yes	No	Yes	No
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

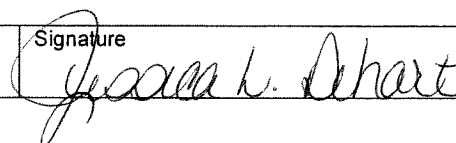
* If the tank owner address is different from the one listed in Section I., then enter the street address, city, state, zip code and telephone no. below:

VIII. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true accurate and complete.

Print name and official title of owner or owner's authorized representative
Jessica L. Dehart, P.G. Acting Agent for NCDOT

Signature



Date Signed

3/28/08

UST-3 Notice of Intent: UST Permanent Closure or Change-in-Service

Return completed form to:

The DWM Regional Office located in the area where the facility is located. Send a copy to the Central Office in Raleigh so that the status of the tank may be changed to "PERMANENTLY CLOSED" and your tank fee account can be closed out. SEE MAP ON THE BACK OF THIS FORM FOR THE CENTRAL AND REGIONAL OFFICE ADDRESSES.

STATE USE ONLY

I.D. # _____

Date Received _____

INSTRUCTIONS (READ THIS FIRST)

Complete and return at least **thirty (30) days** prior to closure or change-in-service activities. If a Professional Engineer (P.E.) or a Licensed Geologist (L.G.) provides supervision for closure or change-in-service site assessment activities and signs and seals all closure reports then at least a **five (5) working days** notice is acceptable.

Completed UST closure or change-in-service site assessment reports, along with a copy of the UST-2 form, should be submitted to the appropriate Division of Waste Management (DWM) Regional Office within thirty (30) days following closure activities. The UST-2 form should also be submitted to the Central Office in Raleigh so that the status of the tanks may be changed to permanently closed and your tank fee account can be closed out.

UST closure and change-in-service site assessments must be completed in accordance with the latest version of the *Guidelines for Tank Closure*. The *Guidelines for Tank Closure* can be obtained at www.wastenotnc.org.

You must make sure that USTs removed from your property are disposed of properly. When choosing a closure contractor, ask where the tank(s) will be taken for disposal. Usually, USTs are cleaned and cut up for scrap metal. This is dangerous work and must be performed by a qualified company. Tanks disposed of illegally in fields or other dumpsites can leak petroleum products and sludge into the environment. If your tanks are disposed of improperly, you could be held responsible for the cleanup of any environmental damage that occurs.

I. OWNERSHIP OF TANKS

II. LOCATION

Owner Name (Corporation, Individual, Public Agency, or Other Entity)
NCDOT by Permanent Easement

Facility Name or Company
Pansy Earnest Property - Parcel #50

Street Address
3585 US Hwy-1

Facility ID # (If known)
Unknown

City
Hoffman

County
Richmond

Street Address
3585 US Hwy-1

State
NC

Zip Code
28347

City
Hoffman

County
Richmond

Zip Code
28347

Phone Number
none

Phone Number
none

III. CONTACT PERSONNEL

Name:
Cyrus F. Parker, LG, PE

Company Name:
NCDOT Geotechnical Unit

Job Title:
Project Manager

Phone Number:
250-4088

IV. TANK REMOVAL, CLOSURE IN PLACE, CHANGE-IN SERVICE

- | | | |
|--|---|--|
| <ol style="list-style-type: none"> 1. Contact local fire marshal. 2. Plan entire closure event. 3. Conduct Site Soil Assessment. 4. If removing tanks or closing in place, refer to API Publication 2015 <i>Cleaning Petroleum Storage Tanks</i> and 1604 <i>Removal and Disposal of Used Underground Petroleum Storage Tanks</i>. | <ol style="list-style-type: none"> 5. Provide a sketch locating piping, tanks and soil sampling locations. 6. Submit a closure report in the format of UST-12 (including the form UST-2) within thirty (30) days following the site investigation. 7. If a release from the tanks has occurred, the site assessment portion of the tank closure must be conducted under the supervision of | <p>a P.E. or L.G., with all closure site assessment reports bearing the signature and seal of the P.E. or L.G. If a release has not occurred, the supervision, signature or seal of a P.E. or L.G. is not required.</p> <ol style="list-style-type: none"> 8. Keep closure records for three (3) years. |
|--|---|--|

V. WORK TO BE PERFORMED BY

Contractor Name:
Tony Disher

Contractor Company Name:
Soil Solutions INC.

Address:
1703 Vargave Street, Winston Salem

State:
NC

Zip Code:
27107

Phone No:
(336) 725-5844

Primary Consultant Name:
Sheri Knox

Primary Consultant Company Name:
Solutions-IES

Consultant Phone No:
(919) 873-1060

VI. TANKS SCHEDULED FOR CLOSURE OR CHANGE-IN-SERVICE

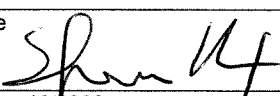
Tank ID No.	Size in Gallons	Last Contents	Proposed Activity		
			Closure		Change-In-Service New Contents Stored
			Removal	Abandonment in Place *	
1	1000	Petroleum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2	1000	Petroleum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	

* Prior written approval to abandon a tank in place must be received from a DWM Regional Office.

VII. OWNER OR OWNER'S AUTHORIZED REPRESENTATIVE

I understand that I can be held responsible for environmental damage resulting from the improper disposal of my USTs.

Print name and official title: Sheri Knox - Solutions-IES project manager and acting agent for NCDOT

Signature: 

Date Signed: 3/3/08

SCHEDULED REMOVAL DATE
week of March 10, 2008

Notify your DWM Regional Office 48 hours before this date if scheduled removal date changes

UST-61

24-Hour Release and UST Leak Reporting Form.

For Releases in NC

This form should be completed and submitted to the UST Section's regional office following a known or suspected release from an underground storage tank (UST) system. This form is required to be submitted within 24 hours of discovery of a known or suspected release

(DWM USE ONLY)
Incident # _____ Risk (H,I,L,U) _____
Received On _____ Received By _____
Reported by (circle one): Phone, Fax or Report
Region _____

Suspected Contamination? (Y/N) Y
Confirmed GW Contamination? (Y/N) N
Confirmed Soil Contamination? (Y/N) Y
Samples Taken? (Y/N) Y
Free Product? (Y/N) N If Yes, State Greatest Thickness NA

Facility ID Number 3259
Date Leak Discovered 3/24/08
Comm/Non-Commercial? _____
Reg/Non-regulated? Regulated

INCIDENT DESCRIPTION

Incident Name: NCDOT Parcel 50 – Pansy Earnest Property

Address: 3585 US 1

County: Richmond

City/Town: Hoffman

Zip Code: 28347

Regional Office (circle one): Asheville, Mooresville, Fayetteville
Raleigh, Washington, Wilmington, Winston-Salem

Latitude (decimal degrees): 35.03086

Longitude (decimal degrees): 79.55077

Obtained by:

Briefly describe suspected or confirmed release: (including but not limited to: nature of release, date of release, amount of release, amount of free product present and recovery efforts, initial responses conducted, impacts to receptors)

Two 550 gallon USTs were closed by removal on 3/24/08. Laboratory analytical data indicated GRO and DRO concentrations in soil above regulatory screening levels. The type and date of release are unknown. No receptors were identified. Impacted soil was excavated and disposed.

- GPS
 Topographic map
 GIS Address matching
 Other
 Unknown

Describe location:

HOW RELEASE WAS DISCOVERED (Release Code)

(Check one)

- | | | |
|---|--|--|
| <input type="checkbox"/> Release Detection Equipment or Methods | <input checked="" type="checkbox"/> Visual/Odor | <input type="checkbox"/> Groundwater Contamination |
| <input checked="" type="checkbox"/> During UST Closure/Removal | <input type="checkbox"/> Water in Tank | <input type="checkbox"/> Surface Water Contamination |
| <input type="checkbox"/> Property Transfer | <input type="checkbox"/> Water Supply Well Contamination | <input type="checkbox"/> Other (specify) _____ |

SOURCE OF CONTAMINATION

Source of Release

(Check one to indicate primary source)

- Tank
 Piping
 Dispenser
 Submersible Turbine Pump
 Delivery Problem
 Other
 Unknown

Definitions presented on reverse

Cause of Release

(Check one to indicate primary cause)

- Spill
 Overfill
 Corrosion
 Physical or Mechanical Damage
 Install Problem
 Other
 Unknown

Definitions presented on reverse

Type of Release

(Check one)

- Petroleum
 Non-Petroleum
 Both

Location

(Check one)

- Facility
 Residence
 Other

Product Type Released

(Check one to indicate primary product type released)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Gasoline/ Diesel/ Kerosene | <input type="checkbox"/> Diesel/Veg. Oil Blend |
| <input type="checkbox"/> Heating Oil | <input type="checkbox"/> Vegetable Oil 100% |
| <input type="checkbox"/> Other Petroleum Products | <input type="checkbox"/> E10 – E20 |
| <input type="checkbox"/> Metals | <input type="checkbox"/> E21 – E84 |
| <input type="checkbox"/> Other Inorganics | <input type="checkbox"/> E85 – E99 |
| <input type="checkbox"/> Other Organics | <input type="checkbox"/> Ethanol 100% |
| | <input type="checkbox"/> E01 – E09 |

Ownership

1. Municipal 2. Military 3. Unknown 4. Private 5. Federal 6. County 7. State

Operation Type

1. Public Service 2. Agricultural 3. Residential 4. Education/Relig. 5. Industrial 6. Commercial 7. Mining

IMPACT ON DRINKING WATER SUPPLIES

Water Supply Wells Affected? 1. Yes **2. No** 3. Unknown

Number of Water Supply Wells Affected _____

Water Supply Wells Contaminated: *(Include Users Names, Addresses and Phone Numbers. Attach additional sheet if necessary)*

- 1.
- 2.
- 3.

UST SYSTEM OWNER

UST Owner/Company

NCDOT by permanent easement

Point of Contact

Cyrus F. Parker (NCDOT Geoenvironmental Unit)

Address

Beryl Road

City

Raleigh

State

NC

Zip Code

27607

Telephone Number

919-250-4088

UST SYSTEM OPERATOR

UST Operator/Company

Unknown

Address

City

State

Zip Code

Telephone Number

LANDOWNER AT LOCATION OF UST INCIDENT

Landowner

NCDOT by permanent easement

Address

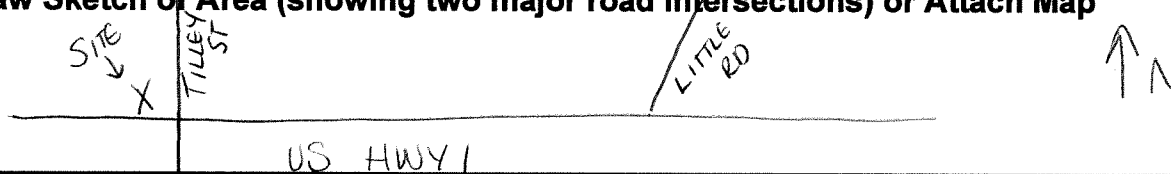
City

State

Zip Code

Telephone Number

Draw Sketch of Area (showing two major road intersections) or Attach Map



Person Reporting Incident Jessica Dehart

Company Solutions-IES, Inc.

Telephone Number 919-873-1000

Title Acting Agent for NCDOT

Address 1101 Nowell Rd. Raleigh, NC

Date 04/15/08

Definitions of Sources

Tank: means the tank that stores the product and is part of the underground storage tank system

Piping: means the piping and connectors running from the tank or submersible turbine pump to the dispenser or other end-use equipment (Vent, vapor recovery, or fill lines are excluded.)

Dispenser: includes the dispenser and the equipment used to connect the dispenser to the piping (e.g., a release from a suction pump or from components located above the shear valve)

Submersible Turbine Pump (STP) Area includes the submersible turbine pump head (typically located in the tank sump), the line leak detector, and the piping that connects the submersible turbine pump to the tank

Delivery Problem: identifies releases that occurred during product delivery to the tank. (Typical causes associated with this source are spills and overfills.)

Other: serves as the option to use when the release source is known but does not fit into one of the preceding categories (e.g., for releases from vent lines, vapor recovery lines, and fill lines)

Unknown: identifies releases for which the source has not been determined

Definitions of Causes

Spill: use this cause when a spill occurs (e.g., when the delivery hose is disconnected from the tank fill pipe or when the nozzle is removed from the dispenser)

Overfill: use when an overfill occurs (e.g., overfills may occur from the fill pipe at the tank or when the nozzle fails to shut off at the dispenser)

Physical or Mechanical Damage: use for all types of physical or mechanical damage, except corrosion (e.g., puncture of tank or piping, loose fittings, broken components, and components that have changed dimension)

Corrosion: use when a metal tank, piping, or other component has a release due to corrosion (e.g., for steel, corrosion takes the form of rust)

Installation Problem: use when the problem is determined to have occurred specifically because the UST system was not installed properly

Other: use this option when the cause is known but does not fit into one of the preceding categories (e.g., putting regulated substances into monitoring wells)

Unknown: use when the cause has not been determined

APPENDIX B

SITE-SPECIFIC HEALTH AND SAFETY PLAN

HEALTH AND SAFETY PLAN

PRELIMINARY SITE ASSESSMENTS

PARCELS: (R-2502-A&B) 009, 021, 048, 050, 061, and 068

Along US-1 South of SR1001 to North of the Richmond County Line

**NCDOT TIP: R-2502 A & B
NCDOT WBS Element: 34438.1.1
RICHMOND / MOORE COUNTY
NORTH CAROLINA**

Prepared for:

NCDOT Geotechnical Unit
1589 Mail Service Center
Raleigh, NC 27699-1589

Prepared by:

Solutions-IES, Inc.
1101 Nowell Road
Raleigh, NC 27607

Solutions-IES Project No. 6000.07A3.NDOT

February 2008

**HEALTH AND SAFETY PLAN
PRELIMINARY SITE ASSESSMENT**

LOCATION OF SITE: 6 Parcels from South of SR 1001 to North of the
Richmond County Line, North Carolina

SOLUTIONS-IES JOB NO.: 6000.07A3.NDOT
CLIENT: Mr. Cyrus F. Parker, LG , PE
(NCDOT Geotechnical Unit)

REVIEWED BY

Corporate Health & Safety Officer Walter J. Beckwith, P.G.
Project Manager Sheri Knox, P.E.



DATE OF PLAN PREPARATION

February 27, 2008

DATES OF PLANNED FIELD ACTIVITIES:

March 10, 2008 to March 21

EMERGENCY CONTACT INFORMATION:

Hospital: **First Health Richmond Memorial Hospital**
 925 South Long Drive
 Rockingham, NC 28379 (910) 417-3665

Distance from Site: **Approximately 15.7 miles**

Travel Time: 24 minutes

Directions:

Start: Going West on US-1/Main Street towards Bracy St.
Turn LEFT on South Long Drive / NC-1646
End: 925 South Long Drive, Rockingham, NC 28379-4835

Source: www.mapquest.com
(See Figure 1 for Hospital Route)

EMS/FIRE/POLICE: 911

SOLUTIONS-IES HEALTH AND SAFETY OFFICER:

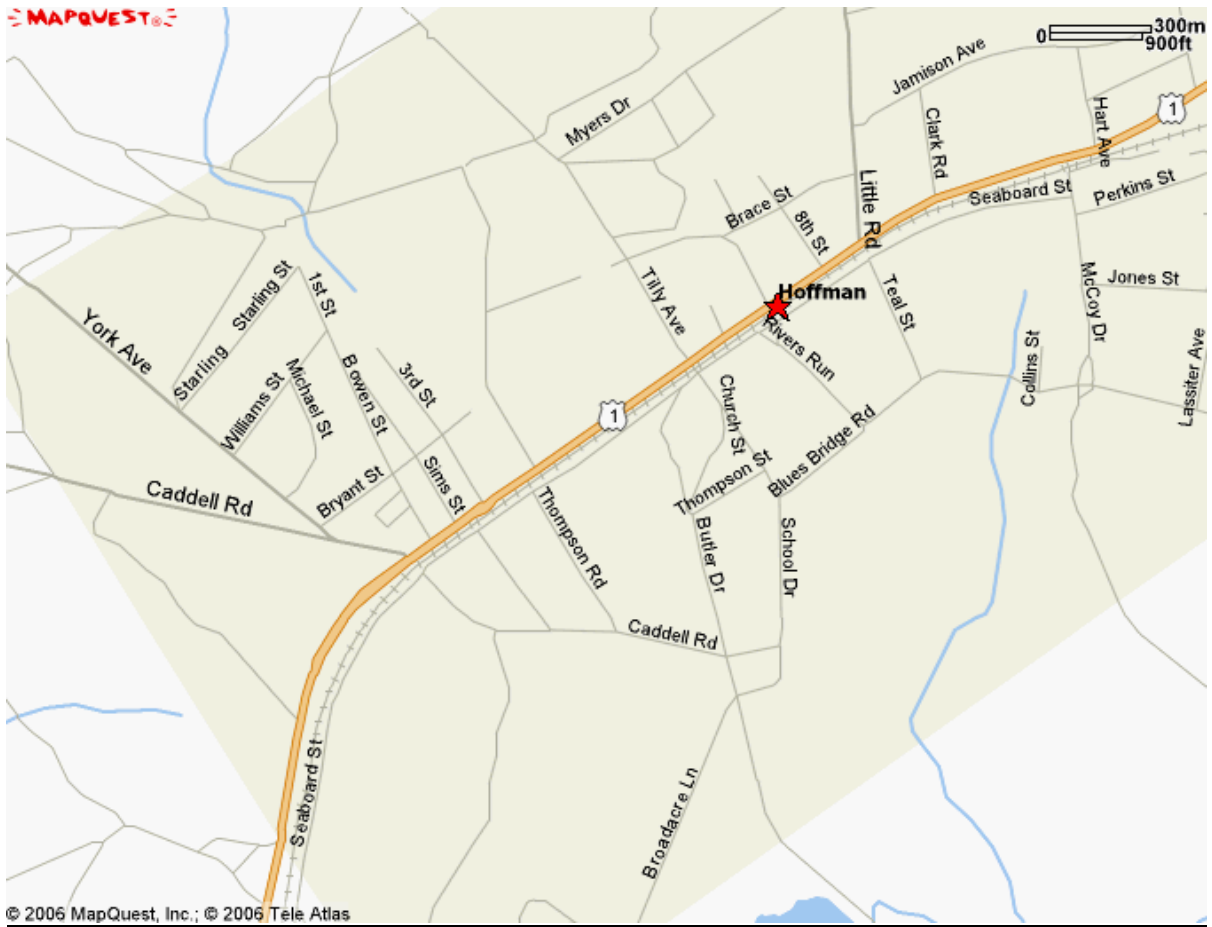
Walt Beckwith, Office (919) 873-1060; Mobile (919) 345-1310

CLIENT CONTACT: Mr. Cyrus F. Parker, LG, PE
Office (919) 250-4088

FIGURE 1
ROUTE TO HOSPITAL



**FIGURE 2
LOCAL MAP**



DAILY SIGN IN LOG:

Solutions-IES is not liable for any Health & Safety issues involving non-Solutions-IES employees. Contractors, sub-contractors and government employees are responsible for providing and following their own Health & Safety Plans and adhering to their own company policies.

The undersigned Solutions-IES employees have read and understood this site-specific health and safety plan:

<u>Name</u>	<u>Signature</u>	<u>Date</u>	<u>Attended Today's Site Specific H&S Meeting?(Y/N)</u>
Jessica Dehart	J. Dehart	3/10/08	Y
Jessica Dehart	J. Dehart	3/11/08	Y
Jessica Dehart	J. Dehart	3/12/08	Y
Jessica Dehart	J. Dehart	3/13/08	Y
Jessica Dehart	J. Dehart	3/14/08	Y
Jessica Dehart	J. Dehart	3/18/08	Y
Jessica Dehart	J. Dehart	3/19/08	Y
Jessica Dehart	J. Dehart	3/20/08	Y
Jessica Dehart	J. Dehart	3/21/08	Y
Tim Parks	T. Parks	³¹²⁴⁻⁰⁰³ 3/23/08	Y
Tim Parks	T. Parks	3/25/08	Y
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

SITE-SPECIFIC HEALTH AND SAFETY PLAN

TANK PULL'S AND SOIL EXCAVATION / REMOVAL

PARCELS: (R-2502-A&B) 009, 021, 048, 050, 061, and 068

A. Site History and Description

NCDOT TIP: R-2502 A & B Richmond County, NC

A Limited PSAs was performed at the six parcels referenced in the Request for Technical and Cost Proposal dated July 10, 2006. NCDOT provided a brief description of the six parcels including some background information and a Limited Phase I Site Assessment report prepared by S&ME, Inc. Work is to be performed in Right of Way and/or Easement only.

State Project: R-2502A

Parcel 009, K.J. Lewis Property - 2505 US Hwy 1 (north side of hwy 1 and east of Mercer St.) Richmond County NC. This parcel is located on the north side of US 1 just east of Mercer Street. Three USTs were noted on the property in the existing right of way. Heavy vegetation, overhead electric lines exist on the site. It probably operated as a gas station in the past. Pump island remains were observed. We did not collect any samples as access at this site is difficult.

Scope: Remove USTs contents and piping; excavate and dispose of contaminated soils.

Parcel 021, James Brigman Property - 2589 US Hwy 1 near the towns of Marston and Hoffman. It previously operated as gas station, smoke shop and body-piercing establishment. No evidence of UST system observed. 11 soil borings showed low concentrations detected in headspace analysis and no detects of TPH DRO/GRO above lab limits

Scope: Remove USTs contents and piping; excavate and dispose of contaminated soils.

Parcel 048, Roy Barry Bostick Property - 3569 US Hwy 1 Richmond County, NC near Marston and Hoffman. Previously, buildings housed a towing company which performed vehicle maintenance and race car assembly. There is possibly one small UST southwest corner of building. There is no evidence of UST system. 10 soil borings showed low levels of volatile vapors in headspace and chromium and lead detected above reporting limits in all 10 samples. DRO was above lab reporting limits in 6 of 10.

Scope: Remove USTs, contents and piping; excavate and dispose of contaminated soils. This parcel is located on the north side of US 1 and 300 feet west of Tilley Street.

Parcel 050, Pansy Earnest Property -3585 US Hwy 1 near Marston and Hoffman Richmond Co., near Hwy 1 and Tilley St in Hoffman. There is a cinder block building on site, and several utilities including overhead. GPR showed 2 potential USTs near southwestern corner of bldg. No evidence of UST system noted. Nine soil borings showed low concentration of volatiles in headspace and DRO levels between 5.4-6.6 mg/kg .

Scope: Remove USTs, contents and piping; excavate and dispose of contaminated soils.

Parcel 061, Cooper & Brown Incorporated Property - 3702 Us Hwy 1. There is a cinder block building on site, along with dense brush and trees. Utilities were noted overhead. Geophysical found no evidence of USTs. There are elevated DRO and GRO in soils that are stockpiled on site.

Scope: Load and dispose of 50 yd³ stockpiled on-site.

Parcel 068 (R-2502B), James Pugh Property - US Hwy 1 Richmond County, near Marston and Hoffman. Located on the north side of US 1 ~500 ft west of Special Forces Way. The site is covered with dense brush and trees. A former pump island noted suggesting gas station operated in the past. GPR did not suggest a UST, but maybe a cistern or well 140 ft west of pump island. Nineteen soil borings had volatile vapors in headspace screening, and elevated GRO and DRO levels.

Scope: Excavate and dispose of contaminated soils down to an elevation of 278 feet or until no contamination is detected.

A. Site Classification: (i.e. plant, landfill, etc.)

The sites are either abandoned commercial businesses that were previously used as commercial fueling stations or cleared lots. Parcel 068 is a local resident with an open well head that presents a fall hazard.

B. Activities performed prior to investigation: (i.e. groundwater sampling, tank removal, spill, fire, etc.)

The property owner of Parcel 061 reportedly closed eight UST's. Phase 1 ESA was completed that encompasses the properties. Solutions-IES completed an PSA of the properties in August of 2006.

C. Unusual Features: (i.e. lakes, streams, utilities, dikes, drum storage, etc.)

Properties are adjacent to the highways, and a opened well head on parcel 68

D. Waste Classification: Solid Liquid Gas Sludge

E. Waste Characterization: Toxic Corrosive Radioactive

Flammable Volatile Reactive

Other (Specify) _____

F. Substance(s) Quantity Action Level (PEL/TWA)

Gasoline unknown 5ppm

Kerosene/Diesel unknown 100ppm

Diesel Fuel unknown 10ppm

Heating Oil unknown 100ppm

Waste Oil unknown Not Established

G. Physical Hazards: Heat Cold Noise Radiation

Other (Specify) Vehicular traffic, and slips, trips, and falls

H. Weather:

Tank removal activities will be performed in March. Temperatures may range anywhere from lows in the 30's to highs in the low 60's. Weather forecasts should be reviewed prior to mobilization, and prior to start of work daily. If heavy rain is predicted, it is recommended not to leave uncovered UST's in the ground. Heavy rain may cause them to float.

B. Site Organization and Control

A. Work area identified as:

PARCELS 009, 021, 048, 050, 061, and 068. The work areas will be identified in the field and will be marked with traffic cones, flags and caution tape if necessary.

B. Decontamination area identified as:

Area adjacent to Solutions-IES work vehicle.

C. Support area identified as:

Solutions-IES work vehicle

D. Site security maintained by:

All of the sites are unsecured. Traffic cones, flagging or barricade tape will be used to segregate the work area from casual entry by onlookers. Be particularly careful on sites that are active and open to the public. Prevent any slip/trip or fall hazards. Recognize potential hazards posed to the public as well as Solutions-IES workers.

C. Job Activities and Work Plans

A. Type of Activity: Soil Sampling, Soil Excavation and Tank Removals

1. Soil sampling out of back-hoe bucket or hand auger

Comments:

Solutions-IES Employee will make direct eye contact with back-hoe operator before approaching bucket to obtain sample, and will only approach bucket when it is at rest. _____

B. Work Plan Description:

The following describes the activities to be performed at the site. UST's will be removed by Soil Solutions, and contaminated soils will be excavated to the extent written in the proposal. Additional soil may be removed after verbal confirmation from the project manager. Solutions-IES will screen soils and perform closure and confirmation sampling. The samples will be shipped on under Chain-of-Custody control to Pace Analytical Laboratories for analysis. Soil samples collected will be analyzed for total petroleum hydrocarbons. Contaminated soil will be removed from the sites by Soil Solutions and disposed of according to regulations.

D. Levels of Protection

<u>Job Activity</u>	<u>Personal Protective Equipment (PPE)</u>	<u>Level</u>
1. Soil sampling	<u>Steel toe boots, nitrile gloves,</u> <u>safety glasses, ear plugs, and DOT safety vest.</u> <u>Hard hat will be worn while working around</u> <u>Geo-Probe.</u>	D

V. Ambient Field Monitoring

A. Equipment required:

Flame ionization detector (FID)

B. Monitoring Protocol:

Position yourself upwind of the purging/sampling operation if possible. If odors are detected monitor the breathing zone with a flame ionization detector (FID). Monitor the breathing zone frequently. If readings approach 5 ppm over background, cease activities. Move upwind from the suspected source and let levels stabilize. Return to work when levels are less than 5 ppm. If levels do not decrease, stop activities and call Solutions-IES Health and Safety officer.

VI. Safety Equipment List

- A. First-Aid kit Yes ___ No Location: Solutions-IES truck
- B. Fire Extinguisher: Yes ___ No Location: Solutions-IES truck
Verify condition prior to mobilization
- C. Communication: ___ Buddy ___ Radio ___ Hand Signals Cell Phone
- D. Personal Protective Equipment List: Level D
- ___ Tyvek
 - ___ Chemical Resistant Suit
 - ___ Fully Encapsulated Suit
 - Steel Toed Boots
 - Orange Work Vest
 - Hard Hat
 - Safety Glasses
 - ___ Ear Plugs (**See Attached Hearing Protection Protocol**)
 - ___ Gloves, inner (specify) _____
 - Gloves, outer (specify) Nitrile, work gloves
 - ___ Respirator, Type: ___ Half-face ___ Full-face ___ SCBA
 - ___ Respirator Cartridge Type: _____
- E. Other Specialized Equipment:
- Water Cooler
 - Cell Phone
 - Traffic Cones
 - Traffic Signs (When Necessary)
 - API UST Closure Guidelines
 - NCDENR UST Section Tank Closure Guidelines
 - Other(specify) roll of plastic sheeting

VII. Decontamination Equipment

- Pressure Washer (Geoprobe) ___ Solvent Rinse
___ Steam Ginny (Drill Rig) ___ Other (specify) _____
 Water
 Liquinox™
 5-Gallon Carboy of Deionized Water

VIII. Decontamination Procedures

Activity: Soil sampling

Procedure: All non-disposable sampling equipment will be rinsed with potable water, washed with a Liquinox™/water mixture, and then rinsed with DI water and allowed to air dry.

IX. Sanitation:

Restrooms/Hand Washing:

Locate suitable facilities before beginning work.

Shower:

Not Available

Comments:

Hose on Geo-Probe can be used for hand washing.

X. Education, Training and Medical Surveillance

A. Special Training Beyond OSHA 40-Hour Requirement?

No

___ Yes (specify) _____

B. Special Medical Monitoring beyond standard OSHA program required?

No

___ Yes (specify) _____

APPENDIX I MSDS FORMS

Unknown concentrations of the contaminants listed below may be detected in the soil and groundwater at the parcels to be assessed.

1. Gasoline
2. Diesel
3. Kerosene
4. Heating Oil
5. Waste Oil

APPENDIX II
ACCIDENT, ENVIRONMENTAL RELEASE, PROPERTY DAMAGE OR
NEAR MISS FORM

Appendix IV
Hearing Protection Protocol

APPENDIX C

**RECORDS OF CERTIFICATES OF USTS AND RESIDUALS DISPOSAL,
DISPOSAL MANIFEST**



SOIL SOLUTIONS

CERTIFICATE OF DISPOSAL

Soil Solutions, Inc. does hereby certify that 349 gallons of non-hazardous contaminated water received on 03/24/2008 from:

Generator: NCDOT (Parcel 50)

Originating at: 3585 US-1
Hoffman, NC

SSI Waste ID #: 030809

has been disposed of by Soil Solutions, Inc. in a manner approved by the North Carolina Department of Environment and Natural Resources.

Signature

Thomas W. Hammett
Vice President
Soil Solutions, Inc.





SOIL SOLUTIONS

TANKS DISPOSAL CERTIFICATE

Tank Owner: NCDOT (Parcel 50)

Site Address: 3585 US-1
Hoffman, NC

Description of Tanks:

<u>Tank Number</u>	<u>Size of Tank</u>	<u>Contents</u>
1	550 Gallons	Gasoline
2	550 Gallons	Gasoline

Transporter: Soil Solutions, Inc.

SSI Project #: 030809

Disposal Certification:

Soil Solutions, Inc. does hereby certify that the above named storage tanks were transported to Atlantic Scrap and Processing in Winston-Salem, NC for proper disposal and recycling.

Signature

Thomas W. Hammett
Vice President
Soil Solutions, Inc.





SOIL SOLUTIONS

CERTIFICATE OF DISPOSAL

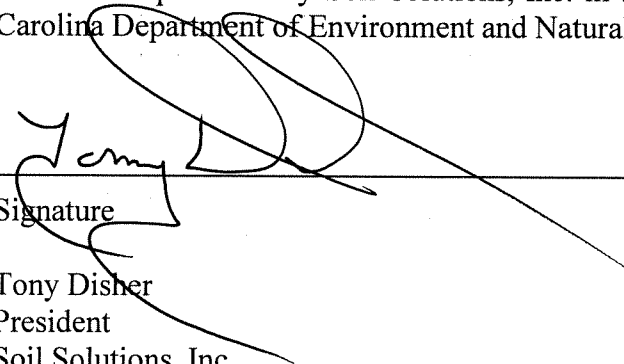
Soil Solutions, Inc. does hereby certify that 25.55 tons of non-hazardous contaminated material received on 03/25/2008 from:

Generator: NCDOT (Parcel 50)

Originating at: 3585 US-1
Hoffman, NC

SSI Waste ID #: 030809

has been disposed of by Soil Solutions, Inc. in a manner approved by the North Carolina Department of Environment and Natural Resources.



Signature

Tony Disher
President
Soil Solutions, Inc.



Earthtec of NC, Inc.
 Post Office Box 130
 Sanford, NC 27331
 Phone #: 919-774-4517
 Fax #: 919-774-6415

NORTH CAROLINA
 PUBLIC WEIGHMASTER
 LICENSE EXPIRES JUNE 30, 2008
 ADOLPHUS HEADEN 31794

1 ID. NO.

79960 1b BR
 28860 1b TR RECALLED
 51100 1b NT

INVALID UNLESS SIGNED

Jackson - (336) 407-4549

03/25/08 09:14am

NON-HAZARDOUS WASTE MANIFEST

Project Number: 030809	Load Number: 1
Consultant: Soil Solutions, Inc. 1703 Vergrave Street, Winston Salem, NC	Contact: Tony Disher 336-725-5844
Generator: NCDOT Parcel #30 3585 US 1 Hoffman, NC	Contact: Cyrus Parker Phone: 919-250-4088
Transporter:	Contact: Phone:
Destination: Earthtec Environmental, Inc 3145 Rosser Road, Bear Creek, NC 27207	Contact: Scott Keller Phone: 919-774-4517 or 919-770-4258
Waste Description: Soil contaminated w/ petroleum	Waste Origination: 3585 US1 Hoffman, NC
Truck #: EV-007	Gross Weight: 79960
	Tare Weight: 28860
	Net Weight: 51100
	25.55 tons

Generator's Certification: I certify that the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of HAZARDOUS WASTE.

Tim P... Agent for NCDOT 3/25/08
 Generator / Agent Signature Title Date
 Acknowledgment of Receipt of Material: Richard Bloskely 3-25-08
 Drivers Signature Date

Noted Discrepancies:
 Inspected & Accepted (except as noted above By: Earthtec Environmental, Inc.
 Accepted By: Adolphus Headen Date: 3-25-08

APPENDIX D

**LABORATORY ANALYTICAL REPORT AND
CHAIN-OF-CUSTODY FORM**

Case Narrative

PRISM
LABORATORIES, INC.

Date: 04/15/08
Company: N. C. Department of Transportation
Contact: Jessica Dehart
Address: c/o Solution - IES
1101 Nowell Road
Raleigh, NC 27607

Client Project ID: NC DOT - Richmond County UST
Prism COC Group No: G0308809
Collection Date(s): 3/24/2008 thru 3/25/2008
Lab Submittal Date(s): 03/27/08
Client Project Name Or No: WBS# 34438.1.1

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 62 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Semi Volatile Analysis

No Anomalies Reported

Volatile Analysis

No Anomalies Reported

Metals Analysis

N/A

Wet Lab and Micro Analysis

N/A

Please call if you have any questions relating to this analytical report.

Date Reviewed by: Robbi A. Jones
Signature: *Robbi A. Jones*
Review Date: 04/15/08

Project Manager: Angela D. Overcash
Signature: *Robbi Jones for A. Overcash*
Approval Date: 04/15/08

Data Qualifiers Key Reference:

- B: Compound also detected in the method blank.
- #: Result outside of the QC limits.
- DO: Compound diluted out.
- E: Estimated concentration, calibration range exceeded.
- J: The analyte was positively identified but the value is estimated below the reporting limit.
- H: Estimated concentration with a high bias.
- L: Estimated concentration with a low bias.
- M: A matrix effect is present.

Notes: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N-2
 Prism Sample ID: 209845
 COC Group: G0308809
 Time Collected: 03/25/08 10:35
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	95.9	%			1	SM2540 G	03/31/08 13:30	mbarber	
<u>Sample Weight Determination</u>									
Weight Bisulfate 1	4.62	g			1	5035	03/25/08 0:00	lbrown	
Weight Bisulfate 2	4.68	g			1	5035	03/25/08 0:00	lbrown	
Weight Methanol	4.75	g			1	5035	03/25/08 0:00	lbrown	
<u>Volatile Organic Compounds by GC/MS</u>									
1,1,1-Trichloroethane	BRL	mg/kg	0.0056	0.00067	1	8260B	04/01/08 17:41	erussell	Q31384
1,1,1,2-Tetrachloroethane	BRL	mg/kg	0.0056	0.00041	1	8260B	04/01/08 17:41	erussell	Q31384
1,1,2-Trichloroethane	BRL	mg/kg	0.0056	0.0006	1	8260B	04/01/08 17:41	erussell	Q31384
1,1-Dichloroethane	BRL	mg/kg	0.0056	0.00064	1	8260B	04/01/08 17:41	erussell	Q31384
1,1-Dichloroethene	BRL	mg/kg	0.0056	0.00097	1	8260B	04/01/08 17:41	erussell	Q31384
1,1-Dichloropropene	BRL	mg/kg	0.0056	0.00067	1	8260B	04/01/08 17:41	erussell	Q31384
1,2,3-Trichlorobenzene	BRL	mg/kg	0.0056	0.00064	1	8260B	04/01/08 17:41	erussell	Q31384
1,2,3-Trichloropropane	BRL	mg/kg	0.0056	0.00076	1	8260B	04/01/08 17:41	erussell	Q31384
1,2,4-Trichlorobenzene	BRL	mg/kg	0.0056	0.00073	1	8260B	04/01/08 17:41	erussell	Q31384
1,2,4-Trimethylbenzene	BRL	mg/kg	0.0056	0.00028	1	8260B	04/01/08 17:41	erussell	Q31384
1,2-Dibromoethane (EDB)	BRL	mg/kg	0.0056	0.0007	1	8260B	04/01/08 17:41	erussell	Q31384
1,2-Dichlorobenzene	BRL	mg/kg	0.0056	0.00036	1	8260B	04/01/08 17:41	erussell	Q31384
1,2-Dichloroethane	BRL	mg/kg	0.0056	0.00063	1	8260B	04/01/08 17:41	erussell	Q31384
1,2-Dichloropropane	BRL	mg/kg	0.0056	0.0014	1	8260B	04/01/08 17:41	erussell	Q31384
1,3,5-Trimethylbenzene	BRL	mg/kg	0.0056	0.00047	1	8260B	04/01/08 17:41	erussell	Q31384
1,3-Dichlorobenzene	BRL	mg/kg	0.0056	0.00037	1	8260B	04/01/08 17:41	erussell	Q31384
1,3-Dichloropropane	BRL	mg/kg	0.0056	0.00024	1	8260B	04/01/08 17:41	erussell	Q31384
1,4-Dichlorobenzene	BRL	mg/kg	0.0056	0.00072	1	8260B	04/01/08 17:41	erussell	Q31384
2,2-Dichloropropane	BRL	mg/kg	0.0056	0.00081	1	8260B	04/01/08 17:41	erussell	Q31384
2-Chlorotoluene	BRL	mg/kg	0.0056	0.00032	1	8260B	04/01/08 17:41	erussell	Q31384

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N-2
 Prism Sample ID: 209845
 COC Group: G0308809
 Time Collected: 03/25/08 10:35
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2-Hexanone	BRL	mg/kg	0.056	0.0049	1	8260B	04/01/08 17:41	erussell	Q31384
4-Chlorotoluene	BRL	mg/kg	0.0056	0.00042	1	8260B	04/01/08 17:41	erussell	Q31384
4-Methyl-2-pentanone (MIBK)	BRL	mg/kg	0.056	0.0059	1	8260B	04/01/08 17:41	erussell	Q31384
Acetone	BRL	mg/kg	0.056	0.017	1	8260B	04/01/08 17:41	erussell	Q31384
Benzene	BRL	mg/kg	0.0034	0.00047	1	8260B	04/01/08 17:41	erussell	Q31384
Bromobenzene	BRL	mg/kg	0.0056	0.00072	1	8260B	04/01/08 17:41	erussell	Q31384
Bromochloromethane	BRL	mg/kg	0.0056	0.00046	1	8260B	04/01/08 17:41	erussell	Q31384
Bromodichloromethane	BRL	mg/kg	0.0056	0.00061	1	8260B	04/01/08 17:41	erussell	Q31384
Bromoform	BRL	mg/kg	0.0056	0.00051	1	8260B	04/01/08 17:41	erussell	Q31384
Bromomethane	BRL	mg/kg	0.011	0.0013	1	8260B	04/01/08 17:41	erussell	Q31384
Carbon tetrachloride	BRL	mg/kg	0.0056	0.00037	1	8260B	04/01/08 17:41	erussell	Q31384
Chlorobenzene	BRL	mg/kg	0.0056	0.00058	1	8260B	04/01/08 17:41	erussell	Q31384
Chlorodibromomethane	BRL	mg/kg	0.0056	0.00052	1	8260B	04/01/08 17:41	erussell	Q31384
Chloroethane	BRL	mg/kg	0.011	0.0019	1	8260B	04/01/08 17:41	erussell	Q31384
Chloroform	BRL	mg/kg	0.0056	0.00094	1	8260B	04/01/08 17:41	erussell	Q31384
Chloromethane	BRL	mg/kg	0.0056	0.0014	1	8260B	04/01/08 17:41	erussell	Q31384
cis-1,2-Dichloroethene	BRL	mg/kg	0.0056	0.0009	1	8260B	04/01/08 17:41	erussell	Q31384
cis-1,3-Dichloropropene	BRL	mg/kg	0.0056	0.00074	1	8260B	04/01/08 17:41	erussell	Q31384
Dichlorodifluoromethane	BRL	mg/kg	0.0056	0.0016	1	8260B	04/01/08 17:41	erussell	Q31384
Ethylbenzene	BRL	mg/kg	0.0056	0.00026	1	8260B	04/01/08 17:41	erussell	Q31384
Isopropyl ether (IPE)	BRL	mg/kg	0.0056	0.00052	1	8260B	04/01/08 17:41	erussell	Q31384
Isopropylbenzene	BRL	mg/kg	0.0056	0.00033	1	8260B	04/01/08 17:41	erussell	Q31384
m,p-Xylenes	BRL	mg/kg	0.011	0.00093	1	8260B	04/01/08 17:41	erussell	Q31384
Methyl ethyl ketone (MEK)	BRL	mg/kg	0.11	0.017	1	8260B	04/01/08 17:41	erussell	Q31384
Methyl t-butyl ether (MTBE)	BRL	mg/kg	0.011	0.00047	1	8260B	04/01/08 17:41	erussell	Q31384
Methylene chloride	BRL	mg/kg	0.0056	0.00093	1	8260B	04/01/08 17:41	erussell	Q31384
n-Butylbenzene	BRL	mg/kg	0.0056	0.00041	1	8260B	04/01/08 17:41	erussell	Q31384

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N-2
 Prism Sample ID: 209845
 COC Group: G0308809
 Time Collected: 03/25/08 10:35
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
n-Propylbenzene	BRL	mg/kg	0.0056	0.00037	1	8260B	04/01/08 17:41	erussell	Q31384
Naphthalene	BRL	mg/kg	0.011	0.00068	1	8260B	04/01/08 17:41	erussell	Q31384
o-Xylene	BRL	mg/kg	0.0056	0.00024	1	8260B	04/01/08 17:41	erussell	Q31384
p-Isopropyltoluene	BRL	mg/kg	0.0056	0.00045	1	8260B	04/01/08 17:41	erussell	Q31384
sec-Butylbenzene	BRL	mg/kg	0.0056	0.00038	1	8260B	04/01/08 17:41	erussell	Q31384
Styrene	BRL	mg/kg	0.0056	0.00063	1	8260B	04/01/08 17:41	erussell	Q31384
tert-Butylbenzene	BRL	mg/kg	0.0056	0.00047	1	8260B	04/01/08 17:41	erussell	Q31384
Tetrachloroethene	BRL	mg/kg	0.0056	0.00051	1	8260B	04/01/08 17:41	erussell	Q31384
Toluene	BRL	mg/kg	0.0056	0.00042	1	8260B	04/01/08 17:41	erussell	Q31384
trans-1,2-Dichloroethene	BRL	mg/kg	0.0056	0.00072	1	8260B	04/01/08 17:41	erussell	Q31384
trans-1,3-Dichloropropene	BRL	mg/kg	0.0056	0.00067	1	8260B	04/01/08 17:41	erussell	Q31384
Trichloroethene	BRL	mg/kg	0.0056	0.00082	1	8260B	04/01/08 17:41	erussell	Q31384
Trichlorofluoromethane	BRL	mg/kg	0.0056	0.0010	1	8260B	04/01/08 17:41	erussell	Q31384
Vinyl acetate	BRL	mg/kg	0.028	0.0016	1	8260B	04/01/08 17:41	erussell	Q31384
Vinyl chloride	BRL	mg/kg	0.0056	0.00098	1	8260B	04/01/08 17:41	erussell	Q31384

Surrogate	% Recovery	Control Limits
Toluene-d8	103	81 - 128
Dibromofluoromethane	105	67 - 143
Bromofluorobenzene	108	77 - 128

Semi-volatile Organic Compounds by GC/MS

1,2,4-Trichlorobenzene	BRL	mg/kg	0.34	0.037	1	8270C	04/05/08 2:48	rselph	Q31504
1,2-Dichlorobenzene	BRL	mg/kg	0.34	0.038	1	8270C	04/05/08 2:48	rselph	Q31504
1,3-Dichlorobenzene	BRL	mg/kg	0.34	0.033	1	8270C	04/05/08 2:48	rselph	Q31504
1,4-Dichlorobenzene	BRL	mg/kg	0.34	0.041	1	8270C	04/05/08 2:48	rselph	Q31504
2,4,5-Trichlorophenol	BRL	mg/kg	0.34	0.040	1	8270C	04/05/08 2:48	rselph	Q31504
2,4,6-Trichlorophenol	BRL	mg/kg	0.34	0.037	1	8270C	04/05/08 2:48	rselph	Q31504

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N-2
 Prism Sample ID: 209845
 COC Group: G0308809
 Time Collected: 03/25/08 10:35
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2,4-Dichlorophenol	BRL	mg/kg	0.34	0.022	1	8270C	04/05/08 2:48	rselph	Q31504
2,4-Dimethylphenol	BRL	mg/kg	0.34	0.051	1	8270C	04/05/08 2:48	rselph	Q31504
2,4-Dinitrophenol	BRL	mg/kg	1.7	0.098	1	8270C	04/05/08 2:48	rselph	Q31504
2,4-Dinitrotoluene	BRL	mg/kg	0.34	0.045	1	8270C	04/05/08 2:48	rselph	Q31504
2,6-Dinitrotoluene	BRL	mg/kg	0.34	0.061	1	8270C	04/05/08 2:48	rselph	Q31504
2-Chloronaphthalene	BRL	mg/kg	0.34	0.043	1	8270C	04/05/08 2:48	rselph	Q31504
2-Chlorophenol	BRL	mg/kg	0.34	0.014	1	8270C	04/05/08 2:48	rselph	Q31504
2-Methylnaphthalene	BRL	mg/kg	0.34	0.038	1	8270C	04/05/08 2:48	rselph	Q31504
2-Methylphenol	BRL	mg/kg	0.34	0.027	1	8270C	04/05/08 2:48	rselph	Q31504
2-Nitrophenol	BRL	mg/kg	0.34	0.048	1	8270C	04/05/08 2:48	rselph	Q31504
3&4-Methylphenol	BRL	mg/kg	0.34	0.040	1	8270C	04/05/08 2:48	rselph	Q31504
3,3'-Dichlorobenzidine	BRL	mg/kg	0.68	0.062	1	8270C	04/05/08 2:48	rselph	Q31504
4,6-Dinitro-2-methylphenol	BRL	mg/kg	1.7	0.029	1	8270C	04/05/08 2:48	rselph	Q31504
4-Bromophenylphenylether	BRL	mg/kg	0.34	0.042	1	8270C	04/05/08 2:48	rselph	Q31504
4-Chloro-3-methylphenol	BRL	mg/kg	0.68	0.040	1	8270C	04/05/08 2:48	rselph	Q31504
4-Chloroaniline	BRL	mg/kg	0.34	0.025	1	8270C	04/05/08 2:48	rselph	Q31504
4-Chlorophenylphenylether	BRL	mg/kg	0.34	0.043	1	8270C	04/05/08 2:48	rselph	Q31504
4-Nitrophenol	BRL	mg/kg	1.7	0.043	1	8270C	04/05/08 2:48	rselph	Q31504
Acenaphthene	BRL	mg/kg	0.34	0.046	1	8270C	04/05/08 2:48	rselph	Q31504
Acenaphthylene	BRL	mg/kg	0.34	0.032	1	8270C	04/05/08 2:48	rselph	Q31504
Anthracene	BRL	mg/kg	0.34	0.025	1	8270C	04/05/08 2:48	rselph	Q31504
Azobenzene	BRL	mg/kg	1.7	0.050	1	8270C	04/05/08 2:48	rselph	Q31504
Benzo(a)anthracene	BRL	mg/kg	0.34	0.038	1	8270C	04/05/08 2:48	rselph	Q31504
Benzo(a)pyrene	BRL	mg/kg	0.34	0.043	1	8270C	04/05/08 2:48	rselph	Q31504
Benzo(b)fluoranthene	BRL	mg/kg	0.34	0.069	1	8270C	04/05/08 2:48	rselph	Q31504
Benzo(g,h,i)perylene	BRL	mg/kg	0.34	0.043	1	8270C	04/05/08 2:48	rselph	Q31504
Benzo(k)fluoranthene	BRL	mg/kg	0.34	0.091	1	8270C	04/05/08 2:48	rselph	Q31504

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N-2
 Prism Sample ID: 209845
 COC Group: G0308809
 Time Collected: 03/25/08 10:35
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Benzoic acid	BRL	mg/kg	1.7	0.14	1	8270C	04/05/08 2:48	rselph	Q31504
Benzyl alcohol	BRL	mg/kg	0.68	0.027	1	8270C	04/05/08 2:48	rselph	Q31504
Bis(2-chloroethoxy)methane	BRL	mg/kg	0.34	0.057	1	8270C	04/05/08 2:48	rselph	Q31504
Bis(2-chloroethyl)ether	BRL	mg/kg	0.34	0.042	1	8270C	04/05/08 2:48	rselph	Q31504
Bis(2-chloroisopropyl)ether	BRL	mg/kg	0.34	0.034	1	8270C	04/05/08 2:48	rselph	Q31504
Bis(2-ethylhexyl)phthalate	BRL	mg/kg	0.34	0.026	1	8270C	04/05/08 2:48	rselph	Q31504
Butylbenzylphthalate	BRL	mg/kg	0.34	0.042	1	8270C	04/05/08 2:48	rselph	Q31504
Chrysene	BRL	mg/kg	0.34	0.023	1	8270C	04/05/08 2:48	rselph	Q31504
Di-n-butylphthalate	BRL	mg/kg	0.34	0.054	1	8270C	04/05/08 2:48	rselph	Q31504
Di-n-octylphthalate	BRL	mg/kg	0.34	0.098	1	8270C	04/05/08 2:48	rselph	Q31504
Dibenzo(a,h)anthracene	BRL	mg/kg	0.34	0.032	1	8270C	04/05/08 2:48	rselph	Q31504
Dibenzofuran	BRL	mg/kg	0.34	0.041	1	8270C	04/05/08 2:48	rselph	Q31504
Diethylphthalate	BRL	mg/kg	0.34	0.088	1	8270C	04/05/08 2:48	rselph	Q31504
Dimethylphthalate	BRL	mg/kg	0.34	0.050	1	8270C	04/05/08 2:48	rselph	Q31504
Fluoranthene	BRL	mg/kg	0.34	0.060	1	8270C	04/05/08 2:48	rselph	Q31504
Fluorene	BRL	mg/kg	0.34	0.048	1	8270C	04/05/08 2:48	rselph	Q31504
Hexachlorobenzene	BRL	mg/kg	0.34	0.047	1	8270C	04/05/08 2:48	rselph	Q31504
Hexachlorobutadiene	BRL	mg/kg	0.34	0.034	1	8270C	04/05/08 2:48	rselph	Q31504
Hexachlorocyclopentadiene	BRL	mg/kg	0.34	0.051	1	8270C	04/05/08 2:48	rselph	Q31504
Hexachloroethane	BRL	mg/kg	0.34	0.014	1	8270C	04/05/08 2:48	rselph	Q31504
Indeno(1,2,3-cd)pyrene	BRL	mg/kg	0.34	0.032	1	8270C	04/05/08 2:48	rselph	Q31504
Isophorone	BRL	mg/kg	0.34	0.032	1	8270C	04/05/08 2:48	rselph	Q31504
N-Nitrosodi-n-propylamine	BRL	mg/kg	0.34	0.020	1	8270C	04/05/08 2:48	rselph	Q31504
N-Nitrosodiphenylamine	BRL	mg/kg	0.34	0.049	1	8270C	04/05/08 2:48	rselph	Q31504
Naphthalene	BRL	mg/kg	0.34	0.041	1	8270C	04/05/08 2:48	rselph	Q31504
Nitrobenzene	BRL	mg/kg	0.34	0.043	1	8270C	04/05/08 2:48	rselph	Q31504
Pentachlorophenol	BRL	mg/kg	1.7	0.052	1	8270C	04/05/08 2:48	rselph	Q31504

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N-2
 Prism Sample ID: 209845
 COC Group: G0308809
 Time Collected: 03/25/08 10:35
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Phenanthrene	BRL	mg/kg	0.34	0.029	1	8270C	04/05/08 2:48	rselph	Q31504
Phenol	BRL	mg/kg	0.34	0.060	1	8270C	04/05/08 2:48	rselph	Q31504
Pyrene	BRL	mg/kg	0.34	0.065	1	8270C	04/05/08 2:48	rselph	Q31504

Sample Preparation: 30.4 g / 1 mL 3550B 04/04/08 12:00 pbarr P21252

Surrogate	% Recovery	Control Limits
Terphenyl-d14	84	41 - 136
Phenol-d5	83	13 - 95
Nitrobenzene-d5	74	14 - 103
2-Fluorophenol	59	14 - 89
2-Fluorobiphenyl	88	21 - 108
2,4,6-Tribromophenol	90	25 - 123

Extractable Petroleum Hydrocarbons by GC-FID

C11-C22 Aromatics	BRL	mg/kg	10	1.8	1	MADEP EPH	04/13/08 18:01	grappaccioli	Q31684
C19-C36 Aliphatics	BRL	mg/kg	10	1.4	1	MADEP EPH	04/13/08 18:01	grappaccioli	Q31684
C9-C18 Aliphatics	BRL	mg/kg	10	0.94	1	MADEP EPH	04/13/08 18:01	grappaccioli	Q31684

Sample Preparation: 9.96 g / 2 mL EPH 04/08/08 10:00 pbarr P21286

Surrogate	% Recovery	Control Limits
o-Terphenyl	76	40 - 140
2-Fluorobiphenyl	111	40 - 140
2-Bromonaphthalene	133	40 - 140
1-Chloro-octadecane	47	40 - 140

Volatile Petroleum Hydrocarbons by GC-PID/FID

C5-C8 Aliphatics	BRL	mg/kg	5.2	1.0	1	MADEP VPH	04/05/08 5:11	erussell	Q31515
C9-C10 Aromatics	BRL	mg/kg	5.2	0.031	1	MADEP VPH	04/05/08 5:11	erussell	Q31515
C9-C12 Aliphatics	BRL	mg/kg	5.2	1.6	1	MADEP VPH	04/05/08 5:11	erussell	Q31515

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N-2
 Prism Sample ID: 209845
 COC Group: G0308809
 Time Collected: 03/25/08 10:35
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
							Surrogate	% Recovery	Control Limits
							2,5-Dibromotoluene-PID	117	70 - 130
							2,5-Dibromotoluene-FID	110	70 - 130

Sample Weight Determination

Weight 1	15.52	g		1	MADEP VPH	04/14/08 0:00	Lbrown
Weight 2	13.77	g		1	MADEP VPH	04/14/08 0:00	lbrown

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S-2
 Prism Sample ID: 209846
 COC Group: G0308809
 Time Collected: 03/25/08 10:25
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	95.2	%			1	SM2540 G	03/31/08 13:30	mbarber	
<u>Sample Weight Determination</u>									
Weight Bisulfate 1	4.78	g			1	5035	03/25/08 0:00	lbrown	
Weight Bisulfate 2	4.72	g			1	5035	03/25/08 0:00	lbrown	
Weight Methanol	4.60	g			1	5035	03/25/08 0:00	lbrown	
<u>Volatile Organic Compounds by GC/MS</u>									
1,1,1-Trichloroethane	BRL	mg/kg	0.0055	0.00065	1	8260B	04/01/08 18:13	erussell	Q31384
1,1,2,2-Tetrachloroethane	BRL	mg/kg	0.0055	0.0004	1	8260B	04/01/08 18:13	erussell	Q31384
1,1,2-Trichloroethane	BRL	mg/kg	0.0055	0.00058	1	8260B	04/01/08 18:13	erussell	Q31384
1,1-Dichloroethane	BRL	mg/kg	0.0055	0.00063	1	8260B	04/01/08 18:13	erussell	Q31384
1,1-Dichloroethene	BRL	mg/kg	0.0055	0.00094	1	8260B	04/01/08 18:13	erussell	Q31384
1,1-Dichloropropene	BRL	mg/kg	0.0055	0.00065	1	8260B	04/01/08 18:13	erussell	Q31384
1,2,3-Trichlorobenzene	BRL	mg/kg	0.0055	0.00063	1	8260B	04/01/08 18:13	erussell	Q31384
1,2,3-Trichloropropane	BRL	mg/kg	0.0055	0.00074	1	8260B	04/01/08 18:13	erussell	Q31384
1,2,4-Trichlorobenzene	BRL	mg/kg	0.0055	0.00071	1	8260B	04/01/08 18:13	erussell	Q31384
1,2,4-Trimethylbenzene	BRL	mg/kg	0.0055	0.00027	1	8260B	04/01/08 18:13	erussell	Q31384
1,2-Dibromoethane (EDB)	BRL	mg/kg	0.0055	0.00068	1	8260B	04/01/08 18:13	erussell	Q31384
1,2-Dichlorobenzene	BRL	mg/kg	0.0055	0.00035	1	8260B	04/01/08 18:13	erussell	Q31384
1,2-Dichloroethane	BRL	mg/kg	0.0055	0.00062	1	8260B	04/01/08 18:13	erussell	Q31384
1,2-Dichloropropane	BRL	mg/kg	0.0055	0.0013	1	8260B	04/01/08 18:13	erussell	Q31384
1,3,5-Trimethylbenzene	BRL	mg/kg	0.0055	0.00046	1	8260B	04/01/08 18:13	erussell	Q31384
1,3-Dichlorobenzene	BRL	mg/kg	0.0055	0.00036	1	8260B	04/01/08 18:13	erussell	Q31384
1,3-Dichloropropane	BRL	mg/kg	0.0055	0.00023	1	8260B	04/01/08 18:13	erussell	Q31384
1,4-Dichlorobenzene	BRL	mg/kg	0.0055	0.0007	1	8260B	04/01/08 18:13	erussell	Q31384
2,2-Dichloropropane	BRL	mg/kg	0.0055	0.00079	1	8260B	04/01/08 18:13	erussell	Q31384
2-Chlorotoluene	BRL	mg/kg	0.0055	0.00031	1	8260B	04/01/08 18:13	erussell	Q31384

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NC Certification No. 402
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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S-2
 Prism Sample ID: 209846
 COC Group: G0308809
 Time Collected: 03/25/08 10:25
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2-Hexanone	BRL	mg/kg	0.055	0.0047	1	8260B	04/01/08 18:13	erussell	Q31384
4-Chlorotoluene	BRL	mg/kg	0.0055	0.00041	1	8260B	04/01/08 18:13	erussell	Q31384
4-Methyl-2-pentanone (MIBK)	BRL	mg/kg	0.055	0.0057	1	8260B	04/01/08 18:13	erussell	Q31384
Acetone	BRL	mg/kg	0.055	0.016	1	8260B	04/01/08 18:13	erussell	Q31384
Benzene	BRL	mg/kg	0.0033	0.00046	1	8260B	04/01/08 18:13	erussell	Q31384
Bromobenzene	BRL	mg/kg	0.0055	0.0007	1	8260B	04/01/08 18:13	erussell	Q31384
Bromochloromethane	BRL	mg/kg	0.0055	0.00045	1	8260B	04/01/08 18:13	erussell	Q31384
Bromodichloromethane	BRL	mg/kg	0.0055	0.00059	1	8260B	04/01/08 18:13	erussell	Q31384
Bromoform	BRL	mg/kg	0.0055	0.00049	1	8260B	04/01/08 18:13	erussell	Q31384
Bromomethane	BRL	mg/kg	0.011	0.0012	1	8260B	04/01/08 18:13	erussell	Q31384
Carbon tetrachloride	BRL	mg/kg	0.0055	0.00036	1	8260B	04/01/08 18:13	erussell	Q31384
Chlorobenzene	BRL	mg/kg	0.0055	0.00056	1	8260B	04/01/08 18:13	erussell	Q31384
Chlorodibromomethane	BRL	mg/kg	0.0055	0.00051	1	8260B	04/01/08 18:13	erussell	Q31384
Chloroethane	BRL	mg/kg	0.011	0.0018	1	8260B	04/01/08 18:13	erussell	Q31384
Chloroform	BRL	mg/kg	0.0055	0.00091	1	8260B	04/01/08 18:13	erussell	Q31384
Chloromethane	BRL	mg/kg	0.0055	0.0013	1	8260B	04/01/08 18:13	erussell	Q31384
cis-1,2-Dichloroethene	BRL	mg/kg	0.0055	0.00088	1	8260B	04/01/08 18:13	erussell	Q31384
cis-1,3-Dichloropropene	BRL	mg/kg	0.0055	0.00073	1	8260B	04/01/08 18:13	erussell	Q31384
Dichlorodifluoromethane	BRL	mg/kg	0.0055	0.0015	1	8260B	04/01/08 18:13	erussell	Q31384
Ethylbenzene	BRL	mg/kg	0.0055	0.00025	1	8260B	04/01/08 18:13	erussell	Q31384
Isopropyl ether (IPE)	BRL	mg/kg	0.0055	0.00051	1	8260B	04/01/08 18:13	erussell	Q31384
Isopropylbenzene	BRL	mg/kg	0.0055	0.00032	1	8260B	04/01/08 18:13	erussell	Q31384
m,p-Xylenes	BRL	mg/kg	0.011	0.0009	1	8260B	04/01/08 18:13	erussell	Q31384
Methyl ethyl ketone (MEK)	BRL	mg/kg	0.11	0.016	1	8260B	04/01/08 18:13	erussell	Q31384
Methyl t-butyl ether (MTBE)	BRL	mg/kg	0.011	0.00046	1	8260B	04/01/08 18:13	erussell	Q31384
Methylene chloride	BRL	mg/kg	0.0055	0.0009	1	8260B	04/01/08 18:13	erussell	Q31384
n-Butylbenzene	BRL	mg/kg	0.0055	0.0004	1	8260B	04/01/08 18:13	erussell	Q31384

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NC Certification No. 402
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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S-2
 Prism Sample ID: 209846
 COC Group: G0308809
 Time Collected: 03/25/08 10:25
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
n-Propylbenzene	BRL	mg/kg	0.0055	0.00036	1	8260B	04/01/08 18:13	erussell	Q31384
Naphthalene	BRL	mg/kg	0.011	0.00066	1	8260B	04/01/08 18:13	erussell	Q31384
o-Xylene	BRL	mg/kg	0.0055	0.00023	1	8260B	04/01/08 18:13	erussell	Q31384
p-Isopropyltoluene	BRL	mg/kg	0.0055	0.00044	1	8260B	04/01/08 18:13	erussell	Q31384
sec-Butylbenzene	BRL	mg/kg	0.0055	0.00037	1	8260B	04/01/08 18:13	erussell	Q31384
Styrene	BRL	mg/kg	0.0055	0.00062	1	8260B	04/01/08 18:13	erussell	Q31384
tert-Butylbenzene	BRL	mg/kg	0.0055	0.00046	1	8260B	04/01/08 18:13	erussell	Q31384
Tetrachloroethene	BRL	mg/kg	0.0055	0.00049	1	8260B	04/01/08 18:13	erussell	Q31384
Toluene	BRL	mg/kg	0.0055	0.00041	1	8260B	04/01/08 18:13	erussell	Q31384
trans-1,2-Dichloroethene	BRL	mg/kg	0.0055	0.0007	1	8260B	04/01/08 18:13	erussell	Q31384
trans-1,3-Dichloropropene	BRL	mg/kg	0.0055	0.00065	1	8260B	04/01/08 18:13	erussell	Q31384
Trichloroethene	BRL	mg/kg	0.0055	0.0008	1	8260B	04/01/08 18:13	erussell	Q31384
Trichlorofluoromethane	BRL	mg/kg	0.0055	0.00098	1	8260B	04/01/08 18:13	erussell	Q31384
Vinyl acetate	BRL	mg/kg	0.027	0.0015	1	8260B	04/01/08 18:13	erussell	Q31384
Vinyl chloride	BRL	mg/kg	0.0055	0.00096	1	8260B	04/01/08 18:13	erussell	Q31384

Surrogate	% Recovery	Control Limits
Toluene-d8	103	81 - 128
Dibromofluoromethane	105	67 - 143
Bromofluorobenzene	107	77 - 128

Semi-volatile Organic Compounds by GC/MS

1,2,4-Trichlorobenzene	BRL	mg/kg	0.35	0.038	1	8270C	04/05/08 3:38	rselph	Q31504
1,2-Dichlorobenzene	BRL	mg/kg	0.35	0.038	1	8270C	04/05/08 3:38	rselph	Q31504
1,3-Dichlorobenzene	BRL	mg/kg	0.35	0.034	1	8270C	04/05/08 3:38	rselph	Q31504
1,4-Dichlorobenzene	BRL	mg/kg	0.35	0.041	1	8270C	04/05/08 3:38	rselph	Q31504
2,4,5-Trichlorophenol	BRL	mg/kg	0.35	0.041	1	8270C	04/05/08 3:38	rselph	Q31504
2,4,6-Trichlorophenol	BRL	mg/kg	0.35	0.037	1	8270C	04/05/08 3:38	rselph	Q31504

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S-2
 Prism Sample ID: 209846
 COC Group: G0308809
 Time Collected: 03/25/08 10:25
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2,4-Dichlorophenol	BRL	mg/kg	0.35	0.023	1	8270C	04/05/08 3:38	rselph	Q31504
2,4-Dimethylphenol	BRL	mg/kg	0.35	0.051	1	8270C	04/05/08 3:38	rselph	Q31504
2,4-Dinitrophenol	BRL	mg/kg	1.7	0.10	1	8270C	04/05/08 3:38	rselph	Q31504
2,4-Dinitrotoluene	BRL	mg/kg	0.35	0.045	1	8270C	04/05/08 3:38	rselph	Q31504
2,6-Dinitrotoluene	BRL	mg/kg	0.35	0.062	1	8270C	04/05/08 3:38	rselph	Q31504
2-Chloronaphthalene	BRL	mg/kg	0.35	0.043	1	8270C	04/05/08 3:38	rselph	Q31504
2-Chlorophenol	BRL	mg/kg	0.35	0.014	1	8270C	04/05/08 3:38	rselph	Q31504
2-Methylnaphthalene	BRL	mg/kg	0.35	0.039	1	8270C	04/05/08 3:38	rselph	Q31504
2-Methylphenol	BRL	mg/kg	0.35	0.028	1	8270C	04/05/08 3:38	rselph	Q31504
2-Nitrophenol	BRL	mg/kg	0.35	0.049	1	8270C	04/05/08 3:38	rselph	Q31504
3&4-Methylphenol	BRL	mg/kg	0.35	0.040	1	8270C	04/05/08 3:38	rselph	Q31504
3,3'-Dichlorobenzidine	BRL	mg/kg	0.69	0.063	1	8270C	04/05/08 3:38	rselph	Q31504
4,6-Dinitro-2-methylphenol	BRL	mg/kg	1.7	0.030	1	8270C	04/05/08 3:38	rselph	Q31504
4-Bromophenylphenylether	BRL	mg/kg	0.35	0.043	1	8270C	04/05/08 3:38	rselph	Q31504
4-Chloro-3-methylphenol	BRL	mg/kg	0.69	0.041	1	8270C	04/05/08 3:38	rselph	Q31504
4-Chloroaniline	BRL	mg/kg	0.35	0.026	1	8270C	04/05/08 3:38	rselph	Q31504
4-Chlorophenylphenylether	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 3:38	rselph	Q31504
4-Nitrophenol	BRL	mg/kg	1.7	0.044	1	8270C	04/05/08 3:38	rselph	Q31504
Acenaphthene	BRL	mg/kg	0.35	0.047	1	8270C	04/05/08 3:38	rselph	Q31504
Acenaphthylene	BRL	mg/kg	0.35	0.033	1	8270C	04/05/08 3:38	rselph	Q31504
Anthracene	BRL	mg/kg	0.35	0.025	1	8270C	04/05/08 3:38	rselph	Q31504
Azobenzene	BRL	mg/kg	1.7	0.051	1	8270C	04/05/08 3:38	rselph	Q31504
Benzo(a)anthracene	BRL	mg/kg	0.35	0.039	1	8270C	04/05/08 3:38	rselph	Q31504
Benzo(a)pyrene	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 3:38	rselph	Q31504
Benzo(b)fluoranthene	BRL	mg/kg	0.35	0.071	1	8270C	04/05/08 3:38	rselph	Q31504
Benzo(g,h,i)perylene	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 3:38	rselph	Q31504
Benzo(k)fluoranthene	BRL	mg/kg	0.35	0.093	1	8270C	04/05/08 3:38	rselph	Q31504

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S-2
 Prism Sample ID: 209846
 COC Group: G0308809
 Time Collected: 03/25/08 10:25
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Benzoic acid	BRL	mg/kg	1.7	0.15	1	8270C	04/05/08 3:38	rselph	Q31504
Benzyl alcohol	BRL	mg/kg	0.69	0.028	1	8270C	04/05/08 3:38	rselph	Q31504
Bis(2-chloroethoxy)methane	BRL	mg/kg	0.35	0.058	1	8270C	04/05/08 3:38	rselph	Q31504
Bis(2-chloroethyl)ether	BRL	mg/kg	0.35	0.043	1	8270C	04/05/08 3:38	rselph	Q31504
Bis(2-chloroisopropyl)ether	BRL	mg/kg	0.35	0.035	1	8270C	04/05/08 3:38	rselph	Q31504
Bis(2-ethylhexyl)phthalate	BRL	mg/kg	0.35	0.027	1	8270C	04/05/08 3:38	rselph	Q31504
Butylbenzylphthalate	BRL	mg/kg	0.35	0.043	1	8270C	04/05/08 3:38	rselph	Q31504
Chrysene	BRL	mg/kg	0.35	0.023	1	8270C	04/05/08 3:38	rselph	Q31504
Di-n-butylphthalate	BRL	mg/kg	0.35	0.055	1	8270C	04/05/08 3:38	rselph	Q31504
Di-n-octylphthalate	BRL	mg/kg	0.35	0.10	1	8270C	04/05/08 3:38	rselph	Q31504
Dibenzo(a,h)anthracene	BRL	mg/kg	0.35	0.032	1	8270C	04/05/08 3:38	rselph	Q31504
Dibenzofuran	BRL	mg/kg	0.35	0.042	1	8270C	04/05/08 3:38	rselph	Q31504
Diethylphthalate	BRL	mg/kg	0.35	0.089	1	8270C	04/05/08 3:38	rselph	Q31504
Dimethylphthalate	BRL	mg/kg	0.35	0.051	1	8270C	04/05/08 3:38	rselph	Q31504
Fluoranthene	BRL	mg/kg	0.35	0.061	1	8270C	04/05/08 3:38	rselph	Q31504
Fluorene	BRL	mg/kg	0.35	0.049	1	8270C	04/05/08 3:38	rselph	Q31504
Hexachlorobenzene	BRL	mg/kg	0.35	0.048	1	8270C	04/05/08 3:38	rselph	Q31504
Hexachlorobutadiene	BRL	mg/kg	0.35	0.034	1	8270C	04/05/08 3:38	rselph	Q31504
Hexachlorocyclopentadiene	BRL	mg/kg	0.35	0.051	1	8270C	04/05/08 3:38	rselph	Q31504
Hexachloroethane	BRL	mg/kg	0.35	0.014	1	8270C	04/05/08 3:38	rselph	Q31504
Indeno(1,2,3-cd)pyrene	BRL	mg/kg	0.35	0.033	1	8270C	04/05/08 3:38	rselph	Q31504
Isophorone	BRL	mg/kg	0.35	0.033	1	8270C	04/05/08 3:38	rselph	Q31504
N-Nitrosodi-n-propylamine	BRL	mg/kg	0.35	0.020	1	8270C	04/05/08 3:38	rselph	Q31504
N-Nitrosodiphenylamine	BRL	mg/kg	0.35	0.050	1	8270C	04/05/08 3:38	rselph	Q31504
Naphthalene	BRL	mg/kg	0.35	0.041	1	8270C	04/05/08 3:38	rselph	Q31504
Nitrobenzene	BRL	mg/kg	0.35	0.043	1	8270C	04/05/08 3:38	rselph	Q31504
Pentachlorophenol	BRL	mg/kg	1.7	0.053	1	8270C	04/05/08 3:38	rselph	Q31504

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S-2
 Prism Sample ID: 209846
 COC Group: G0308809
 Time Collected: 03/25/08 10:25
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Phenanthrene	BRL	mg/kg	0.35	0.029	1	8270C	04/05/08 3:38	rselph	Q31504
Phenol	BRL	mg/kg	0.35	0.061	1	8270C	04/05/08 3:38	rselph	Q31504
Pyrene	BRL	mg/kg	0.35	0.066	1	8270C	04/05/08 3:38	rselph	Q31504

Sample Preparation: 30.05 g / 1 mL 3550B 04/04/08 12:00 pbarr P21252

Surrogate	% Recovery	Control Limits
Terphenyl-d14	88	41 - 136
Phenol-d5	62	13 - 95
Nitrobenzene-d5	64	14 - 103
2-Fluorophenol	50	14 - 89
2-Fluorobiphenyl	77	21 - 108
2,4,6-Tribromophenol	87	25 - 123

Extractable Petroleum Hydrocarbons by GC-FID

C11-C22 Aromatics	BRL	mg/kg	10	1.8	1	MADEP EPH	04/13/08 18:53	grappaccioli	Q31684
C19-C36 Aliphatics	BRL	mg/kg	10	1.4	1	MADEP EPH	04/13/08 18:53	grappaccioli	Q31684
C9-C18 Aliphatics	BRL	mg/kg	10	0.93	1	MADEP EPH	04/13/08 18:53	grappaccioli	Q31684

Sample Preparation: 10.15 g / 2 mL EPH 04/08/08 10:00 pbarr P21286

Surrogate	% Recovery	Control Limits
o-Terphenyl	74	40 - 140
2-Fluorobiphenyl	104	40 - 140
2-Bromonaphthalene	124	40 - 140
1-Chloro-octadecane	45	40 - 140

Volatile Petroleum Hydrocarbons by GC-PID/FID

C5-C8 Aliphatics	BRL	mg/kg	5.3	1.0	1	MADEP VPH	04/05/08 5:53	erussell	Q31515
C9-C10 Aromatics	BRL	mg/kg	5.3	0.032	1	MADEP VPH	04/05/08 5:53	erussell	Q31515
C9-C12 Aliphatics	BRL	mg/kg	5.3	1.6	1	MADEP VPH	04/05/08 5:53	erussell	Q31515

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S-2
 Prism Sample ID: 209846
 COC Group: G0308809
 Time Collected: 03/25/08 10:25
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Surrogate	% Recovery	Control Limits
2,5-Dibromotoluene-PID	115	70 - 130
2,5-Dibromotoluene-FID	107	70 - 130

Sample Weight Determination

Weight 1	17.65	g		1	MADEP VPH	04/14/08 0:00	lbrown
Weight 2	18.67	g		1	MADEP VPH	04/14/08 0:00	Lbrown

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S
 Prism Sample ID: 209847
 COC Group: G0308809
 Time Collected: 03/25/08 10:15
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	94.2	%			1	SM2540 G	03/31/08 13:30	mbarber	
<u>Sample Weight Determination</u>									
Weight Bisulfate 1	5.08	g			1	5035	03/28/08 0:00	lbrown	
Weight Bisulfate 2	3.72	g			1	5035	03/28/08 0:00	lbrown	
Weight Methanol	5.07	g			1	5035	03/28/08 0:00	lbrown	
<u>Volatile Organic Compounds by GC/MS</u>									
1,1,1-Trichloroethane	BRL	mg/kg	0.0052	0.00062	1	8260B	04/01/08 18:44	erussell	Q31384
1,1,1,2-Tetrachloroethane	BRL	mg/kg	0.0052	0.00038	1	8260B	04/01/08 18:44	erussell	Q31384
1,1,2-Trichloroethane	BRL	mg/kg	0.0052	0.00055	1	8260B	04/01/08 18:44	erussell	Q31384
1,1-Dichloroethane	BRL	mg/kg	0.0052	0.0006	1	8260B	04/01/08 18:44	erussell	Q31384
1,1-Dichloroethene	BRL	mg/kg	0.0052	0.0009	1	8260B	04/01/08 18:44	erussell	Q31384
1,1-Dichloropropene	BRL	mg/kg	0.0052	0.00062	1	8260B	04/01/08 18:44	erussell	Q31384
1,2,3-Trichlorobenzene	BRL	mg/kg	0.0052	0.0006	1	8260B	04/01/08 18:44	erussell	Q31384
1,2,3-Trichloropropane	BRL	mg/kg	0.0052	0.0007	1	8260B	04/01/08 18:44	erussell	Q31384
1,2,4-Trichlorobenzene	BRL	mg/kg	0.0052	0.00068	1	8260B	04/01/08 18:44	erussell	Q31384
1,2,4-Trimethylbenzene	BRL	mg/kg	0.0052	0.00026	1	8260B	04/01/08 18:44	erussell	Q31384
1,2-Dibromoethane (EDB)	BRL	mg/kg	0.0052	0.00065	1	8260B	04/01/08 18:44	erussell	Q31384
1,2-Dichlorobenzene	BRL	mg/kg	0.0052	0.00033	1	8260B	04/01/08 18:44	erussell	Q31384
1,2-Dichloroethane	BRL	mg/kg	0.0052	0.00059	1	8260B	04/01/08 18:44	erussell	Q31384
1,2-Dichloropropane	BRL	mg/kg	0.0052	0.0013	1	8260B	04/01/08 18:44	erussell	Q31384
1,3,5-Trimethylbenzene	BRL	mg/kg	0.0052	0.00044	1	8260B	04/01/08 18:44	erussell	Q31384
1,3-Dichlorobenzene	BRL	mg/kg	0.0052	0.00034	1	8260B	04/01/08 18:44	erussell	Q31384
1,3-Dichloropropane	BRL	mg/kg	0.0052	0.00022	1	8260B	04/01/08 18:44	erussell	Q31384
1,4-Dichlorobenzene	BRL	mg/kg	0.0052	0.00067	1	8260B	04/01/08 18:44	erussell	Q31384
2,2-Dichloropropane	BRL	mg/kg	0.0052	0.00075	1	8260B	04/01/08 18:44	erussell	Q31384
2-Chlorotoluene	BRL	mg/kg	0.0052	0.00029	1	8260B	04/01/08 18:44	erussell	Q31384

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S
 Prism Sample ID: 209847
 COC Group: G0308809
 Time Collected: 03/25/08 10:15
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2-Hexanone	BRL	mg/kg	0.052	0.0045	1	8260B	04/01/08 18:44	erussell	Q31384
4-Chlorotoluene	BRL	mg/kg	0.0052	0.00039	1	8260B	04/01/08 18:44	erussell	Q31384
4-Methyl-2-pentanone (MIBK)	BRL	mg/kg	0.052	0.0054	1	8260B	04/01/08 18:44	erussell	Q31384
Acetone	BRL	mg/kg	0.052	0.015	1	8260B	04/01/08 18:44	erussell	Q31384
Benzene	BRL	mg/kg	0.0031	0.00044	1	8260B	04/01/08 18:44	erussell	Q31384
Bromobenzene	BRL	mg/kg	0.0052	0.00067	1	8260B	04/01/08 18:44	erussell	Q31384
Bromochloromethane	BRL	mg/kg	0.0052	0.00043	1	8260B	04/01/08 18:44	erussell	Q31384
Bromodichloromethane	BRL	mg/kg	0.0052	0.00056	1	8260B	04/01/08 18:44	erussell	Q31384
Bromoform	BRL	mg/kg	0.0052	0.00047	1	8260B	04/01/08 18:44	erussell	Q31384
Bromomethane	BRL	mg/kg	0.010	0.0012	1	8260B	04/01/08 18:44	erussell	Q31384
Carbon tetrachloride	BRL	mg/kg	0.0052	0.00034	1	8260B	04/01/08 18:44	erussell	Q31384
Chlorobenzene	BRL	mg/kg	0.0052	0.00053	1	8260B	04/01/08 18:44	erussell	Q31384
Chlorodibromomethane	BRL	mg/kg	0.0052	0.00048	1	8260B	04/01/08 18:44	erussell	Q31384
Chloroethane	BRL	mg/kg	0.010	0.0018	1	8260B	04/01/08 18:44	erussell	Q31384
Chloroform	BRL	mg/kg	0.0052	0.00087	1	8260B	04/01/08 18:44	erussell	Q31384
Chloromethane	BRL	mg/kg	0.0052	0.0013	1	8260B	04/01/08 18:44	erussell	Q31384
cis-1,2-Dichloroethene	BRL	mg/kg	0.0052	0.00084	1	8260B	04/01/08 18:44	erussell	Q31384
cis-1,3-Dichloropropene	BRL	mg/kg	0.0052	0.00069	1	8260B	04/01/08 18:44	erussell	Q31384
Dichlorodifluoromethane	BRL	mg/kg	0.0052	0.0014	1	8260B	04/01/08 18:44	erussell	Q31384
Ethylbenzene	BRL	mg/kg	0.0052	0.00024	1	8260B	04/01/08 18:44	erussell	Q31384
Isopropyl ether (IPE)	BRL	mg/kg	0.0052	0.00048	1	8260B	04/01/08 18:44	erussell	Q31384
Isopropylbenzene	BRL	mg/kg	0.0052	0.0003	1	8260B	04/01/08 18:44	erussell	Q31384
m,p-Xylenes	BRL	mg/kg	0.010	0.00086	1	8260B	04/01/08 18:44	erussell	Q31384
Methyl ethyl ketone (MEK)	BRL	mg/kg	0.10	0.015	1	8260B	04/01/08 18:44	erussell	Q31384
Methyl t-butyl ether (MTBE)	BRL	mg/kg	0.010	0.00044	1	8260B	04/01/08 18:44	erussell	Q31384
Methylene chloride	BRL	mg/kg	0.0052	0.00086	1	8260B	04/01/08 18:44	erussell	Q31384
n-Butylbenzene	BRL	mg/kg	0.0052	0.00038	1	8260B	04/01/08 18:44	erussell	Q31384

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04/15/08

N. C. Department of Transportation
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 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S
 Prism Sample ID: 209847
 COC Group: G0308809
 Time Collected: 03/25/08 10:15
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
n-Propylbenzene	BRL	mg/kg	0.0052	0.00034	1	8260B	04/01/08 18:44	erussell	Q31384
Naphthalene	BRL	mg/kg	0.010	0.00063	1	8260B	04/01/08 18:44	erussell	Q31384
o-Xylene	BRL	mg/kg	0.0052	0.00022	1	8260B	04/01/08 18:44	erussell	Q31384
p-Isopropyltoluene	BRL	mg/kg	0.0052	0.00042	1	8260B	04/01/08 18:44	erussell	Q31384
sec-Butylbenzene	BRL	mg/kg	0.0052	0.00036	1	8260B	04/01/08 18:44	erussell	Q31384
Styrene	BRL	mg/kg	0.0052	0.00059	1	8260B	04/01/08 18:44	erussell	Q31384
tert-Butylbenzene	BRL	mg/kg	0.0052	0.00044	1	8260B	04/01/08 18:44	erussell	Q31384
Tetrachloroethene	BRL	mg/kg	0.0052	0.00047	1	8260B	04/01/08 18:44	erussell	Q31384
Toluene	BRL	mg/kg	0.0052	0.00039	1	8260B	04/01/08 18:44	erussell	Q31384
trans-1,2-Dichloroethene	BRL	mg/kg	0.0052	0.00067	1	8260B	04/01/08 18:44	erussell	Q31384
trans-1,3-Dichloropropene	BRL	mg/kg	0.0052	0.00062	1	8260B	04/01/08 18:44	erussell	Q31384
Trichloroethene	BRL	mg/kg	0.0052	0.00076	1	8260B	04/01/08 18:44	erussell	Q31384
Trichlorofluoromethane	BRL	mg/kg	0.0052	0.00093	1	8260B	04/01/08 18:44	erussell	Q31384
Vinyl acetate	BRL	mg/kg	0.026	0.0015	1	8260B	04/01/08 18:44	erussell	Q31384
Vinyl chloride	BRL	mg/kg	0.0052	0.00091	1	8260B	04/01/08 18:44	erussell	Q31384

Surrogate	% Recovery	Control Limits
Toluene-d8	103	81 - 128
Dibromofluoromethane	105	67 - 143
Bromofluorobenzene	107	77 - 128

Semi-volatile Organic Compounds by GC/MS

1,2,4-Trichlorobenzene	BRL	mg/kg	0.35	0.038	1	8270C	04/05/08 4:28	rselph	Q31504
1,2-Dichlorobenzene	BRL	mg/kg	0.35	0.038	1	8270C	04/05/08 4:28	rselph	Q31504
1,3-Dichlorobenzene	BRL	mg/kg	0.35	0.034	1	8270C	04/05/08 4:28	rselph	Q31504
1,4-Dichlorobenzene	BRL	mg/kg	0.35	0.041	1	8270C	04/05/08 4:28	rselph	Q31504
2,4,5-Trichlorophenol	BRL	mg/kg	0.35	0.041	1	8270C	04/05/08 4:28	rselph	Q31504
2,4,6-Trichlorophenol	BRL	mg/kg	0.35	0.037	1	8270C	04/05/08 4:28	rselph	Q31504

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 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S
 Prism Sample ID: 209847
 COC Group: G0308809
 Time Collected: 03/25/08 10:15
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2,4-Dichlorophenol	BRL	mg/kg	0.35	0.023	1	8270C	04/05/08 4:28	rselph	Q31504
2,4-Dimethylphenol	BRL	mg/kg	0.35	0.052	1	8270C	04/05/08 4:28	rselph	Q31504
2,4-Dinitrophenol	BRL	mg/kg	1.7	0.10	1	8270C	04/05/08 4:28	rselph	Q31504
2,4-Dinitrotoluene	BRL	mg/kg	0.35	0.046	1	8270C	04/05/08 4:28	rselph	Q31504
2,6-Dinitrotoluene	BRL	mg/kg	0.35	0.063	1	8270C	04/05/08 4:28	rselph	Q31504
2-Chloronaphthalene	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 4:28	rselph	Q31504
2-Chlorophenol	BRL	mg/kg	0.35	0.015	1	8270C	04/05/08 4:28	rselph	Q31504
2-Methylnaphthalene	BRL	mg/kg	0.35	0.039	1	8270C	04/05/08 4:28	rselph	Q31504
2-Methylphenol	BRL	mg/kg	0.35	0.028	1	8270C	04/05/08 4:28	rselph	Q31504
2-Nitrophenol	BRL	mg/kg	0.35	0.049	1	8270C	04/05/08 4:28	rselph	Q31504
3&4-Methylphenol	BRL	mg/kg	0.35	0.041	1	8270C	04/05/08 4:28	rselph	Q31504
3,3'-Dichlorobenzidine	BRL	mg/kg	0.69	0.063	1	8270C	04/05/08 4:28	rselph	Q31504
4,6-Dinitro-2-methylphenol	BRL	mg/kg	1.7	0.030	1	8270C	04/05/08 4:28	rselph	Q31504
4-Bromophenylphenylether	BRL	mg/kg	0.35	0.043	1	8270C	04/05/08 4:28	rselph	Q31504
4-Chloro-3-methylphenol	BRL	mg/kg	0.69	0.041	1	8270C	04/05/08 4:28	rselph	Q31504
4-Chloroaniline	BRL	mg/kg	0.35	0.026	1	8270C	04/05/08 4:28	rselph	Q31504
4-Chlorophenylphenylether	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 4:28	rselph	Q31504
4-Nitrophenol	BRL	mg/kg	1.7	0.044	1	8270C	04/05/08 4:28	rselph	Q31504
Acenaphthene	BRL	mg/kg	0.35	0.047	1	8270C	04/05/08 4:28	rselph	Q31504
Acenaphthylene	BRL	mg/kg	0.35	0.033	1	8270C	04/05/08 4:28	rselph	Q31504
Anthracene	BRL	mg/kg	0.35	0.025	1	8270C	04/05/08 4:28	rselph	Q31504
Azobenzene	BRL	mg/kg	1.7	0.051	1	8270C	04/05/08 4:28	rselph	Q31504
Benzo(a)anthracene	BRL	mg/kg	0.35	0.039	1	8270C	04/05/08 4:28	rselph	Q31504
Benzo(a)pyrene	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 4:28	rselph	Q31504
Benzo(b)fluoranthene	BRL	mg/kg	0.35	0.071	1	8270C	04/05/08 4:28	rselph	Q31504
Benzo(g,h,i)perylene	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 4:28	rselph	Q31504
Benzo(k)fluoranthene	BRL	mg/kg	0.35	0.093	1	8270C	04/05/08 4:28	rselph	Q31504

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S
 Prism Sample ID: 209847
 COC Group: G0308809
 Time Collected: 03/25/08 10:15
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Benzoic acid	BRL	mg/kg	1.7	0.15	1	8270C	04/05/08 4:28	rselph	Q31504
Benzyl alcohol	BRL	mg/kg	0.69	0.028	1	8270C	04/05/08 4:28	rselph	Q31504
Bis(2-chloroethoxy)methane	BRL	mg/kg	0.35	0.059	1	8270C	04/05/08 4:28	rselph	Q31504
Bis(2-chloroethyl)ether	BRL	mg/kg	0.35	0.043	1	8270C	04/05/08 4:28	rselph	Q31504
Bis(2-chloroisopropyl)ether	BRL	mg/kg	0.35	0.035	1	8270C	04/05/08 4:28	rselph	Q31504
Bis(2-ethylhexyl)phthalate	BRL	mg/kg	0.35	0.027	1	8270C	04/05/08 4:28	rselph	Q31504
Butylbenzylphthalate	BRL	mg/kg	0.35	0.043	1	8270C	04/05/08 4:28	rselph	Q31504
Chrysene	BRL	mg/kg	0.35	0.023	1	8270C	04/05/08 4:28	rselph	Q31504
Di-n-butylphthalate	BRL	mg/kg	0.35	0.056	1	8270C	04/05/08 4:28	rselph	Q31504
Di-n-octylphthalate	BRL	mg/kg	0.35	0.10	1	8270C	04/05/08 4:28	rselph	Q31504
Dibenzo(a,h)anthracene	BRL	mg/kg	0.35	0.032	1	8270C	04/05/08 4:28	rselph	Q31504
Dibenzofuran	BRL	mg/kg	0.35	0.042	1	8270C	04/05/08 4:28	rselph	Q31504
Diethylphthalate	BRL	mg/kg	0.35	0.090	1	8270C	04/05/08 4:28	rselph	Q31504
Dimethylphthalate	BRL	mg/kg	0.35	0.051	1	8270C	04/05/08 4:28	rselph	Q31504
Fluoranthene	BRL	mg/kg	0.35	0.061	1	8270C	04/05/08 4:28	rselph	Q31504
Fluorene	BRL	mg/kg	0.35	0.049	1	8270C	04/05/08 4:28	rselph	Q31504
Hexachlorobenzene	BRL	mg/kg	0.35	0.048	1	8270C	04/05/08 4:28	rselph	Q31504
Hexachlorobutadiene	BRL	mg/kg	0.35	0.035	1	8270C	04/05/08 4:28	rselph	Q31504
Hexachlorocyclopentadiene	BRL	mg/kg	0.35	0.052	1	8270C	04/05/08 4:28	rselph	Q31504
Hexachloroethane	BRL	mg/kg	0.35	0.014	1	8270C	04/05/08 4:28	rselph	Q31504
Indeno(1,2,3-cd)pyrene	BRL	mg/kg	0.35	0.033	1	8270C	04/05/08 4:28	rselph	Q31504
Isophorone	BRL	mg/kg	0.35	0.033	1	8270C	04/05/08 4:28	rselph	Q31504
N-Nitrosodi-n-propylamine	BRL	mg/kg	0.35	0.020	1	8270C	04/05/08 4:28	rselph	Q31504
N-Nitrosodiphenylamine	BRL	mg/kg	0.35	0.050	1	8270C	04/05/08 4:28	rselph	Q31504
Naphthalene	BRL	mg/kg	0.35	0.041	1	8270C	04/05/08 4:28	rselph	Q31504
Nitrobenzene	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 4:28	rselph	Q31504
Pentachlorophenol	BRL	mg/kg	1.7	0.053	1	8270C	04/05/08 4:28	rselph	Q31504

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S
 Prism Sample ID: 209847
 COC Group: G0308809
 Time Collected: 03/25/08 10:15
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Phenanthrene	BRL	mg/kg	0.35	0.029	1	8270C	04/05/08 4:28	rselph	Q31504
Phenol	BRL	mg/kg	0.35	0.061	1	8270C	04/05/08 4:28	rselph	Q31504
Pyrene	BRL	mg/kg	0.35	0.066	1	8270C	04/05/08 4:28	rselph	Q31504

Sample Preparation: 30.26 g / 1 mL 3550B 04/04/08 12:00 pbarr P21252

Surrogate	% Recovery	Control Limits
Terphenyl-d14	87	41 - 136
Phenol-d5	70	13 - 95
Nitrobenzene-d5	71	14 - 103
2-Fluorophenol	52	14 - 89
2-Fluorobiphenyl	87	21 - 108
2,4,6-Tribromophenol	91	25 - 123

Extractable Petroleum Hydrocarbons by GC-FID

C11-C22 Aromatics	BRL	mg/kg	11	1.9	1	MADEP EPH	04/13/08 19:45	grappaccioli	Q31684
C19-C36 Aliphatics	BRL	mg/kg	11	1.5	1	MADEP EPH	04/13/08 19:45	grappaccioli	Q31684
C9-C18 Aliphatics	BRL	mg/kg	11	0.98	1	MADEP EPH	04/13/08 19:45	grappaccioli	Q31684

Sample Preparation: 9.71 g / 2 mL EPH 04/08/08 10:00 pbarr P21286

Surrogate	% Recovery	Control Limits
o-Terphenyl	70	40 - 140
2-Fluorobiphenyl	105	40 - 140
2-Bromonaphthalene	126	40 - 140
1-Chloro-octadecane	40	40 - 140

Volatile Petroleum Hydrocarbons by GC-PID/FID

C5-C8 Aliphatics	BRL	mg/kg	5.3	1.0	1	MADEP VPH	04/05/08 6:35	erussell	Q31515
C9-C10 Aromatics	BRL	mg/kg	5.3	0.032	1	MADEP VPH	04/05/08 6:35	erussell	Q31515
C9-C12 Aliphatics	BRL	mg/kg	5.3	1.6	1	MADEP VPH	04/05/08 6:35	erussell	Q31515

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NC Certification No. 402
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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-S
 Prism Sample ID: 209847
 COC Group: G0308809
 Time Collected: 03/25/08 10:15
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Surrogate	% Recovery	Control Limits
2,5-Dibromotoluene-PID	119	70 - 130
2,5-Dibromotoluene-FID	109	70 - 130

Sample Weight Determination

Weight 1	16.17	g		1	MADEP VPH	04/14/08 0:00	lbrown
Weight 2	17.05	g		1	MADEP VPH	04/14/08 0:00	Lbrown

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N
 Prism Sample ID: 209848
 COC Group: G0308809
 Time Collected: 03/25/08 10:05
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	83.0	%			1	SM2540 G	03/31/08 13:30	mbarber	
Sample Weight Determination									
Weight Bisulfate 1	5.73	g			1	5035	03/25/08 0:00	lbrown	
Weight Bisulfate 2	4.95	g			1	5035	03/25/08 0:00	lbrown	
Weight Methanol	5.04	g			1	5035	03/25/08 0:00	lbrown	
Volatile Organic Compounds by GC/MS									
1,1,1-Trichloroethane	BRL	mg/kg	0.0053	0.00062	1	8260B	04/02/08 13:40	erussell	Q31384
1,1,1,2-Tetrachloroethane	BRL	mg/kg	0.0053	0.00038	1	8260B	04/02/08 13:40	erussell	Q31384
1,1,2-Trichloroethane	BRL	mg/kg	0.0053	0.00056	1	8260B	04/02/08 13:40	erussell	Q31384
1,1-Dichloroethane	BRL	mg/kg	0.0053	0.0006	1	8260B	04/02/08 13:40	erussell	Q31384
1,1-Dichloroethene	BRL	mg/kg	0.0053	0.0009	1	8260B	04/02/08 13:40	erussell	Q31384
1,1-Dichloropropene	BRL	mg/kg	0.0053	0.00062	1	8260B	04/02/08 13:40	erussell	Q31384
1,2,3-Trichlorobenzene	BRL	mg/kg	0.0053	0.0006	1	8260B	04/02/08 13:40	erussell	Q31384
1,2,3-Trichloropropane	BRL	mg/kg	0.0053	0.0007	1	8260B	04/02/08 13:40	erussell	Q31384
1,2,4-Trichlorobenzene	BRL	mg/kg	0.0053	0.00068	1	8260B	04/02/08 13:40	erussell	Q31384
1,2,4-Trimethylbenzene	BRL	mg/kg	0.0053	0.00026	1	8260B	04/02/08 13:40	erussell	Q31384
1,2-Dibromoethane (EDB)	BRL	mg/kg	0.0053	0.00065	1	8260B	04/02/08 13:40	erussell	Q31384
1,2-Dichlorobenzene	BRL	mg/kg	0.0053	0.00034	1	8260B	04/02/08 13:40	erussell	Q31384
1,2-Dichloroethane	BRL	mg/kg	0.0053	0.00059	1	8260B	04/02/08 13:40	erussell	Q31384
1,2-Dichloropropane	BRL	mg/kg	0.0053	0.0013	1	8260B	04/02/08 13:40	erussell	Q31384
1,3,5-Trimethylbenzene	BRL	mg/kg	0.0053	0.00044	1	8260B	04/02/08 13:40	erussell	Q31384
1,3-Dichlorobenzene	BRL	mg/kg	0.0053	0.00035	1	8260B	04/02/08 13:40	erussell	Q31384
1,3-Dichloropropane	BRL	mg/kg	0.0053	0.00022	1	8260B	04/02/08 13:40	erussell	Q31384
1,4-Dichlorobenzene	BRL	mg/kg	0.0053	0.00067	1	8260B	04/02/08 13:40	erussell	Q31384
2,2-Dichloropropane	BRL	mg/kg	0.0053	0.00076	1	8260B	04/02/08 13:40	erussell	Q31384
2-Chlorotoluene	BRL	mg/kg	0.0053	0.00029	1	8260B	04/02/08 13:40	erussell	Q31384

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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N
 Prism Sample ID: 209848
 COC Group: G0308809
 Time Collected: 03/25/08 10:05
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2-Hexanone	BRL	mg/kg	0.053	0.0045	1	8260B	04/02/08 13:40	erussell	Q31384
4-Chlorotoluene	BRL	mg/kg	0.0053	0.00039	1	8260B	04/02/08 13:40	erussell	Q31384
4-Methyl-2-pentanone (MIBK)	BRL	mg/kg	0.053	0.0055	1	8260B	04/02/08 13:40	erussell	Q31384
Acetone	BRL	mg/kg	0.053	0.016	1	8260B	04/02/08 13:40	erussell	Q31384
Benzene	BRL	mg/kg	0.0032	0.00044	1	8260B	04/02/08 13:40	erussell	Q31384
Bromobenzene	BRL	mg/kg	0.0053	0.00067	1	8260B	04/02/08 13:40	erussell	Q31384
Bromochloromethane	BRL	mg/kg	0.0053	0.00043	1	8260B	04/02/08 13:40	erussell	Q31384
Bromodichloromethane	BRL	mg/kg	0.0053	0.00057	1	8260B	04/02/08 13:40	erussell	Q31384
Bromoform	BRL	mg/kg	0.0053	0.00047	1	8260B	04/02/08 13:40	erussell	Q31384
Bromomethane	BRL	mg/kg	0.011	0.0012	1	8260B	04/02/08 13:40	erussell	Q31384
Carbon tetrachloride	BRL	mg/kg	0.0053	0.00035	1	8260B	04/02/08 13:40	erussell	Q31384
Chlorobenzene	BRL	mg/kg	0.0053	0.00054	1	8260B	04/02/08 13:40	erussell	Q31384
Chlorodibromomethane	BRL	mg/kg	0.0053	0.00048	1	8260B	04/02/08 13:40	erussell	Q31384
Chloroethane	BRL	mg/kg	0.011	0.0018	1	8260B	04/02/08 13:40	erussell	Q31384
Chloroform	BRL	mg/kg	0.0053	0.00087	1	8260B	04/02/08 13:40	erussell	Q31384
Chloromethane	BRL	mg/kg	0.0053	0.0013	1	8260B	04/02/08 13:40	erussell	Q31384
cis-1,2-Dichloroethene	BRL	mg/kg	0.0053	0.00084	1	8260B	04/02/08 13:40	erussell	Q31384
cis-1,3-Dichloropropene	BRL	mg/kg	0.0053	0.00069	1	8260B	04/02/08 13:40	erussell	Q31384
Dichlorodifluoromethane	BRL	mg/kg	0.0053	0.0015	1	8260B	04/02/08 13:40	erussell	Q31384
Ethylbenzene	BRL	mg/kg	0.0053	0.00024	1	8260B	04/02/08 13:40	erussell	Q31384
Isopropyl ether (IPE)	BRL	mg/kg	0.0053	0.00048	1	8260B	04/02/08 13:40	erussell	Q31384
Isopropylbenzene	BRL	mg/kg	0.0053	0.0003	1	8260B	04/02/08 13:40	erussell	Q31384
m,p-Xylenes	BRL	mg/kg	0.011	0.00086	1	8260B	04/02/08 13:40	erussell	Q31384
Methyl ethyl ketone (MEK)	BRL	mg/kg	0.11	0.016	1	8260B	04/02/08 13:40	erussell	Q31384
Methyl t-butyl ether (MTBE)	BRL	mg/kg	0.011	0.00044	1	8260B	04/02/08 13:40	erussell	Q31384
Methylene chloride	BRL	mg/kg	0.0053	0.00086	1	8260B	04/02/08 13:40	erussell	Q31384
n-Butylbenzene	BRL	mg/kg	0.0053	0.00038	1	8260B	04/02/08 13:40	erussell	Q31384

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N
 Prism Sample ID: 209848
 COC Group: G0308809
 Time Collected: 03/25/08 10:05
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
n-Propylbenzene	BRL	mg/kg	0.0053	0.00035	1	8260B	04/02/08 13:40	erussell	Q31384
Naphthalene	BRL	mg/kg	0.011	0.00063	1	8260B	04/02/08 13:40	erussell	Q31384
o-Xylene	BRL	mg/kg	0.0053	0.00022	1	8260B	04/02/08 13:40	erussell	Q31384
p-Isopropyltoluene	BRL	mg/kg	0.0053	0.00042	1	8260B	04/02/08 13:40	erussell	Q31384
sec-Butylbenzene	BRL	mg/kg	0.0053	0.00036	1	8260B	04/02/08 13:40	erussell	Q31384
Styrene	BRL	mg/kg	0.0053	0.00059	1	8260B	04/02/08 13:40	erussell	Q31384
tert-Butylbenzene	BRL	mg/kg	0.0053	0.00044	1	8260B	04/02/08 13:40	erussell	Q31384
Tetrachloroethene	BRL	mg/kg	0.0053	0.00047	1	8260B	04/02/08 13:40	erussell	Q31384
Toluene	BRL	mg/kg	0.0053	0.00039	1	8260B	04/02/08 13:40	erussell	Q31384
trans-1,2-Dichloroethene	BRL	mg/kg	0.0053	0.00067	1	8260B	04/02/08 13:40	erussell	Q31384
trans-1,3-Dichloropropene	BRL	mg/kg	0.0053	0.00062	1	8260B	04/02/08 13:40	erussell	Q31384
Trichloroethene	BRL	mg/kg	0.0053	0.00077	1	8260B	04/02/08 13:40	erussell	Q31384
Trichlorofluoromethane	BRL	mg/kg	0.0053	0.00094	1	8260B	04/02/08 13:40	erussell	Q31384
Vinyl acetate	BRL	mg/kg	0.026	0.0015	1	8260B	04/02/08 13:40	erussell	Q31384
Vinyl chloride	BRL	mg/kg	0.0053	0.00091	1	8260B	04/02/08 13:40	erussell	Q31384

Surrogate	% Recovery	Control Limits
Toluene-d8	103	81 - 128
Dibromofluoromethane	116	67 - 143
Bromofluorobenzene	105	77 - 128

Semi-volatile Organic Compounds by GC/MS

1,2,4-Trichlorobenzene	BRL	mg/kg	0.39	0.043	1	8270C	04/05/08 5:18	rselph	Q31504
1,2-Dichlorobenzene	BRL	mg/kg	0.39	0.043	1	8270C	04/05/08 5:18	rselph	Q31504
1,3-Dichlorobenzene	BRL	mg/kg	0.39	0.038	1	8270C	04/05/08 5:18	rselph	Q31504
1,4-Dichlorobenzene	BRL	mg/kg	0.39	0.047	1	8270C	04/05/08 5:18	rselph	Q31504
2,4,5-Trichlorophenol	BRL	mg/kg	0.39	0.046	1	8270C	04/05/08 5:18	rselph	Q31504
2,4,6-Trichlorophenol	BRL	mg/kg	0.39	0.042	1	8270C	04/05/08 5:18	rselph	Q31504

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N
 Prism Sample ID: 209848
 COC Group: G0308809
 Time Collected: 03/25/08 10:05
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2,4-Dichlorophenol	BRL	mg/kg	0.39	0.026	1	8270C	04/05/08 5:18	rselph	Q31504
2,4-Dimethylphenol	BRL	mg/kg	0.39	0.058	1	8270C	04/05/08 5:18	rselph	Q31504
2,4-Dinitrophenol	BRL	mg/kg	2.0	0.11	1	8270C	04/05/08 5:18	rselph	Q31504
2,4-Dinitrotoluene	BRL	mg/kg	0.39	0.051	1	8270C	04/05/08 5:18	rselph	Q31504
2,6-Dinitrotoluene	BRL	mg/kg	0.39	0.071	1	8270C	04/05/08 5:18	rselph	Q31504
2-Chloronaphthalene	BRL	mg/kg	0.39	0.049	1	8270C	04/05/08 5:18	rselph	Q31504
2-Chlorophenol	BRL	mg/kg	0.39	0.016	1	8270C	04/05/08 5:18	rselph	Q31504
2-Methylnaphthalene	BRL	mg/kg	0.39	0.044	1	8270C	04/05/08 5:18	rselph	Q31504
2-Methylphenol	BRL	mg/kg	0.39	0.032	1	8270C	04/05/08 5:18	rselph	Q31504
2-Nitrophenol	BRL	mg/kg	0.39	0.055	1	8270C	04/05/08 5:18	rselph	Q31504
3&4-Methylphenol	BRL	mg/kg	0.39	0.046	1	8270C	04/05/08 5:18	rselph	Q31504
3,3'-Dichlorobenzidine	BRL	mg/kg	0.78	0.071	1	8270C	04/05/08 5:18	rselph	Q31504
4,6-Dinitro-2-methylphenol	BRL	mg/kg	2.0	0.034	1	8270C	04/05/08 5:18	rselph	Q31504
4-Bromophenylphenylether	BRL	mg/kg	0.39	0.049	1	8270C	04/05/08 5:18	rselph	Q31504
4-Chloro-3-methylphenol	BRL	mg/kg	0.78	0.046	1	8270C	04/05/08 5:18	rselph	Q31504
4-Chloroaniline	BRL	mg/kg	0.39	0.029	1	8270C	04/05/08 5:18	rselph	Q31504
4-Chlorophenylphenylether	BRL	mg/kg	0.39	0.049	1	8270C	04/05/08 5:18	rselph	Q31504
4-Nitrophenol	BRL	mg/kg	2.0	0.050	1	8270C	04/05/08 5:18	rselph	Q31504
Acenaphthene	BRL	mg/kg	0.39	0.053	1	8270C	04/05/08 5:18	rselph	Q31504
Acenaphthylene	BRL	mg/kg	0.39	0.037	1	8270C	04/05/08 5:18	rselph	Q31504
Anthracene	BRL	mg/kg	0.39	0.028	1	8270C	04/05/08 5:18	rselph	Q31504
Azobenzene	BRL	mg/kg	2.0	0.057	1	8270C	04/05/08 5:18	rselph	Q31504
Benzo(a)anthracene	BRL	mg/kg	0.39	0.044	1	8270C	04/05/08 5:18	rselph	Q31504
Benzo(a)pyrene	BRL	mg/kg	0.39	0.049	1	8270C	04/05/08 5:18	rselph	Q31504
Benzo(b)fluoranthene	BRL	mg/kg	0.39	0.080	1	8270C	04/05/08 5:18	rselph	Q31504
Benzo(g,h,i)perylene	BRL	mg/kg	0.39	0.050	1	8270C	04/05/08 5:18	rselph	Q31504
Benzo(k)fluoranthene	BRL	mg/kg	0.39	0.10	1	8270C	04/05/08 5:18	rselph	Q31504

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N
 Prism Sample ID: 209848
 COC Group: G0308809
 Time Collected: 03/25/08 10:05
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Benzoic acid	BRL	mg/kg	2.0	0.17	1	8270C	04/05/08 5:18	rselph	Q31504
Benzyl alcohol	BRL	mg/kg	0.78	0.031	1	8270C	04/05/08 5:18	rselph	Q31504
Bis(2-chloroethoxy)methane	BRL	mg/kg	0.39	0.066	1	8270C	04/05/08 5:18	rselph	Q31504
Bis(2-chloroethyl)ether	BRL	mg/kg	0.39	0.049	1	8270C	04/05/08 5:18	rselph	Q31504
Bis(2-chloroisopropyl)ether	BRL	mg/kg	0.39	0.039	1	8270C	04/05/08 5:18	rselph	Q31504
Bis(2-ethylhexyl)phthalate	BRL	mg/kg	0.39	0.030	1	8270C	04/05/08 5:18	rselph	Q31504
Butylbenzylphthalate	BRL	mg/kg	0.39	0.048	1	8270C	04/05/08 5:18	rselph	Q31504
Chrysene	BRL	mg/kg	0.39	0.026	1	8270C	04/05/08 5:18	rselph	Q31504
Di-n-butylphthalate	BRL	mg/kg	0.39	0.063	1	8270C	04/05/08 5:18	rselph	Q31504
Di-n-octylphthalate	BRL	mg/kg	0.39	0.11	1	8270C	04/05/08 5:18	rselph	Q31504
Dibenzo(a,h)anthracene	BRL	mg/kg	0.39	0.037	1	8270C	04/05/08 5:18	rselph	Q31504
Dibenzofuran	BRL	mg/kg	0.39	0.048	1	8270C	04/05/08 5:18	rselph	Q31504
Diethylphthalate	BRL	mg/kg	0.39	0.10	1	8270C	04/05/08 5:18	rselph	Q31504
Dimethylphthalate	BRL	mg/kg	0.39	0.058	1	8270C	04/05/08 5:18	rselph	Q31504
Fluoranthene	BRL	mg/kg	0.39	0.069	1	8270C	04/05/08 5:18	rselph	Q31504
Fluorene	BRL	mg/kg	0.39	0.056	1	8270C	04/05/08 5:18	rselph	Q31504
Hexachlorobenzene	BRL	mg/kg	0.39	0.054	1	8270C	04/05/08 5:18	rselph	Q31504
Hexachlorobutadiene	BRL	mg/kg	0.39	0.039	1	8270C	04/05/08 5:18	rselph	Q31504
Hexachlorocyclopentadiene	BRL	mg/kg	0.39	0.058	1	8270C	04/05/08 5:18	rselph	Q31504
Hexachloroethane	BRL	mg/kg	0.39	0.016	1	8270C	04/05/08 5:18	rselph	Q31504
Indeno(1,2,3-cd)pyrene	BRL	mg/kg	0.39	0.037	1	8270C	04/05/08 5:18	rselph	Q31504
Isophorone	BRL	mg/kg	0.39	0.037	1	8270C	04/05/08 5:18	rselph	Q31504
N-Nitrosodi-n-propylamine	BRL	mg/kg	0.39	0.023	1	8270C	04/05/08 5:18	rselph	Q31504
N-Nitrosodiphenylamine	BRL	mg/kg	0.39	0.057	1	8270C	04/05/08 5:18	rselph	Q31504
Naphthalene	BRL	mg/kg	0.39	0.047	1	8270C	04/05/08 5:18	rselph	Q31504
Nitrobenzene	BRL	mg/kg	0.39	0.049	1	8270C	04/05/08 5:18	rselph	Q31504
Pentachlorophenol	BRL	mg/kg	2.0	0.060	1	8270C	04/05/08 5:18	rselph	Q31504

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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N
 Prism Sample ID: 209848
 COC Group: G0308809
 Time Collected: 03/25/08 10:05
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Phenanthrene	BRL	mg/kg	0.39	0.033	1	8270C	04/05/08 5:18	rselph	Q31504
Phenol	BRL	mg/kg	0.39	0.069	1	8270C	04/05/08 5:18	rselph	Q31504
Pyrene	BRL	mg/kg	0.39	0.075	1	8270C	04/05/08 5:18	rselph	Q31504

Sample Preparation: 30.47 g / 1 mL 3550B 04/04/08 12:00 pbarr P21252

Surrogate	% Recovery	Control Limits
Terphenyl-d14	92	41 - 136
Phenol-d5	82	13 - 95
Nitrobenzene-d5	78	14 - 103
2-Fluorophenol	63	14 - 89
2-Fluorobiphenyl	108 #	21 - 108
2,4,6-Tribromophenol	94	25 - 123

Extractable Petroleum Hydrocarbons by GC-FID

C11-C22 Aromatics	BRL	mg/kg	12	2.1	1	MADEP EPH	04/13/08 21:29	grappaccioli	Q31684
C19-C36 Aliphatics	BRL	mg/kg	12	1.6	1	MADEP EPH	04/13/08 21:29	grappaccioli	Q31684
C9-C18 Aliphatics	BRL	mg/kg	12	1.1	1	MADEP EPH	04/13/08 21:29	grappaccioli	Q31684

Sample Preparation: 10.09 g / 2 mL EPH 04/08/08 10:00 pbarr P21286

Surrogate	% Recovery	Control Limits
o-Terphenyl	75	40 - 140
2-Fluorobiphenyl	103	40 - 140
2-Bromonaphthalene	126	40 - 140
1-Chloro-octadecane	43	40 - 140

Volatile Petroleum Hydrocarbons by GC-PID/FID

C5-C8 Aliphatics	BRL	mg/kg	6.0	1.2	1	MADEP VPH	04/05/08 7:18	erussell	Q31515
C9-C10 Aromatics	BRL	mg/kg	6.0	0.036	1	MADEP VPH	04/05/08 7:18	erussell	Q31515
C9-C12 Aliphatics	BRL	mg/kg	6.0	1.9	1	MADEP VPH	04/05/08 7:18	erussell	Q31515

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-N
 Prism Sample ID: 209848
 COC Group: G0308809
 Time Collected: 03/25/08 10:05
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Surrogate	% Recovery	Control Limits
2,5-Dibromotoluene-PID	112	70 - 130
2,5-Dibromotoluene-FID	105	70 - 130

Sample Weight Determination

Weight 1	15.41	g		1	MADEP VPH	04/14/08 0:00	lbrown
Weight 2	15.23	g		1	MADEP VPH	04/14/08 0:00	Lbrown

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-E
 Prism Sample ID: 209849
 COC Group: G0308809
 Time Collected: 03/25/08 9:55
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	95.3	%			1	SM2540 G	03/31/08 13:30	mbarber	
<u>Sample Weight Determination</u>									
Weight Bisulfate 1	5.00	g			1	5035	03/28/08 0:00	lbrown	
Weight Bisulfate 2	5.12	g			1	5035	03/28/08 0:00	lbrown	
Weight Methanol	5.37	g			1	5035	03/28/08 0:00	lbrown	
<u>Volatile Organic Compounds by GC/MS</u>									
1,1,1-Trichloroethane	BRL	mg/kg	0.0083	0.00098	1	8260B	04/04/08 11:49	erussell	Q31384
1,1,2,2-Tetrachloroethane	BRL	mg/kg	0.0083	0.0006	1	8260B	04/04/08 11:49	erussell	Q31384
1,1,2-Trichloroethane	BRL	mg/kg	0.0083	0.00088	1	8260B	04/04/08 11:49	erussell	Q31384
1,1-Dichloroethane	BRL	mg/kg	0.0083	0.00095	1	8260B	04/04/08 11:49	erussell	Q31384
1,1-Dichloroethene	BRL	mg/kg	0.0083	0.0014	1	8260B	04/04/08 11:49	erussell	Q31384
1,1-Dichloropropene	BRL	mg/kg	0.0083	0.00098	1	8260B	04/04/08 11:49	erussell	Q31384
1,2,3-Trichlorobenzene	BRL	mg/kg	0.0083	0.00095	1	8260B	04/04/08 11:49	erussell	Q31384
1,2,3-Trichloropropane	BRL	mg/kg	0.0083	0.0011	1	8260B	04/04/08 11:49	erussell	Q31384
1,2,4-Trichlorobenzene	BRL	mg/kg	0.0083	0.0011	1	8260B	04/04/08 11:49	erussell	Q31384
1,2,4-Trimethylbenzene	BRL	mg/kg	0.0083	0.00042	1	8260B	04/04/08 11:49	erussell	Q31384
1,2-Dibromoethane (EDB)	BRL	mg/kg	0.0083	0.0010	1	8260B	04/04/08 11:49	erussell	Q31384
1,2-Dichlorobenzene	BRL	mg/kg	0.0083	0.00053	1	8260B	04/04/08 11:49	erussell	Q31384
1,2-Dichloroethane	BRL	mg/kg	0.0083	0.00093	1	8260B	04/04/08 11:49	erussell	Q31384
1,2-Dichloropropane	BRL	mg/kg	0.0083	0.0020	1	8260B	04/04/08 11:49	erussell	Q31384
1,3,5-Trimethylbenzene	BRL	mg/kg	0.0083	0.0007	1	8260B	04/04/08 11:49	erussell	Q31384
1,3-Dichlorobenzene	BRL	mg/kg	0.0083	0.00055	1	8260B	04/04/08 11:49	erussell	Q31384
1,3-Dichloropropane	BRL	mg/kg	0.0083	0.00035	1	8260B	04/04/08 11:49	erussell	Q31384
1,4-Dichlorobenzene	BRL	mg/kg	0.0083	0.0011	1	8260B	04/04/08 11:49	erussell	Q31384
2,2-Dichloropropane	BRL	mg/kg	0.0083	0.0012	1	8260B	04/04/08 11:49	erussell	Q31384
2-Chlorotoluene	BRL	mg/kg	0.0083	0.00047	1	8260B	04/04/08 11:49	erussell	Q31384

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04/15/08

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 Attn: Jessica Dehart
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 1101 Nowell Road
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Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

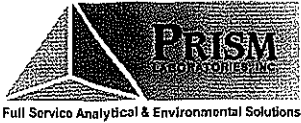
Client Sample ID: 50-E
 Prism Sample ID: 209849
 COC Group: G0308809
 Time Collected: 03/25/08 9:55
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2-Hexanone	BRL	mg/kg	0.083	0.0072	1	8260B	04/04/08 11:49	erussell	Q31384
4-Chlorotoluene	BRL	mg/kg	0.0083	0.00062	1	8260B	04/04/08 11:49	erussell	Q31384
4-Methyl-2-pentanone (MIBK)	BRL	mg/kg	0.083	0.0086	1	8260B	04/04/08 11:49	erussell	Q31384
Acetone	BRL	mg/kg	0.083	0.025	1	8260B	04/04/08 11:49	erussell	Q31384
Benzene	BRL	mg/kg	0.0050	0.0007	1	8260B	04/04/08 11:49	erussell	Q31384
Bromobenzene	BRL	mg/kg	0.0083	0.0011	1	8260B	04/04/08 11:49	erussell	Q31384
Bromochloromethane	BRL	mg/kg	0.0083	0.00068	1	8260B	04/04/08 11:49	erussell	Q31384
Bromodichloromethane	BRL	mg/kg	0.0083	0.0009	1	8260B	04/04/08 11:49	erussell	Q31384
Bromoform	BRL	mg/kg	0.0083	0.00075	1	8260B	04/04/08 11:49	erussell	Q31384
Bromomethane	BRL	mg/kg	0.017	0.0019	1	8260B	04/04/08 11:49	erussell	Q31384
Carbon tetrachloride	BRL	mg/kg	0.0083	0.00055	1	8260B	04/04/08 11:49	erussell	Q31384
Chlorobenzene	BRL	mg/kg	0.0083	0.00085	1	8260B	04/04/08 11:49	erussell	Q31384
Chlorodibromomethane	BRL	mg/kg	0.0083	0.00077	1	8260B	04/04/08 11:49	erussell	Q31384
Chloroethane	BRL	mg/kg	0.017	0.0028	1	8260B	04/04/08 11:49	erussell	Q31384
Chloroform	BRL	mg/kg	0.0083	0.0014	1	8260B	04/04/08 11:49	erussell	Q31384
Chloromethane	BRL	mg/kg	0.0083	0.0020	1	8260B	04/04/08 11:49	erussell	Q31384
cis-1,2-Dichloroethene	BRL	mg/kg	0.0083	0.0013	1	8260B	04/04/08 11:49	erussell	Q31384
cis-1,3-Dichloropropene	BRL	mg/kg	0.0083	0.0011	1	8260B	04/04/08 11:49	erussell	Q31384
Dichlorodifluoromethane	BRL	mg/kg	0.0083	0.0023	1	8260B	04/04/08 11:49	erussell	Q31384
Ethylbenzene	BRL	mg/kg	0.0083	0.00038	1	8260B	04/04/08 11:49	erussell	Q31384
Isopropyl ether (IPE)	BRL	mg/kg	0.0083	0.00077	1	8260B	04/04/08 11:49	erussell	Q31384
Isopropylbenzene	BRL	mg/kg	0.0083	0.00048	1	8260B	04/04/08 11:49	erussell	Q31384
m,p-Xylenes	BRL	mg/kg	0.017	0.0014	1	8260B	04/04/08 11:49	erussell	Q31384
Methyl ethyl ketone (MEK)	BRL	mg/kg	0.17	0.025	1	8260B	04/04/08 11:49	erussell	Q31384
Methyl t-butyl ether (MTBE)	BRL	mg/kg	0.017	0.0007	1	8260B	04/04/08 11:49	erussell	Q31384
Methylene chloride	BRL	mg/kg	0.0083	0.0014	1	8260B	04/04/08 11:49	erussell	Q31384
n-Butylbenzene	BRL	mg/kg	0.0083	0.0006	1	8260B	04/04/08 11:49	erussell	Q31384

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-E
 Prism Sample ID: 209849
 COC Group: G0308809
 Time Collected: 03/25/08 9:55
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
n-Propylbenzene	BRL	mg/kg	0.0083	0.00055	1	8260B	04/04/08 11:49	erussell	Q31384
Naphthalene	BRL	mg/kg	0.017	0.0010	1	8260B	04/04/08 11:49	erussell	Q31384
o-Xylene	BRL	mg/kg	0.0083	0.00035	1	8260B	04/04/08 11:49	erussell	Q31384
p-Isopropyltoluene	BRL	mg/kg	0.0083	0.00067	1	8260B	04/04/08 11:49	erussell	Q31384
sec-Butylbenzene	BRL	mg/kg	0.0083	0.00057	1	8260B	04/04/08 11:49	erussell	Q31384
Styrene	BRL	mg/kg	0.0083	0.00093	1	8260B	04/04/08 11:49	erussell	Q31384
tert-Butylbenzene	BRL	mg/kg	0.0083	0.0007	1	8260B	04/04/08 11:49	erussell	Q31384
Tetrachloroethene	BRL	mg/kg	0.0083	0.00075	1	8260B	04/04/08 11:49	erussell	Q31384
Toluene	BRL	mg/kg	0.0083	0.00062	1	8260B	04/04/08 11:49	erussell	Q31384
trans-1,2-Dichloroethene	BRL	mg/kg	0.0083	0.0011	1	8260B	04/04/08 11:49	erussell	Q31384
trans-1,3-Dichloropropene	BRL	mg/kg	0.0083	0.00098	1	8260B	04/04/08 11:49	erussell	Q31384
Trichloroethene	BRL	mg/kg	0.0083	0.0012	1	8260B	04/04/08 11:49	erussell	Q31384
Trichlorofluoromethane	BRL	mg/kg	0.0083	0.0015	1	8260B	04/04/08 11:49	erussell	Q31384
Vinyl acetate	BRL	mg/kg	0.042	0.0023	1	8260B	04/04/08 11:49	erussell	Q31384
Vinyl chloride	BRL	mg/kg	0.0083	0.0014	1	8260B	04/04/08 11:49	erussell	Q31384

This sample was analyzed as a 5030 due to bad purges resulting from the analysis of the 5035 vials.

Surrogate	% Recovery	Control Limits
Toluene-d8	98	81 - 128
Dibromofluoromethane	103	67 - 143
Bromofluorobenzene	107	77 - 128

Semi-volatile Organic Compounds by GC/MS

1,2,4-Trichlorobenzene	BRL	mg/kg	0.35	0.039	1	8270C	04/05/08 6:07	rselph	Q31504
1,2-Dichlorobenzene	BRL	mg/kg	0.35	0.039	1	8270C	04/05/08 6:07	rselph	Q31504
1,3-Dichlorobenzene	BRL	mg/kg	0.35	0.034	1	8270C	04/05/08 6:07	rselph	Q31504
1,4-Dichlorobenzene	BRL	mg/kg	0.35	0.042	1	8270C	04/05/08 6:07	rselph	Q31504
2,4,5-Trichlorophenol	BRL	mg/kg	0.35	0.042	1	8270C	04/05/08 6:07	rselph	Q31504

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NC Certification No. 402
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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-E
 Prism Sample ID: 209849
 COC Group: G0308809
 Time Collected: 03/25/08 9:55
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2,4,6-Trichlorophenol	BRL	mg/kg	0.35	0.038	1	8270C	04/05/08 6:07	rselph	Q31504
2,4-Dichlorophenol	BRL	mg/kg	0.35	0.023	1	8270C	04/05/08 6:07	rselph	Q31504
2,4-Dimethylphenol	BRL	mg/kg	0.35	0.052	1	8270C	04/05/08 6:07	rselph	Q31504
2,4-Dinitrophenol	BRL	mg/kg	1.8	0.10	1	8270C	04/05/08 6:07	rselph	Q31504
2,4-Dinitrotoluene	BRL	mg/kg	0.35	0.046	1	8270C	04/05/08 6:07	rselph	Q31504
2,6-Dinitrotoluene	BRL	mg/kg	0.35	0.063	1	8270C	04/05/08 6:07	rselph	Q31504
2-Chloronaphthalene	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 6:07	rselph	Q31504
2-Chlorophenol	BRL	mg/kg	0.35	0.015	1	8270C	04/05/08 6:07	rselph	Q31504
2-Methylnaphthalene	BRL	mg/kg	0.35	0.039	1	8270C	04/05/08 6:07	rselph	Q31504
2-Methylphenol	BRL	mg/kg	0.35	0.028	1	8270C	04/05/08 6:07	rselph	Q31504
2-Nitrophenol	BRL	mg/kg	0.35	0.049	1	8270C	04/05/08 6:07	rselph	Q31504
3&4-Methylphenol	BRL	mg/kg	0.35	0.041	1	8270C	04/05/08 6:07	rselph	Q31504
3,3'-Dichlorobenzidine	BRL	mg/kg	0.70	0.063	1	8270C	04/05/08 6:07	rselph	Q31504
4,6-Dinitro-2-methylphenol	BRL	mg/kg	1.8	0.030	1	8270C	04/05/08 6:07	rselph	Q31504
4-Bromophenylphenylether	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 6:07	rselph	Q31504
4-Chloro-3-methylphenol	BRL	mg/kg	0.70	0.041	1	8270C	04/05/08 6:07	rselph	Q31504
4-Chloroaniline	BRL	mg/kg	0.35	0.026	1	8270C	04/05/08 6:07	rselph	Q31504
4-Chlorophenylphenylether	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 6:07	rselph	Q31504
4-Nitrophenol	BRL	mg/kg	1.8	0.045	1	8270C	04/05/08 6:07	rselph	Q31504
Acenaphthene	BRL	mg/kg	0.35	0.048	1	8270C	04/05/08 6:07	rselph	Q31504
Acenaphthylene	BRL	mg/kg	0.35	0.033	1	8270C	04/05/08 6:07	rselph	Q31504
Anthracene	BRL	mg/kg	0.35	0.025	1	8270C	04/05/08 6:07	rselph	Q31504
Azobenzene	BRL	mg/kg	1.8	0.051	1	8270C	04/05/08 6:07	rselph	Q31504
Benzo(a)anthracene	BRL	mg/kg	0.35	0.039	1	8270C	04/05/08 6:07	rselph	Q31504
Benzo(a)pyrene	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 6:07	rselph	Q31504
Benzo(b)fluoranthene	BRL	mg/kg	0.35	0.072	1	8270C	04/05/08 6:07	rselph	Q31504
Benzo(g,h,i)perylene	BRL	mg/kg	0.35	0.045	1	8270C	04/05/08 6:07	rselph	Q31504

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NC Certification No. 402
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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-E
 Prism Sample ID: 209849
 COC Group: G0308809
 Time Collected: 03/25/08 9:55
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Benzo(k)fluoranthene	BRL	mg/kg	0.35	0.094	1	8270C	04/05/08 6:07	rselph	Q31504
Benzoic acid	BRL	mg/kg	1.8	0.15	1	8270C	04/05/08 6:07	rselph	Q31504
Benzyl alcohol	BRL	mg/kg	0.70	0.028	1	8270C	04/05/08 6:07	rselph	Q31504
Bis(2-chloroethoxy)methane	BRL	mg/kg	0.35	0.059	1	8270C	04/05/08 6:07	rselph	Q31504
Bis(2-chloroethyl)ether	BRL	mg/kg	0.35	0.043	1	8270C	04/05/08 6:07	rselph	Q31504
Bis(2-chloroisopropyl)ether	BRL	mg/kg	0.35	0.035	1	8270C	04/05/08 6:07	rselph	Q31504
Bis(2-ethylhexyl)phthalate	BRL	mg/kg	0.35	0.027	1	8270C	04/05/08 6:07	rselph	Q31504
Butylbenzylphthalate	BRL	mg/kg	0.35	0.043	1	8270C	04/05/08 6:07	rselph	Q31504
Chrysene	BRL	mg/kg	0.35	0.024	1	8270C	04/05/08 6:07	rselph	Q31504
Di-n-butylphthalate	BRL	mg/kg	0.35	0.056	1	8270C	04/05/08 6:07	rselph	Q31504
Di-n-octylphthalate	BRL	mg/kg	0.35	0.10	1	8270C	04/05/08 6:07	rselph	Q31504
Dibenzo(a,h)anthracene	BRL	mg/kg	0.35	0.033	1	8270C	04/05/08 6:07	rselph	Q31504
Dibenzofuran	BRL	mg/kg	0.35	0.043	1	8270C	04/05/08 6:07	rselph	Q31504
Diethylphthalate	BRL	mg/kg	0.35	0.090	1	8270C	04/05/08 6:07	rselph	Q31504
Dimethylphthalate	BRL	mg/kg	0.35	0.052	1	8270C	04/05/08 6:07	rselph	Q31504
Fluoranthene	BRL	mg/kg	0.35	0.062	1	8270C	04/05/08 6:07	rselph	Q31504
Fluorene	BRL	mg/kg	0.35	0.050	1	8270C	04/05/08 6:07	rselph	Q31504
Hexachlorobenzene	BRL	mg/kg	0.35	0.048	1	8270C	04/05/08 6:07	rselph	Q31504
Hexachlorobutadiene	BRL	mg/kg	0.35	0.035	1	8270C	04/05/08 6:07	rselph	Q31504
Hexachlorocyclopentadiene	BRL	mg/kg	0.35	0.052	1	8270C	04/05/08 6:07	rselph	Q31504
Hexachloroethane	BRL	mg/kg	0.35	0.014	1	8270C	04/05/08 6:07	rselph	Q31504
Indeno(1,2,3-cd)pyrene	BRL	mg/kg	0.35	0.033	1	8270C	04/05/08 6:07	rselph	Q31504
Isophorone	BRL	mg/kg	0.35	0.033	1	8270C	04/05/08 6:07	rselph	Q31504
N-Nitrosodi-n-propylamine	BRL	mg/kg	0.35	0.020	1	8270C	04/05/08 6:07	rselph	Q31504
N-Nitrosodiphenylamine	BRL	mg/kg	0.35	0.051	1	8270C	04/05/08 6:07	rselph	Q31504
Naphthalene	BRL	mg/kg	0.35	0.042	1	8270C	04/05/08 6:07	rselph	Q31504
Nitrobenzene	BRL	mg/kg	0.35	0.044	1	8270C	04/05/08 6:07	rselph	Q31504

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-E
 Prism Sample ID: 209849
 COC Group: G0308809
 Time Collected: 03/25/08 9:55
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Pentachlorophenol	BRL	mg/kg	1.8	0.054	1	8270C	04/05/08 6:07	rselph	Q31504
Phenanthrene	BRL	mg/kg	0.35	0.030	1	8270C	04/05/08 6:07	rselph	Q31504
Phenol	BRL	mg/kg	0.35	0.062	1	8270C	04/05/08 6:07	rselph	Q31504
Pyrene	BRL	mg/kg	0.35	0.067	1	8270C	04/05/08 6:07	rselph	Q31504

Sample Preparation: 29.65 g / 1 mL 3550B 04/04/08 12:00 pbarr P21252

Surrogate	% Recovery	Control Limits
Terphenyl-d14	85	41 - 136
Phenol-d5	63	13 - 95
Nitrobenzene-d5	59	14 - 103
2-Fluorophenol	47	14 - 89
2-Fluorobiphenyl	65	21 - 108
2,4,6-Tribromophenol	78	25 - 123

Extractable Petroleum Hydrocarbons by GC-FID

C11-C22 Aromatics	BRL	mg/kg	10	1.8	1	MADEP EPH	04/13/08 10:14	grappaccioli	Q31684
C19-C36 Aliphatics	BRL	mg/kg	10	1.4	1	MADEP EPH	04/13/08 10:14	grappaccioli	Q31684
C9-C18 Aliphatics	BRL	mg/kg	10	0.93	1	MADEP EPH	04/13/08 10:14	grappaccioli	Q31684

Sample Preparation: 10.2 g / 2 mL EPH 04/08/08 10:00 pbarr P21286

Surrogate	% Recovery	Control Limits
o-Terphenyl	76	40 - 140
2-Fluorobiphenyl	98	40 - 140
2-Bromonaphthalene	114	40 - 140
1-Chloro-octadecane	41	40 - 140

Volatile Petroleum Hydrocarbons by GC-PID/FID

C5-C8 Aliphatics	BRL	mg/kg	5.2	1.0	1	MADEP VPH	04/05/08 8:00	erussell	Q31515
C9-C10 Aromatics	BRL	mg/kg	5.2	0.031	1	MADEP VPH	04/05/08 8:00	erussell	Q31515

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-E
 Prism Sample ID: 209849
 COC Group: G0308809
 Time Collected: 03/25/08 9:55
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
C9-C12 Aliphatics	BRL	mg/kg	5.2	1.6	1	MADEP VPH	04/05/08 8:00	erussell	Q31515

Surrogate	% Recovery	Control Limits
2,5-Dibromotoluene-PID	125	70 - 130
2,5-Dibromotoluene-FID	112	70 - 130

Sample Weight Determination

Weight 1	18.79	g		1	MADEP VPH	04/14/08 0:00	Lbrown
Weight 2	18.19	g		1	MADEP VPH	04/14/08 0:00	lbrown

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-W
 Prism Sample ID: 209850
 COC Group: G0308809
 Time Collected: 03/25/08 9:50
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	81.7	%			1	SM2540 G	03/31/08 13:30	mbarber	
Sample Weight Determination									
Weight Bisulfate 1	3.54	g			1	5035	03/25/08 0:00	lbrown	
Weight Bisulfate 2	5.45	g			1	5035	03/25/08 0:00	lbrown	
Weight Methanol	5.09	g			1	5035	03/25/08 0:00	lbrown	
Volatile Organic Compounds by GC/MS									
1,1,1-Trichloroethane	BRL	mg/kg	0.0056	0.00066	1	8260B	04/04/08 12:20	erussell	Q31464
1,1,2,2-Tetrachloroethane	BRL	mg/kg	0.0056	0.0004	1	8260B	04/04/08 12:20	erussell	Q31464
1,1,2-Trichloroethane	BRL	mg/kg	0.0056	0.0006	1	8260B	04/04/08 12:20	erussell	Q31464
1,1-Dichloroethane	BRL	mg/kg	0.0056	0.00064	1	8260B	04/04/08 12:20	erussell	Q31464
1,1-Dichloroethene	BRL	mg/kg	0.0056	0.00097	1	8260B	04/04/08 12:20	erussell	Q31464
1,1-Dichloropropene	BRL	mg/kg	0.0056	0.00066	1	8260B	04/04/08 12:20	erussell	Q31464
1,2,3-Trichlorobenzene	BRL	mg/kg	0.0056	0.00064	1	8260B	04/04/08 12:20	erussell	Q31464
1,2,3-Trichloropropane	BRL	mg/kg	0.0056	0.00075	1	8260B	04/04/08 12:20	erussell	Q31464
1,2,4-Trichlorobenzene	BRL	mg/kg	0.0056	0.00073	1	8260B	04/04/08 12:20	erussell	Q31464
1,2,4-Trimethylbenzene	BRL	mg/kg	0.0056	0.00028	1	8260B	04/04/08 12:20	erussell	Q31464
1,2-Dibromoethane (EDB)	BRL	mg/kg	0.0056	0.0007	1	8260B	04/04/08 12:20	erussell	Q31464
1,2-Dichlorobenzene	BRL	mg/kg	0.0056	0.00036	1	8260B	04/04/08 12:20	erussell	Q31464
1,2-Dichloroethane	BRL	mg/kg	0.0056	0.00063	1	8260B	04/04/08 12:20	erussell	Q31464
1,2-Dichloropropane	BRL	mg/kg	0.0056	0.0014	1	8260B	04/04/08 12:20	erussell	Q31464
1,3,5-Trimethylbenzene	BRL	mg/kg	0.0056	0.00047	1	8260B	04/04/08 12:20	erussell	Q31464
1,3-Dichlorobenzene	BRL	mg/kg	0.0056	0.00037	1	8260B	04/04/08 12:20	erussell	Q31464
1,3-Dichloropropane	BRL	mg/kg	0.0056	0.00024	1	8260B	04/04/08 12:20	erussell	Q31464
1,4-Dichlorobenzene	BRL	mg/kg	0.0056	0.00072	1	8260B	04/04/08 12:20	erussell	Q31464
2,2-Dichloropropane	BRL	mg/kg	0.0056	0.00081	1	8260B	04/04/08 12:20	erussell	Q31464
2-Chlorotoluene	BRL	mg/kg	0.0056	0.00031	1	8260B	04/04/08 12:20	erussell	Q31464

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-W
 Prism Sample ID: 209850
 COC Group: G0308809
 Time Collected: 03/25/08 9:50
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2-Hexanone	BRL	mg/kg	0.056	0.0048	1	8260B	04/04/08 12:20	erussell	Q31464
4-Chlorotoluene	BRL	mg/kg	0.0056	0.00042	1	8260B	04/04/08 12:20	erussell	Q31464
4-Methyl-2-pentanone (MIBK)	BRL	mg/kg	0.056	0.0058	1	8260B	04/04/08 12:20	erussell	Q31464
Acetone	BRL	mg/kg	0.056	0.017	1	8260B	04/04/08 12:20	erussell	Q31464
Benzene	BRL	mg/kg	0.0034	0.00047	1	8260B	04/04/08 12:20	erussell	Q31464
Bromobenzene	BRL	mg/kg	0.0056	0.00072	1	8260B	04/04/08 12:20	erussell	Q31464
Bromochloromethane	BRL	mg/kg	0.0056	0.00046	1	8260B	04/04/08 12:20	erussell	Q31464
Bromodichloromethane	BRL	mg/kg	0.0056	0.00061	1	8260B	04/04/08 12:20	erussell	Q31464
Bromoform	BRL	mg/kg	0.0056	0.00051	1	8260B	04/04/08 12:20	erussell	Q31464
Bromomethane	BRL	mg/kg	0.011	0.0013	1	8260B	04/04/08 12:20	erussell	Q31464
Carbon tetrachloride	BRL	mg/kg	0.0056	0.00037	1	8260B	04/04/08 12:20	erussell	Q31464
Chlorobenzene	BRL	mg/kg	0.0056	0.00057	1	8260B	04/04/08 12:20	erussell	Q31464
Chlorodibromomethane	BRL	mg/kg	0.0056	0.00052	1	8260B	04/04/08 12:20	erussell	Q31464
Chloroethane	BRL	mg/kg	0.011	0.0019	1	8260B	04/04/08 12:20	erussell	Q31464
Chloroform	BRL	mg/kg	0.0056	0.00093	1	8260B	04/04/08 12:20	erussell	Q31464
Chloromethane	BRL	mg/kg	0.0056	0.0013	1	8260B	04/04/08 12:20	erussell	Q31464
cis-1,2-Dichloroethene	BRL	mg/kg	0.0056	0.0009	1	8260B	04/04/08 12:20	erussell	Q31464
cis-1,3-Dichloropropene	BRL	mg/kg	0.0056	0.00074	1	8260B	04/04/08 12:20	erussell	Q31464
Dichlorodifluoromethane	BRL	mg/kg	0.0056	0.0015	1	8260B	04/04/08 12:20	erussell	Q31464
Ethylbenzene	BRL	mg/kg	0.0056	0.00026	1	8260B	04/04/08 12:20	erussell	Q31464
Isopropyl ether (IPE)	BRL	mg/kg	0.0056	0.00052	1	8260B	04/04/08 12:20	erussell	Q31464
Isopropylbenzene	BRL	mg/kg	0.0056	0.00033	1	8260B	04/04/08 12:20	erussell	Q31464
m,p-Xylenes	BRL	mg/kg	0.011	0.00092	1	8260B	04/04/08 12:20	erussell	Q31464
Methyl ethyl ketone (MEK)	BRL	mg/kg	0.11	0.017	1	8260B	04/04/08 12:20	erussell	Q31464
Methyl t-butyl ether (MTBE)	BRL	mg/kg	0.011	0.00047	1	8260B	04/04/08 12:20	erussell	Q31464
Methylene chloride	BRL	mg/kg	0.0056	0.00092	1	8260B	04/04/08 12:20	erussell	Q31464
n-Butylbenzene	BRL	mg/kg	0.0056	0.0004	1	8260B	04/04/08 12:20	erussell	Q31464

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-W
 Prism Sample ID: 209850
 COC Group: G0308809
 Time Collected: 03/25/08 9:50
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
n-Propylbenzene	BRL	mg/kg	0.0056	0.00037	1	8260B	04/04/08 12:20	erussell	Q31464
Naphthalene	BRL	mg/kg	0.011	0.00067	1	8260B	04/04/08 12:20	erussell	Q31464
o-Xylene	BRL	mg/kg	0.0056	0.00024	1	8260B	04/04/08 12:20	erussell	Q31464
p-Isopropyltoluene	BRL	mg/kg	0.0056	0.00045	1	8260B	04/04/08 12:20	erussell	Q31464
sec-Butylbenzene	BRL	mg/kg	0.0056	0.00038	1	8260B	04/04/08 12:20	erussell	Q31464
Styrene	BRL	mg/kg	0.0056	0.00063	1	8260B	04/04/08 12:20	erussell	Q31464
tert-Butylbenzene	BRL	mg/kg	0.0056	0.00047	1	8260B	04/04/08 12:20	erussell	Q31464
Tetrachloroethene	BRL	mg/kg	0.0056	0.00051	1	8260B	04/04/08 12:20	erussell	Q31464
Toluene	BRL	mg/kg	0.0056	0.00042	1	8260B	04/04/08 12:20	erussell	Q31464
trans-1,2-Dichloroethene	BRL	mg/kg	0.0056	0.00072	1	8260B	04/04/08 12:20	erussell	Q31464
trans-1,3-Dichloropropene	BRL	mg/kg	0.0056	0.00066	1	8260B	04/04/08 12:20	erussell	Q31464
Trichloroethene	BRL	mg/kg	0.0056	0.00082	1	8260B	04/04/08 12:20	erussell	Q31464
Trichlorofluoromethane	BRL	mg/kg	0.0056	0.0010	1	8260B	04/04/08 12:20	erussell	Q31464
Vinyl acetate	BRL	mg/kg	0.028	0.0016	1	8260B	04/04/08 12:20	erussell	Q31464
Vinyl chloride	BRL	mg/kg	0.0056	0.00098	1	8260B	04/04/08 12:20	erussell	Q31464

Surrogate	% Recovery	Control Limits
Toluene-d8	97	81 - 128
Dibromofluoromethane	104	67 - 143
Bromofluorobenzene	105	77 - 128

Semi-volatile Organic Compounds by GC/MS

1,2,4-Trichlorobenzene	BRL	mg/kg	0.40	0.044	1	8270C	04/05/08 6:56	rselph	Q31504
1,2-Dichlorobenzene	BRL	mg/kg	0.40	0.044	1	8270C	04/05/08 6:56	rselph	Q31504
1,3-Dichlorobenzene	BRL	mg/kg	0.40	0.039	1	8270C	04/05/08 6:56	rselph	Q31504
1,4-Dichlorobenzene	BRL	mg/kg	0.40	0.048	1	8270C	04/05/08 6:56	rselph	Q31504
2,4,5-Trichlorophenol	BRL	mg/kg	0.40	0.048	1	8270C	04/05/08 6:56	rselph	Q31504
2,4,6-Trichlorophenol	BRL	mg/kg	0.40	0.043	1	8270C	04/05/08 6:56	rselph	Q31504

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-W
 Prism Sample ID: 209850
 COC Group: G0308809
 Time Collected: 03/25/08 9:50
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
2,4-Dichlorophenol	BRL	mg/kg	0.40	0.026	1	8270C	04/05/08 6:56	rselph	Q31504
2,4-Dimethylphenol	BRL	mg/kg	0.40	0.060	1	8270C	04/05/08 6:56	rselph	Q31504
2,4-Dinitrophenol	BRL	mg/kg	2.0	0.12	1	8270C	04/05/08 6:56	rselph	Q31504
2,4-Dinitrotoluene	BRL	mg/kg	0.40	0.053	1	8270C	04/05/08 6:56	rselph	Q31504
2,6-Dinitrotoluene	BRL	mg/kg	0.40	0.072	1	8270C	04/05/08 6:56	rselph	Q31504
2-Chloronaphthalene	BRL	mg/kg	0.40	0.050	1	8270C	04/05/08 6:56	rselph	Q31504
2-Chlorophenol	BRL	mg/kg	0.40	0.017	1	8270C	04/05/08 6:56	rselph	Q31504
2-Methylnaphthalene	BRL	mg/kg	0.40	0.045	1	8270C	04/05/08 6:56	rselph	Q31504
2-Methylphenol	BRL	mg/kg	0.40	0.032	1	8270C	04/05/08 6:56	rselph	Q31504
2-Nitrophenol	BRL	mg/kg	0.40	0.057	1	8270C	04/05/08 6:56	rselph	Q31504
3&4-Methylphenol	BRL	mg/kg	0.40	0.047	1	8270C	04/05/08 6:56	rselph	Q31504
3,3'-Dichlorobenzidine	BRL	mg/kg	0.80	0.073	1	8270C	04/05/08 6:56	rselph	Q31504
4,6-Dinitro-2-methylphenol	BRL	mg/kg	2.0	0.034	1	8270C	04/05/08 6:56	rselph	Q31504
4-Bromophenylphenylether	BRL	mg/kg	0.40	0.050	1	8270C	04/05/08 6:56	rselph	Q31504
4-Chloro-3-methylphenol	BRL	mg/kg	0.80	0.048	1	8270C	04/05/08 6:56	rselph	Q31504
4-Chloroaniline	BRL	mg/kg	0.40	0.030	1	8270C	04/05/08 6:56	rselph	Q31504
4-Chlorophenylphenylether	BRL	mg/kg	0.40	0.051	1	8270C	04/05/08 6:56	rselph	Q31504
4-Nitrophenol	BRL	mg/kg	2.0	0.051	1	8270C	04/05/08 6:56	rselph	Q31504
Acenaphthene	BRL	mg/kg	0.40	0.055	1	8270C	04/05/08 6:56	rselph	Q31504
Acenaphthylene	BRL	mg/kg	0.40	0.038	1	8270C	04/05/08 6:56	rselph	Q31504
Anthracene	BRL	mg/kg	0.40	0.029	1	8270C	04/05/08 6:56	rselph	Q31504
Azobenzene	BRL	mg/kg	2.0	0.059	1	8270C	04/05/08 6:56	rselph	Q31504
Benzo(a)anthracene	BRL	mg/kg	0.40	0.045	1	8270C	04/05/08 6:56	rselph	Q31504
Benzo(a)pyrene	BRL	mg/kg	0.40	0.051	1	8270C	04/05/08 6:56	rselph	Q31504
Benzo(b)fluoranthene	BRL	mg/kg	0.40	0.082	1	8270C	04/05/08 6:56	rselph	Q31504
Benzo(g,h,i)perylene	BRL	mg/kg	0.40	0.051	1	8270C	04/05/08 6:56	rselph	Q31504
Benzo(k)fluoranthene	BRL	mg/kg	0.40	0.11	1	8270C	04/05/08 6:56	rselph	Q31504

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-W
 Prism Sample ID: 209850
 COC Group: G0308809
 Time Collected: 03/25/08 9:50
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Benzoic acid	BRL	mg/kg	2.0	0.17	1	8270C	04/05/08 6:56	rselph	Q31504
Benzyl alcohol	BRL	mg/kg	0.80	0.032	1	8270C	04/05/08 6:56	rselph	Q31504
Bis(2-chloroethoxy)methane	BRL	mg/kg	0.40	0.068	1	8270C	04/05/08 6:56	rselph	Q31504
Bis(2-chloroethyl)ether	BRL	mg/kg	0.40	0.050	1	8270C	04/05/08 6:56	rselph	Q31504
Bis(2-chloroisopropyl)ether	BRL	mg/kg	0.40	0.040	1	8270C	04/05/08 6:56	rselph	Q31504
Bis(2-ethylhexyl)phthalate	BRL	mg/kg	0.40	0.031	1	8270C	04/05/08 6:56	rselph	Q31504
Butylbenzylphthalate	BRL	mg/kg	0.40	0.049	1	8270C	04/05/08 6:56	rselph	Q31504
Chrysene	BRL	mg/kg	0.40	0.027	1	8270C	04/05/08 6:56	rselph	Q31504
Di-n-butylphthalate	BRL	mg/kg	0.40	0.064	1	8270C	04/05/08 6:56	rselph	Q31504
Di-n-octylphthalate	BRL	mg/kg	0.40	0.12	1	8270C	04/05/08 6:56	rselph	Q31504
Dibenzo(a,h)anthracene	BRL	mg/kg	0.40	0.038	1	8270C	04/05/08 6:56	rselph	Q31504
Dibenzofuran	BRL	mg/kg	0.40	0.049	1	8270C	04/05/08 6:56	rselph	Q31504
Diethylphthalate	BRL	mg/kg	0.40	0.10	1	8270C	04/05/08 6:56	rselph	Q31504
Dimethylphthalate	BRL	mg/kg	0.40	0.060	1	8270C	04/05/08 6:56	rselph	Q31504
Fluoranthene	BRL	mg/kg	0.40	0.071	1	8270C	04/05/08 6:56	rselph	Q31504
Fluorene	BRL	mg/kg	0.40	0.057	1	8270C	04/05/08 6:56	rselph	Q31504
Hexachlorobenzene	BRL	mg/kg	0.40	0.055	1	8270C	04/05/08 6:56	rselph	Q31504
Hexachlorobutadiene	BRL	mg/kg	0.40	0.040	1	8270C	04/05/08 6:56	rselph	Q31504
Hexachlorocyclopentadiene	BRL	mg/kg	0.40	0.060	1	8270C	04/05/08 6:56	rselph	Q31504
Hexachloroethane	BRL	mg/kg	0.40	0.017	1	8270C	04/05/08 6:56	rselph	Q31504
Indeno(1,2,3-cd)pyrene	BRL	mg/kg	0.40	0.038	1	8270C	04/05/08 6:56	rselph	Q31504
Isophorone	BRL	mg/kg	0.40	0.038	1	8270C	04/05/08 6:56	rselph	Q31504
N-Nitrosodi-n-propylamine	BRL	mg/kg	0.40	0.023	1	8270C	04/05/08 6:56	rselph	Q31504
N-Nitrosodiphenylamine	BRL	mg/kg	0.40	0.058	1	8270C	04/05/08 6:56	rselph	Q31504
Naphthalene	BRL	mg/kg	0.40	0.048	1	8270C	04/05/08 6:56	rselph	Q31504
Nitrobenzene	BRL	mg/kg	0.40	0.050	1	8270C	04/05/08 6:56	rselph	Q31504
Pentachlorophenol	BRL	mg/kg	2.0	0.061	1	8270C	04/05/08 6:56	rselph	Q31504

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-W
 Prism Sample ID: 209850
 COC Group: G0308809
 Time Collected: 03/25/08 9:50
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Phenanthrene	BRL	mg/kg	0.40	0.034	1	8270C	04/05/08 6:56	rselph	Q31504
Phenol	BRL	mg/kg	0.40	0.071	1	8270C	04/05/08 6:56	rselph	Q31504
Pyrene	BRL	mg/kg	0.40	0.077	1	8270C	04/05/08 6:56	rselph	Q31504

Sample Preparation: 30.14 g / 1 mL 3550B 04/04/08 12:00 pbarr P21252

Surrogate	% Recovery	Control Limits
Terphenyl-d14	96	41 - 136
Phenol-d5	74	13 - 95
Nitrobenzene-d5	69	14 - 103
2-Fluorophenol	57	14 - 89
2-Fluorobiphenyl	87	21 - 108
2,4,6-Tribromophenol	95	25 - 123

Extractable Petroleum Hydrocarbons by GC-FID

C11-C22 Aromatics	BRL	mg/kg	12	2.1	1	MADEP EPH	04/14/08 0:04	grappaccioli	Q31684
C19-C36 Aliphatics	BRL	mg/kg	12	1.6	1	MADEP EPH	04/14/08 0:04	grappaccioli	Q31684
C9-C18 Aliphatics	BRL	mg/kg	12	1.1	1	MADEP EPH	04/14/08 0:04	grappaccioli	Q31684

Sample Preparation: 10.11 g / 2 mL EPH 04/08/08 10:00 pbarr P21286

Surrogate	% Recovery	Control Limits
o-Terphenyl	71	40 - 140
2-Fluorobiphenyl	100	40 - 140
2-Bromonaphthalene	117	40 - 140
1-Chloro-octadecane	40	40 - 140

Volatile Petroleum Hydrocarbons by GC-PID/FID

C5-C8 Aliphatics	BRL	mg/kg	6.1	1.2	1	MADEP VPH	04/05/08 8:42	erussell	Q31515
C9-C10 Aromatics	BRL	mg/kg	6.1	0.037	1	MADEP VPH	04/05/08 8:42	erussell	Q31515
C9-C12 Aliphatics	BRL	mg/kg	6.1	1.9	1	MADEP VPH	04/05/08 8:42	erussell	Q31515

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-W
 Prism Sample ID: 209850
 COC Group: G0308809
 Time Collected: 03/25/08 9:50
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
							Surrogate	% Recovery	Control Limits
							2,5-Dibromotoluene-PID	116	70 - 130
							2,5-Dibromotoluene-FID	105	70 - 130

Sample Weight Determination

Weight 1	21.87	g			1	MADEP VPH	04/14/08 0:00	Lbrown	
Weight 2	15.82	g			1	MADEP VPH	04/14/08 0:00	lbrown	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-T2-1
 Prism Sample ID: 209851
 COC Group: G0308809
 Time Collected: 03/24/08 14:25
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	90.6	%			1	SM2540 G	03/31/08 13:30	mbarber	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	14	mg/kg	7.7	1.2	1	8015B	04/02/08 21:30	jvogel	Q31414
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Sample Preparation: 25.2 g / 1 mL 3545 03/31/08 18:00 wconder P21221

Surrogate	% Recovery	Control Limits
o-Terphenyl	123	49 - 124

Sample Weight Determination

Weight 1	2.47	g			1	GRO	04/14/08 0:00	Lbrown	
Weight 2	1.88	g			1	GRO	04/14/08 0:00	lbrown	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	48	mg/kg	5.5	3.5	50	8015B	03/29/08 18:25	wbradley	Q31330
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One surrogate recovery was outside of the control limits. Matrix interference is suspected.

Surrogate	% Recovery	Control Limits
aaa-TFT	261 #	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit
 J- Estimated value between the Reporting Limit and the MDL
 The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.
 All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-PL-1
 Prism Sample ID: 209852
 COC Group: G0308809
 Time Collected: 03/24/08 14:35
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	95.3	%			1	SM2540 G	03/31/08 13:30	mbarber	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	21	mg/kg	7.3	1.2	1	8015B	04/02/08 22:07	jvogel	Q31414
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Sample Preparation: 25.08 g / 1 mL 3545 03/31/08 18:00 wconder P21221

Surrogate	% Recovery	Control Limits
o-Terphenyl	124	49 - 124

Sample Weight Determination

Weight 1	5.35	g			1	GRO	04/14/08 0:00	Lbrown	
Weight 2	5.46	g			1	GRO	04/14/08 0:00	lbrown	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	5.2	3.3	50	8015B	03/30/08 0:40	wbradley	Q31330
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Surrogate	% Recovery	Control Limits
aaa-TFT	86	55 - 129

Sample Comment(s):

*BRL = Below Reporting Limit
 J- Estimated value between the Reporting Limit and the MDL
 The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.
 All results are reported on a dry-weight basis*

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-PL-2
 Prism Sample ID: 209853
 COC Group: G0308809
 Time Collected: 03/24/08 14:40
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	94.2	%			1	SM2540 G	03/31/08 13:30	mbarber	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	7.3	1.2	1	8015B	04/02/08 22:45	jvogel	Q31414
Sample Preparation:			25.43 g	/	1 mL	3545	03/31/08 18:00	wcoonder	P21221
					Surrogate		% Recovery	Control Limits	
					o-Terphenyl		116	49 - 124	
Sample Weight Determination									
Weight 1	5.36	g			1	GRO	04/14/08 0:00	Lbrown	
Weight 2	5.63	g			1	GRO	04/14/08 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	5.3	3.3	50	8015B	03/29/08 19:27	wbradley	Q31330
					Surrogate		% Recovery	Control Limits	
					aaa-TFT		76	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-T1-1
 Prism Sample ID: 209854
 COC Group: G0308809
 Time Collected: 03/24/08 14:15
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<u>Percent Solids Determination</u>									
Percent Solids	86.7	%			1	SM2540 G	03/31/08 13:30	mbarber	
<u>Diesel Range Organics (DRO) by GC-FID</u>									
Diesel Range Organics (DRO)	BRL	mg/kg	8.1	1.3	1	8015B	04/02/08 23:22	jvogel	Q31414
Sample Preparation:				25 g	/	1 mL	3545	03/31/08 18:00	wconder P21221
				Surrogate			% Recovery	Control Limits	
				o-Terphenyl			85	49 - 124	
<u>Sample Weight Determination</u>									
Weight 1	6.42	g			1	GRO	04/14/08 0:00	Lbrown	
Weight 2	5.56	g			1	GRO	04/14/08 0:00	lbrown	
<u>Gasoline Range Organics (GRO) by GC-FID</u>									
Gasoline Range Organics (GRO)	BRL	mg/kg	5.8	3.6	50	8015B	03/29/08 19:59	wbradley	Q31330
				Surrogate			% Recovery	Control Limits	
				aaa-TFT			111	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit
 J- Estimated value between the Reporting Limit and the MDL
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Angela D. Overcash, V.P. Laboratory Services

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 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-T1-2
 Prism Sample ID: 209855
 COC Group: G0308809
 Time Collected: 03/24/08 14:20
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	84.4	%			1	SM2540 G	03/31/08 13:30	mbarber	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.2	1.3	1	8015B	04/02/08 19:38	lvogel	Q31414
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Sample Preparation: 25.18 g / 1 mL 3545 03/31/08 18:00 wcondor P21221

Surrogate	% Recovery	Control Limits
o-Terphenyl	87	49 - 124

Sample Weight Determination

Weight 1	4.57	g			1	GRO	04/14/08 0:00	Lbrown	
Weight 2	4.14	g			1	GRO	04/14/08 0:00	lbrown	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	5.9	3.7	50	8015B	03/29/08 20:30	wbradley	Q31330
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Surrogate recovery was outside of the control limits. There were no detections in sample so there was no effect on the data.

Surrogate	% Recovery	Control Limits
aaa-TFT	160 #	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 50-T2-2
 Prism Sample ID: 209856
 COC Group: G0308809
 Time Collected: 03/24/08 14:30
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	92.8	%			1	SM2540 G	03/31/08 13:30	mbarber	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	6.3 J	mg/kg	7.5	1.2	1	8015B	04/02/08 20:15	jvogel	Q31414
Sample Preparation:			25.24 g	/	1 mL	3545	03/31/08 18:00	wconder	P21221
					Surrogate		% Recovery	Control Limits	
					o-Terphenyl		121	49 - 124	
Sample Weight Determination									
Weight 1	5.73	g			1	GRO	04/14/08 0:00	lbrown	
Weight 2	5.67	g			1	GRO	04/14/08 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	62	mg/kg	5.4	3.4	50	8015B	03/29/08 21:01	wbradley	Q31330
					Surrogate		% Recovery	Control Limits	
					aaa-TFT		93	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Laboratory Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 County UST
 Project No.: WBS# 34438.1.1
 Sample Matrix: Soil

Client Sample ID: 48-T1-1
 Prism Sample ID: 209857
 COC Group: G0308809
 Time Collected: 03/24/08 15:00
 Time Submitted: 03/27/08 7:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	94.7	%			1	SM2540 G	03/31/08 13:30	mbarber	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	6.0 J	mg/kg	7.4	1.2	1	8015B	04/03/08 0:37	jvogel	Q31414
Sample Preparation:			25.14 g		1 mL	3545	03/31/08 18:00	wconder	P21221

Surrogate	% Recovery	Control Limits
o-Terphenyl	114	49 - 124

Sample Weight Determination

Weight 1	5.37	g			1	GRO	04/14/08 0:00	lbrown	
Weight 2	4.32	g			1	GRO	04/14/08 0:00	lbrown	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	5.3	3.3	50	8015B	03/29/08 21:32	wbradley	Q31330
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Surrogate	% Recovery	Control Limits
aaa-TFT	79	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit
 J- Estimated value between the Reporting Limit and the MDL
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Angela D. Overcash, V.P. Laboratory Services



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Level II QC Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 Project No.: County UST
 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

Gasoline Range Organics (GRO) by GC-FID, method 8015B

Method Blank							QC Batch ID
	Result	RL	Control Limit	Units			
Gasoline Range Organics (GRO)	ND	.5	<2.5	mg/kg			Q31330

Laboratory Control Sample							QC Batch ID
	Result	Spike Amount	Units	Recovery %	Recovery Ranges %		
Gasoline Range Organics (GRO)	41.7	50	mg/kg	83	67-116		Q31330

Matrix Spike							QC Batch ID
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %		
209595 Gasoline Range Organics (GRO)	49.7	50	mg/kg	99	57-113		Q31330

Matrix Spike Duplicate								
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
209595 Gasoline Range Organics (GRO)	47.9	50	mg/kg	96	57-113	4	0 - 23	Q31330



NC Certification No. 402
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 NC Drinking Water Cert. No. 37735

Level II QC Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 Project No.: County UST
 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

Volatile Organic Compounds by GC/MS, method 8260B

Method Blank	Result	RL	Control Limit	Units	QC Batch ID
1,1,1-Trichloroethane	ND	0.005	<0.0025	mg/kg	Q31384
1,1,2,2-Tetrachloroethane	ND	0.005	<0.0025	mg/kg	Q31384
1,1,2-Trichloroethane	ND	0.005	<0.0025	mg/kg	Q31384
1,1-Dichloroethane	ND	0.005	<0.0025	mg/kg	Q31384
1,1-Dichloroethene	ND	0.005	<0.0025	mg/kg	Q31384
1,1-Dichloropropene	ND	0.005	<0.0025	mg/kg	Q31384
1,2,3-Trichlorobenzene	ND	0.005	<0.0025	mg/kg	Q31384
1,2,3-Trichloropropane	ND	0.005	<0.0025	mg/kg	Q31384
1,2,4-Trichlorobenzene	ND	0.005	<0.0025	mg/kg	Q31384
1,2,4-Trimethylbenzene	ND	0.005	<0.0025	mg/kg	Q31384
1,2-Dibromoethane (EDB)	ND	0.005	<0.0025	mg/kg	Q31384
1,2-Dichlorobenzene	ND	0.005	<0.0025	mg/kg	Q31384
1,2-Dichloroethane	ND	0.005	<0.0025	mg/kg	Q31384
1,2-Dichloropropane	ND	0.005	<0.0025	mg/kg	Q31384
1,3,5-Trimethylbenzene	ND	0.005	<0.0025	mg/kg	Q31384
1,3-Dichlorobenzene	ND	0.005	<0.0025	mg/kg	Q31384
1,3-Dichloropropane	ND	0.005	<0.0025	mg/kg	Q31384
1,4-Dichlorobenzene	ND	0.005	<0.0025	mg/kg	Q31384
2,2-Dichloropropane	ND	0.005	<0.0025	mg/kg	Q31384
2-Chlorotoluene	ND	0.005	<0.0025	mg/kg	Q31384
2-Hexanone	ND	0.05	<0.025	mg/kg	Q31384
4-Chlorotoluene	ND	0.005	<0.0025	mg/kg	Q31384
4-Methyl-2-pentanone (MIBK)	ND	0.05	<0.025	mg/kg	Q31384
Acetone	ND	0.05	<0.025	mg/kg	Q31384
Benzene	ND	0.003	<0.0015	mg/kg	Q31384
Bromobenzene	ND	0.005	<0.0025	mg/kg	Q31384
Bromochloromethane	ND	0.005	<0.0025	mg/kg	Q31384
Bromodichloromethane	ND	0.005	<0.0025	mg/kg	Q31384
Bromoform	ND	0.005	<0.0025	mg/kg	Q31384
Bromomethane	ND	0.01	<0.005	mg/kg	Q31384
Carbon tetrachloride	ND	0.005	<0.0025	mg/kg	Q31384
Chlorobenzene	ND	0.005	<0.0025	mg/kg	Q31384
Chlorodibromomethane	ND	0.005	<0.0025	mg/kg	Q31384
Chloroethane	ND	0.01	<0.005	mg/kg	Q31384

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Level II QC Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 Project No.: County UST
 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
Chloroform	ND	0.005	<0.0025	mg/kg	Q31384
Chloromethane	ND	0.005	<0.0025	mg/kg	Q31384
cis-1,2-Dichloroethene	ND	0.005	<0.0025	mg/kg	Q31384
cis-1,3-Dichloropropene	ND	0.005	<0.0025	mg/kg	Q31384
Dichlorodifluoromethane	ND	0.005	<0.0025	mg/kg	Q31384
Ethylbenzene	ND	0.005	<0.0025	mg/kg	Q31384
Isopropyl ether (IPE)	ND	0.005	<0.0025	mg/kg	Q31384
Isopropylbenzene	ND	0.005	<0.0025	mg/kg	Q31384
m,p-Xylenes	ND	0.01	<0.005	mg/kg	Q31384
Methyl ethyl ketone (MEK)	ND	0.1	<0.05	mg/kg	Q31384
Methyl t-butyl ether (MTBE)	ND	0.01	<0.005	mg/kg	Q31384
Methylene chloride	ND	0.005	<0.0025	mg/kg	Q31384
n-Butylbenzene	ND	0.005	<0.0025	mg/kg	Q31384
n-Propylbenzene	ND	0.005	<0.0025	mg/kg	Q31384
Naphthalene	ND	0.01	<0.005	mg/kg	Q31384
o-Xylene	ND	0.005	<0.0025	mg/kg	Q31384
p-Isopropyltoluene	ND	0.005	<0.0025	mg/kg	Q31384
sec-Butylbenzene	ND	0.005	<0.0025	mg/kg	Q31384
Styrene	ND	0.005	<0.0025	mg/kg	Q31384
tert-Butylbenzene	ND	0.005	<0.0025	mg/kg	Q31384
Tetrachloroethene	ND	0.005	<0.0025	mg/kg	Q31384
Toluene	ND	0.005	<0.0025	mg/kg	Q31384
trans-1,2-Dichloroethene	ND	0.005	<0.0025	mg/kg	Q31384
trans-1,3-Dichloropropene	ND	0.005	<0.0025	mg/kg	Q31384
Trichloroethene	ND	0.005	<0.0025	mg/kg	Q31384
Trichlorofluoromethane	ND	0.005	<0.0025	mg/kg	Q31384
Vinyl acetate	ND	0.025	<0.0125	mg/kg	Q31384
Vinyl chloride	ND	0.005	<0.0025	mg/kg	Q31384

Laboratory Control Sample

	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
1,1-Dichloroethene	0.04688	0.05	mg/kg	94	57-122	Q31384
Benzene	0.0466	0.05	mg/kg	93	62-119	Q31384
Chlorobenzene	0.04584	0.05	mg/kg	92	61-124	Q31384
Toluene	0.04951	0.05	mg/kg	99	57-122	Q31384
Trichloroethene	0.04695	0.05	mg/kg	94	59-129	Q31384

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Level II QC Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 Project No.: County UST
 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

Matrix Spike						
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
209843 1,1-Dichloroethene	0.03923	0.05	mg/kg	78	44-140	Q31384
Benzene	0.03934	0.05	mg/kg	79	46-136	Q31384
Chlorobenzene	0.03745	0.05	mg/kg	75	47-135	Q31384
Toluene	0.04135	0.05	mg/kg	83	47-136	Q31384
Trichloroethene	0.03896	0.05	mg/kg	78	45-141	Q31384

Matrix Spike Duplicate								
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
209843 1,1-Dichloroethene	0.04123	0.05	mg/kg	82	44-140	5	0 - 23	Q31384
Benzene	0.03985	0.05	mg/kg	80	46-136	1	0 - 22	Q31384
Chlorobenzene	0.03724	0.05	mg/kg	74	47-135	1	0 - 22	Q31384
Toluene	0.03935	0.05	mg/kg	79	47-136	5	0 - 22	Q31384
Trichloroethene	0.03941	0.05	mg/kg	79	45-141	1	0 - 23	Q31384

Diesel Range Organics (DRO) by GC-FID, method 8015B

Method Blank					
	Result	RL	Control Limit	Units	QC Batch ID
Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg	Q31414

Laboratory Control Sample						
	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
Diesel Range Organics (DRO)	78.7	80	mg/kg	98	55-109	Q31414

Matrix Spike						
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
209749 Diesel Range Organics (DRO)	23290	80	mg/kg	5985 #	50-117	Q31414

Matrix Spike Duplicate								
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
209749 Diesel Range Organics (DRO)	19585	80	mg/kg	1354 #	50-117	17	0 - 24	Q31414

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Level II QC Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 Project No.: County UST
 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

Volatile Organic Compounds by GC/MS, method 8260B

Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
1,1,1-Trichloroethane	ND	0.005	<0.0025	mg/kg	Q31464
1,1,2,2-Tetrachloroethane	ND	0.005	<0.0025	mg/kg	Q31464
1,1,2-Trichloroethane	ND	0.005	<0.0025	mg/kg	Q31464
1,1-Dichloroethane	ND	0.005	<0.0025	mg/kg	Q31464
1,1-Dichloroethene	ND	0.005	<0.0025	mg/kg	Q31464
1,1-Dichloropropene	ND	0.005	<0.0025	mg/kg	Q31464
1,2,3-Trichlorobenzene	ND	0.005	<0.0025	mg/kg	Q31464
1,2,3-Trichloropropane	ND	0.005	<0.0025	mg/kg	Q31464
1,2,4-Trichlorobenzene	ND	0.005	<0.0025	mg/kg	Q31464
1,2,4-Trimethylbenzene	ND	0.005	<0.0025	mg/kg	Q31464
1,2-Dibromoethane (EDB)	ND	0.005	<0.0025	mg/kg	Q31464
1,2-Dichlorobenzene	ND	0.005	<0.0025	mg/kg	Q31464
1,2-Dichloroethane	ND	0.005	<0.0025	mg/kg	Q31464
1,2-Dichloropropane	ND	0.005	<0.0025	mg/kg	Q31464
1,3,5-Trimethylbenzene	ND	0.005	<0.0025	mg/kg	Q31464
1,3-Dichlorobenzene	ND	0.005	<0.0025	mg/kg	Q31464
1,3-Dichloropropane	ND	0.005	<0.0025	mg/kg	Q31464
1,4-Dichlorobenzene	ND	0.005	<0.0025	mg/kg	Q31464
2,2-Dichloropropane	ND	0.005	<0.0025	mg/kg	Q31464
2-Chlorotoluene	ND	0.005	<0.0025	mg/kg	Q31464
2-Hexanone	ND	0.05	<0.025	mg/kg	Q31464
4-Chlorotoluene	ND	0.005	<0.0025	mg/kg	Q31464
4-Methyl-2-pentanone (MIBK)	ND	0.05	<0.025	mg/kg	Q31464
Acetone	ND	0.05	<0.025	mg/kg	Q31464
Benzene	ND	0.003	<0.0015	mg/kg	Q31464
Bromobenzene	ND	0.005	<0.0025	mg/kg	Q31464
Bromochloromethane	ND	0.005	<0.0025	mg/kg	Q31464
Bromodichloromethane	ND	0.005	<0.0025	mg/kg	Q31464
Bromoform	ND	0.005	<0.0025	mg/kg	Q31464
Bromomethane	ND	0.01	<0.005	mg/kg	Q31464
Carbon tetrachloride	ND	0.005	<0.0025	mg/kg	Q31464
Chlorobenzene	ND	0.005	<0.0025	mg/kg	Q31464
Chlorodibromomethane	ND	0.005	<0.0025	mg/kg	Q31464
Chloroethane	ND	0.01	<0.005	mg/kg	Q31464

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NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Level II QC Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 Project No.: County UST
 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
Chloroform	ND	0.005	<0.0025	mg/kg	Q31464
Chloromethane	ND	0.005	<0.0025	mg/kg	Q31464
cis-1,2-Dichloroethene	ND	0.005	<0.0025	mg/kg	Q31464
cis-1,3-Dichloropropene	ND	0.005	<0.0025	mg/kg	Q31464
Dichlorodifluoromethane	ND	0.005	<0.0025	mg/kg	Q31464
Ethylbenzene	ND	0.005	<0.0025	mg/kg	Q31464
Isopropyl ether (IPE)	ND	0.005	<0.0025	mg/kg	Q31464
Isopropylbenzene	ND	0.005	<0.0025	mg/kg	Q31464
m,p-Xylenes	ND	0.01	<0.005	mg/kg	Q31464
Methyl ethyl ketone (MEK)	ND	0.1	<0.05	mg/kg	Q31464
Methyl t-butyl ether (MTBE)	ND	0.01	<0.005	mg/kg	Q31464
Methylene chloride	ND	0.005	<0.0025	mg/kg	Q31464
n-Butylbenzene	ND	0.005	<0.0025	mg/kg	Q31464
n-Propylbenzene	ND	0.005	<0.0025	mg/kg	Q31464
Naphthalene	ND	0.01	<0.005	mg/kg	Q31464
o-Xylene	ND	0.005	<0.0025	mg/kg	Q31464
p-Isopropyltoluene	ND	0.005	<0.0025	mg/kg	Q31464
sec-Butylbenzene	ND	0.005	<0.0025	mg/kg	Q31464
Styrene	ND	0.005	<0.0025	mg/kg	Q31464
tert-Butylbenzene	ND	0.005	<0.0025	mg/kg	Q31464
Tetrachloroethene	ND	0.005	<0.0025	mg/kg	Q31464
Toluene	ND	0.005	<0.0025	mg/kg	Q31464
trans-1,2-Dichloroethene	ND	0.005	<0.0025	mg/kg	Q31464
trans-1,3-Dichloropropene	ND	0.005	<0.0025	mg/kg	Q31464
Trichloroethene	ND	0.005	<0.0025	mg/kg	Q31464
Trichlorofluoromethane	ND	0.005	<0.0025	mg/kg	Q31464
Vinyl acetate	ND	0.025	<0.0125	mg/kg	Q31464
Vinyl chloride	ND	0.005	<0.0025	mg/kg	Q31464

Laboratory Control Sample

	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
1,1-Dichloroethene	37.15	50	mg/kg	74	57-122	Q31464
Benzene	40.53	50	mg/kg	81	62-119	Q31464
Chlorobenzene	39.03	50	mg/kg	78	61-124	Q31464
Toluene	43.39	50	mg/kg	87	57-122	Q31464
Trichloroethene	40.53	50	mg/kg	81	59-129	Q31464

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04/15/08

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 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 Project No.: County UST
 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

Matrix Spike

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
210021 1,1-Dichloroethene	31.11	50	mg/kg	62	44-140	Q31464
Benzene	32.39	50	mg/kg	65	46-136	Q31464
Chlorobenzene	28.91	50	mg/kg	58	47-135	Q31464
Toluene	32	50	mg/kg	64	47-136	Q31464
Trichloroethene	31.95	50	mg/kg	64	45-141	Q31464

Matrix Spike Duplicate

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
210021 1,1-Dichloroethene	31.68	50	mg/kg	63	44-140	2	0 - 23	Q31464
Benzene	32.63	50	mg/kg	65	46-136	1	0 - 22	Q31464
Chlorobenzene	28.93	50	mg/kg	58	47-135	0	0 - 22	Q31464
Toluene	31.31	50	mg/kg	63	47-136	2	0 - 22	Q31464
Trichloroethene	31.68	50	mg/kg	63	45-141	1	0 - 23	Q31464

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04/15/08

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 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 Project No.: County UST
 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

Semi-volatile Organic Compounds by GC/MS, method 8270C

Method Blank	Result	RL	Control Limit	Units	QC Batch ID
1,2,4-Trichlorobenzene	ND	0.33	<0.165	mg/kg	Q31504
1,2-Dichlorobenzene	ND	0.33	<0.165	mg/kg	Q31504
1,3-Dichlorobenzene	ND	0.33	<0.165	mg/kg	Q31504
1,4-Dichlorobenzene	ND	0.33	<0.165	mg/kg	Q31504
2,4,5-Trichlorophenol	ND	0.33	<0.165	mg/kg	Q31504
2,4,6-Trichlorophenol	ND	0.33	<0.165	mg/kg	Q31504
2,4-Dichlorophenol	ND	0.33	<0.165	mg/kg	Q31504
2,4-Dimethylphenol	ND	0.33	<0.165	mg/kg	Q31504
2,4-Dinitrophenol	ND	1.65	<0.825	mg/kg	Q31504
2,4-Dinitrotoluene	ND	0.33	<0.165	mg/kg	Q31504
2,6-Dinitrotoluene	ND	0.33	<0.165	mg/kg	Q31504
2-Chloronaphthalene	ND	0.33	<0.165	mg/kg	Q31504
2-Chlorophenol	ND	0.33	<0.165	mg/kg	Q31504
2-Methylnaphthalene	ND	0.33	<0.165	mg/kg	Q31504
2-Methylphenol	ND	0.33	<0.165	mg/kg	Q31504
2-Nitrophenol	ND	0.33	<0.165	mg/kg	Q31504
3&4-Methylphenol	ND	0.33	<0.165	mg/kg	Q31504
3,3'-Dichlorobenzidine	ND	0.66	<0.33	mg/kg	Q31504
4,6-Dinitro-2-methylphenol	ND	1.65	<0.825	mg/kg	Q31504
4-Bromophenylphenylether	ND	0.33	<0.165	mg/kg	Q31504
4-Chloro-3-methylphenol	ND	0.66	<0.33	mg/kg	Q31504
4-Chloroaniline	ND	0.33	<0.165	mg/kg	Q31504
4-Chlorophenylphenylether	ND	0.33	<0.165	mg/kg	Q31504
4-Nitrophenol	ND	1.65	<0.825	mg/kg	Q31504
Acenaphthene	ND	0.33	<0.165	mg/kg	Q31504
Acenaphthylene	ND	0.33	<0.165	mg/kg	Q31504
Anthracene	ND	0.33	<0.165	mg/kg	Q31504
Azobenzene	ND	1.65	<0.825	mg/kg	Q31504
Benzo(a)anthracene	ND	0.33	<0.165	mg/kg	Q31504
Benzo(a)pyrene	ND	0.33	<0.165	mg/kg	Q31504
Benzo(b)fluoranthene	ND	0.33	<0.165	mg/kg	Q31504
Benzo(g,h,i)perylene	ND	0.33	<0.165	mg/kg	Q31504
Benzo(k)fluoranthene	ND	0.33	<0.165	mg/kg	Q31504
Benzoic acid	ND	1.65	<0.825	mg/kg	Q31504

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Level II QC Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 Project No.: County UST
 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
Benzyl alcohol	ND	0.66	<0.33	mg/kg	Q31504
Bis(2-chloroethoxy)methane	ND	0.33	<0.165	mg/kg	Q31504
Bis(2-chloroethyl)ether	ND	0.33	<0.165	mg/kg	Q31504
Bis(2-chloroisopropyl)ether	ND	0.33	<0.165	mg/kg	Q31504
Bis(2-ethylhexyl)phthalate	ND	0.33	<0.165	mg/kg	Q31504
Butylbenzylphthalate	ND	0.33	<0.165	mg/kg	Q31504
Chrysene	ND	0.33	<0.165	mg/kg	Q31504
Di-n-butylphthalate	ND	0.33	<0.165	mg/kg	Q31504
Di-n-octylphthalate	ND	0.33	<0.165	mg/kg	Q31504
Dibenzo(a,h)anthracene	ND	0.33	<0.165	mg/kg	Q31504
Dibenzofuran	ND	0.33	<0.165	mg/kg	Q31504
Diethylphthalate	ND	0.33	<0.165	mg/kg	Q31504
Dimethylphthalate	ND	0.33	<0.165	mg/kg	Q31504
Fluoranthene	ND	0.33	<0.165	mg/kg	Q31504
Fluorene	ND	0.33	<0.165	mg/kg	Q31504
Hexachlorobenzene	ND	0.33	<0.165	mg/kg	Q31504
Hexachlorobutadiene	ND	0.33	<0.165	mg/kg	Q31504
Hexachlorocyclopentadiene	ND	0.33	<0.165	mg/kg	Q31504
Hexachloroethane	ND	0.33	<0.165	mg/kg	Q31504
Indeno(1,2,3-cd)pyrene	ND	0.33	<0.165	mg/kg	Q31504
Isophorone	ND	0.33	<0.165	mg/kg	Q31504
N-Nitrosodi-n-propylamine	ND	0.33	<0.165	mg/kg	Q31504
N-Nitrosodiphenylamine	ND	0.33	<0.165	mg/kg	Q31504
Naphthalene	ND	0.33	<0.165	mg/kg	Q31504
Nitrobenzene	ND	0.33	<0.165	mg/kg	Q31504
Pentachlorophenol	ND	1.65	<0.825	mg/kg	Q31504
Phenanthrene	ND	0.33	<0.165	mg/kg	Q31504
Phenol	ND	0.33	<0.165	mg/kg	Q31504
Pyrene	ND	0.33	<0.165	mg/kg	Q31504

Laboratory Control Sample

	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
1,2,4-Trichlorobenzene	1.08467	1.6412	mg/kg	66	39-98	Q31504
1,4-Dichlorobenzene	0.99638	1.6412	mg/kg	61	37-95	Q31504
2,4-Dinitrotoluene	1.29799	1.6412	mg/kg	79	56-128	Q31504
2-Chlorophenol	1.01247	1.6412	mg/kg	62	37-98	Q31504
4-Chloro-3-methylphenol	1.20774	1.6412	mg/kg	74	45-111	Q31504

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NC Certification No. 402
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 NC Drinking Water Cert. No. 37735

Level II QC Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 Project No.: County UST
 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

Laboratory Control Sample	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
4-Nitrophenol	1.28749	1.6412	mg/kg	78	20-157	Q31504
Acenaphthene	1.23990	1.6412	mg/kg	76	44-110	Q31504
N-Nitrosodi-n-propylamine	0.79488	1.6412	mg/kg	48	38-101	Q31504
Pentachlorophenol	1.69609	1.6412	mg/kg	103	53-127	Q31504
Phenol	1.07581	1.6412	mg/kg	66	34-102	Q31504
Pyrene	1.44010	1.6412	mg/kg	88	54-131	Q31504

Matrix Spike	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
Sample ID: 210106 1,2,4-Trichlorobenzene	0.92633	1.667	mg/kg	56	26-97	Q31504
1,4-Dichlorobenzene	0.88433	1.667	mg/kg	53	23-92	Q31504
2,4-Dinitrotoluene	1.20933	1.667	mg/kg	73	45-127	Q31504
2-Chlorophenol	0.909	1.667	mg/kg	55	25-94	Q31504
4-Chloro-3-methylphenol	1.147	1.667	mg/kg	69	31-113	Q31504
4-Nitrophenol	1.199	1.667	mg/kg	72	17-150	Q31504
Acenaphthene	1.14266	1.667	mg/kg	69	36-107	Q31504
N-Nitrosodi-n-propylamine	0.78166	1.667	mg/kg	47	22-105	Q31504
Pentachlorophenol	1.539	1.667	mg/kg	92	39-137	Q31504
Phenol	0.93133	1.667	mg/kg	56	23-97	Q31504
Pyrene	1.24133	1.667	mg/kg	74	45-133	Q31504

Matrix Spike Duplicate	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
Sample ID: 210106 1,2,4-Trichlorobenzene	1.25533	1.667	mg/kg	75	26-97	30	0 - 37	Q31504
1,4-Dichlorobenzene	1.12466	1.667	mg/kg	67	23-92	24	0 - 36	Q31504
2,4-Dinitrotoluene	1.36533	1.667	mg/kg	82	45-127	12	0 - 29	Q31504
2-Chlorophenol	1.178	1.667	mg/kg	71	25-94	26	0 - 37	Q31504
4-Chloro-3-methylphenol	1.30366	1.667	mg/kg	78	31-113	13	0 - 32	Q31504
4-Nitrophenol	1.32966	1.667	mg/kg	80	17-150	10	0 - 32	Q31504
Acenaphthene	1.289	1.667	mg/kg	77	36-107	12	0 - 32	Q31504
N-Nitrosodi-n-propylamine	0.94033	1.667	mg/kg	56	22-105	18	0 - 37	Q31504
Pentachlorophenol	1.753	1.667	mg/kg	105	39-137	13	0 - 27	Q31504
Phenol	1.25366	1.667	mg/kg	75	23-97	30	0 - 42	Q31504
Pyrene	1.44933	1.667	mg/kg	87	45-133	15	0 - 27	Q31504

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Level II QC Report

04/15/08

N. C. Department of Transportation
 Attn: Jessica Dehart
 c/o Solution - IES
 1101 Nowell Road
 Raleigh, NC 27607

Project ID: NC DOT - Richmond
 Project No.: County UST
 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

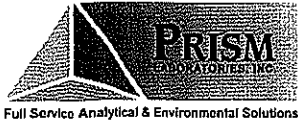
Volatile Petroleum Hydrocarbons by GC-PID/FID, method MADEP VPH

Method Blank					QC Batch ID
	Result	RL	Control Limit	Units	
C5-C8 Aliphatics	ND	5	<2.5	mg/kg	Q31515
C9-C10 Aromatics	ND	5	<2.5	mg/kg	Q31515
C9-C12 Aliphatics	ND	5	<2.5	mg/kg	Q31515

Laboratory Control Sample						
	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
C5-C8 Aliphatics	26.941	30	mg/kg	90	70-130	Q31515
C9-C10 Aromatics	4.894	5	mg/kg	98	70-130	Q31515
C9-C12 Aliphatics	31.891	40	mg/kg	80	70-130	Q31515

Matrix Spike						
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
209696 C5-C8 Aliphatics	27.736	30	mg/kg	92	70-130	Q31515
C9-C10 Aromatics	4.068	5	mg/kg	81	70-130	Q31515
C9-C12 Aliphatics	34.305	40	mg/kg	86	70-130	Q31515

Matrix Spike Duplicate								
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
209696 C5-C8 Aliphatics	28.146	30	mg/kg	94	70-130	1	0 - 25	Q31515
C9-C10 Aromatics	4.207	5	mg/kg	84	70-130	3	0 - 25	Q31515
C9-C12 Aliphatics	36.831	40	mg/kg	92	70-130	7	0 - 25	Q31515



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 WBS# 34438.1.1

COC Group Number: G0308809
 Date/Time Submitted: 3/27/200 7:15

Extractable Petroleum Hydrocarbons by GC-FID, method MADEP EPH

Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
C11-C22 Aromatics	ND	10	<5	mg/kg	Q31684
C19-C36 Aliphatics	ND	10	<5	mg/kg	Q31684
C9-C18 Aliphatics	ND	10	<5	mg/kg	Q31684

Laboratory Control Sample

	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
C11-C22 Aromatics	120.6	170	mg/kg	71	40-140	Q31684
C19-C36 Aliphatics	50.34	80	mg/kg	63	40-140	Q31684
C9-C18 Aliphatics	39	60	mg/kg	65	40-140	Q31684

Matrix Spike

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	QC Batch ID
209842 C11-C22 Aromatics	113.4	170	mg/kg	67	40-140	Q31684
C19-C36 Aliphatics	51.8	80	mg/kg	65	40-140	Q31684
C9-C18 Aliphatics	40.6	60	mg/kg	68	40-140	Q31684

Matrix Spike Duplicate

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
209842 C11-C22 Aromatics	118.24	170	mg/kg	70	40-140	4	0 - 50	Q31684
C19-C36 Aliphatics	51.6	80	mg/kg	65	40-140	0	0 - 50	Q31684
C9-C18 Aliphatics	40.3	60	mg/kg	67	40-140	1	0 - 50	Q31684

See Case Narrative



Full Service Analytical & Environmental Solutions
 449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
 Phone: 704/529-6364 • Fax: 704/525-0409

Client Company Name: Solutions-IES
 Report To/Contact Name: Sessica Dehart
 Reporting Address: 1601 Nansen Rd Raleigh, NC 27607

Phone: 919 873 1000 Fax (Yes) (No):
 Email: (No) Email Address: Dehart@Solutions-
 EDD Type: PDF Excel Other
 Site Location Name: Parcel 48 + 50
 Site Location Physical Address: Richmond County

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2 QUOTE # TO ENSURE PROPER BILLING:

Project Name: Richmond County 1st Closure
 Short Hold Analysis: (Yes) (No) UST Project: (Yes) (No)
 *Please ATTACH any project specific reporting (QC LEVEL I III IV) provisions and/or QC Requirements
 Invoice To: NCAT Beo Environmental Unit
 Address: Raleigh, NC

Purchase Order No./Billing Reference WRSS# 34438.1.1
 Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
 "Working Days" 6-9 Days Standard 10 days Pre-Approved
 Samples received after 15:00 will be processed next business day.
 Turnaround time is based on business days, excluding weekends and holidays.
 (SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

LAB USE ONLY

Samples INTACT upon arrival? YES NO N/A
 Received ON WET ICE? Temp 3.1
 PROPER PRESERVATIVES indicated?
 Received WITHIN HOLDING TIMES?
 CUSTODY SEALS INTACT?
 VOLATILES rec'd W/OUT HEADSPACE?
 PROPER CONTAINERS used?

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
 Certification: NELAC USACE FL NC
 SC OTHER N/A
 Water Chlorinated: YES NO
 Sample Iced Upon Collection: YES NO

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER		PRESERVATIVES	ANALYSES REQUESTED	REMARKS	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO. SIZE				
50-N-2	3/25/08	10:35	soil	11/5		none preformed Sodium bromide	FP1 VPI 8770 WPIE 8763		209845
50-S-2	3/25	10:25							209846
50-S	3/25	10:15							209847
50-N	3/25	10:05							209848
50-E	3/25	9:55							209849
50-W	3/25	9:50							209850

Sampler's Signature: Tim Parker Sampled By (Print Name): Tim Parker Affiliation: Solutions-IES
 Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By: (Signature) Sessica Dehart Date: 3/26/08 Military/Hours: 10:30
 Relinquished By: (Signature) Sessica Dehart Date: 3/26/08 Military/Hours: 17:00
 Relinquished By: (Signature) Sessica Dehart Date: 3/27/08 Military/Hours: 7:15
 Method of Shipment: Fed Ex UPS Hand-delivered Prism Field Service Other Go308809

Additional Comments:
 PRISM USE ONLY
 Site Arrival Time:
 Site Departure Time:
 Field Tech Fee:
 Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)



Full Service Analytical & Environmental Solutions

449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
Phone: 704/529-6384 • Fax: 704/525-0409

Client Company Name: Solutions - IES

Report To/Contact Name: Jessie Dechant

Reporting Address: 101 Navell Rd
Kalaheer, VA 27607

Phone: 919-873-1060 Fax (Yes) (No):

Email (Yes) (No) Email Address: Jdechant@Solutions-IES.com

EDD Type: PDF Excel Other

Site Location Name: Parcel 48 TSD

Site Location Physical Address: Richmond County

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2 QUOTE # TO ENSURE PROPER BILLING:

Project Name: Richmond County UST Closure

Short Hold Analysis: (Yes) (No) UST Project: (Yes) (No)

*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements

Invoice To: NC DOT be Environmental Unit

Address: Raleigh NC

Purchase Order No./Billing Reference

Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days

"Working Days" 6-9 Days Standard 10 days Rush Work Must Be Pre-Approved

Samples received after 15:00 will be processed next business day.

Turnaround time is based on business days, excluding weekends and holidays.

(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

LAB USE ONLY

YES NO N/A

Samples INTACT upon arrival?

Received ON WET ICE? Temp 3.1

PROPER PRESERVATIVES indicated?

Received WITHIN HOLDING TIMES?

CUSTOMER SEALS INTACT?

VOLATILES rec'd W/OUT HEADSPACE?

PROPER CONTAINERS used?

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NELAC USACE FL NC

Water Chlorinated: YES NO

Sample Iced Upon Collection: YES NO

ANALYSES REQUESTED

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER			PRESERVATIVES	REMARKS	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO.	SIZE			
SD-T2-1	3/24	14:25	Soil	6/10A	12		none/methanol		2091851
SD-PL-1		14:35							2091852
SD-PL-2		14:40							2091853
SD-T1-1		14:15							2091854
SD-T1-2		14:20							2091855
SD-T2-2		14:30							2091856
48-T1-1		15:00							2091857

Sampled By (Print Name) Tim Parker Affiliation: Solutions-IES

Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature]

Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature]

Relinquished By: (Signature) [Signature] Received By: (Signature) [Signature]

Method of Shipment: Hand-delivered UPS Fed Ex Other

NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH TAPE SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

Additional Comments: 3/26/08 10:50
3/26/08 12:02
3/27/08 7:15
COC Group No. 60303809

PRISM USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

PRISM USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

PRISM USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

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Mileage:

PRISM USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

APPENDIX E
PHOTOGRAPHS



Photograph 1 - Tanks 1 & 2



Photograph 2 - Removal of Tank 1



Photograph 3 – Removal of Tank 2



Photograph 4 – Excavation with standing groundwater



Photograph 5 – Excavation



Photograph 6 – Product Lines after removal



Photograph 7 – Tank 2 after removal



Photograph 8 – Site after backfill