

UST Closure Report

5 UST Closure Report

A UST Closure Report following the UST-12 format outlined below must be submitted to the appropriate regional office of the UST Section within thirty (30) days following completion of closure, **if the results of the UST closure investigation indicate that no soil contamination equal to or in exceedance of 10 mg/kg TPH, no groundwater contamination in exceedance of 2L, and no FREE PRODUCT are present.** (If contamination in exceedance of these limits is present, then initial response and abatement actions, followed by an Initial Abatement Action Report (Appendix A, p. 62) which incorporates the information required by the UST Closure Report format, are required within 90 days of release discovery.)

A. Site Information

1. Site Identification

- Date of Report: 4/30/08
- Facility I.D.: 3258 UST Incident Number (if known): N/A
- Site Name: Roy Barry Bostick Property
- Site Street Address: 3569 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): 35.030 Longitude (decimal degrees): 79.551

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: 3569 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: NA
- Estimated Quantity of Release: NA
- Cause of Release: NA
- Source of Release (Dispenser/Piping/UST): NA
- Sizes and contents of UST system(s) from which the release occurred): NA

**UNDERGROUND STORAGE TANK CLOSURE REPORT
PARCEL 48, ROY BARRY BOSTICK PROPERTY
3569 US HIGHWAY 1
HOFFMAN, RICHMOND COUNTY
NORTH CAROLINA, 28347
WBS ELEMENT: 34438.1.1
STATE PROJECT: R-2502 A**

Prepared for:

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

Prepared by

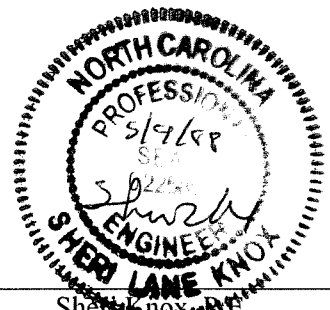
Solutions-IES, Inc.
1101 Nowell Road
Raleigh, NC 27607
www.solutions-ies.com

Solutions-IES Project No. 6000.08A2.NDOT

April 30, 2008



Carrie A. Ruhlman
Environmental Scientist



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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”
Appendix B	Site-Specific Health and Safety Plan
Appendix C	Tank Disposal Certificate
Appendix D	Laboratory Analytical Report and Chain-of-Custody Forms
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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. The services of Solutions-IES, Inc. (Solutions-IES) were retained by the NCDOT to collect closure samples and document closure of one underground storage tank (UST) at the Roy Barry Bostick Property, NCDOT Parcel 48, located at 3569 US Highway 1, 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 UST was in the proposed right-of-way and had to be removed before road construction could commence. This UST Closure Report (Report) documents the UST closure activities and has been prepared following the July 2007 *Underground Storage Tank Section Guidelines for Site Checks, Tank Closure, and Initial Response and Abatement* published by the UST Section, North Carolina Department of Environment and Natural Resources (NCDENR) Division of Waste Management (“*Guidelines*”). 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

Known tank owner and operator information can be found in **Table B-2**.

2.2 UST INFORMATION

Table B-1 summarizes the information known about the UST. The UST had a 250-gallon capacity and dimensions of approximately 2 feet (ft) by 4 ft. As illustrated by **Figure 2**, the UST area was located at the southwest corner of the building situated toward the front of the property facing US Highway 1.

2.3 NON-UST INFORMATION

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

2.4 RELEASE DESCRIPTION

According to the November 2007 Regional UST (RUST) database, no releases have been reported at this Site. A Preliminary Site Assessment (PSA) ¹ performed by Solutions-IES on August 22, 2006 did not identify petroleum impacts to the soil in the vicinity of the UST. However, petroleum impacts were identified near the boundary of the proposed right-of-way at the north end of the Site. Results from the closure sampling conducted during tank removal activities documented in this Report did not indicate petroleum impacts from the UST at the Site. The analytical results are discussed in **Section 4.5**.

2.5 SITE CHARACTERISTICS

According to information provided in a Limited Phase I Site Assessment ² conducted by S&ME in 1999, the buildings on the property were used by a towing company that performed intermittent vehicle maintenance and race car assembly. Reportedly, an aboveground storage tank was located north of the building and used to store waste oil. The building is currently unoccupied. **Figure 1** shows the Site location with respect to nearby roads and topographic landmarks. The Site is located at 3569 US Highway 1, on the north side of US Highway 1, approximately 300 ft west of Tilley Street in Richmond County.

A description of the surrounding properties is as follows:

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

2.6 HISTORICAL REGULATORY ACTIVITY SUMMARY

A review of the RUST database indicated facility identification number FA-3258 associated with this property. There were no incident numbers indicating historical releases associated with this Site. The database identifies the UST as orphaned. No other regulatory activity has been associated with this location.

¹ Solutions-IES, Inc. "Preliminary Site Assessment, Parcel # 48, Roy Barry Bostick Property, 3569 US Highway 1, Richmond County, North Carolina, WBS Element: 34438.1.1; NCDOT Project: R-2502A", September 25, 2006.

² S&ME, Inc. "Limited Phase I Environmental Site Assessment", February 5, 1999.

3.0 SITE CHECK REPORT

A site check summarizes the operating condition of the USTs in question if they remain in service. The UST at this Site was 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 submittal of 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 fieldwork and is included as **Appendix B**. Utilities were located by North Carolina One Call prior to initiation of field activities. The soil and tank removal contractor, Soil Solutions, Inc. (SSI) obtained a permit from the County Fire Marshal prior to mobilizing to the Site.

4.2 CLOSURE PROCEDURES

SSI of Winston-Salem, North Carolina was contracted by Solutions-IES to remove the USTs, and excavate and backfill as needed. On March 24, 2008, Solutions-IES and SSI mobilized to the site. The UST was located using the geophysical results from the PSA. The UST was uncovered and the Lower Explosive Limit (LEL) was confirmed as suitable prior to removing the tank. The tank was removed using a backhoe. One closure sample was collected from beneath the middle of the tank for laboratory analysis. **Figure 3** presents the sample location.

The UST removed from this Site was rusted with many holes. No visual stains or odor were noted in the soil during closure activities. The tank was properly disposed of by SSI. The UST pit was backfilled to ground surface with fill provided by SSI from an off-site source. Photographs of the UST and removal activities are provided in **Appendix E**; the Tank Disposal Certificate is provided in **Appendix C**.

4.3 RESIDUAL MATERIAL REMOVED

No residual liquid was pumped from the UST on this Site.

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.

4.5 CLOSURE INVESTIGATIONS

4.5.1 Field Screening of Soils

Soils were screened in the field using a Photovac Microfid flame ionization detector (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 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 and recorded in the field book. No elevated readings were observed at this Site. The FID reading of the sample submitted for laboratory analysis is 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 tank, one sample was collected from beneath the midpoint of the UST using a backhoe bucket. The soil sample was collected as grab samples and screened with the FID as described in **Section 4.5.1**.

The closure sample was transferred to laboratory-supplied glassware. The container was labeled with the sample location information, date, time of collection and requested analyses. The sample was 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

The collection of groundwater samples was not included in our scope of work. Groundwater was not encountered during tank closure activities. Surface water features were not 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 were 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 sample was 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 also contains results for NCDOT Parcel 50 in addition to Parcel 48.

The closure sample, 48-T1-1 contained 6.0 mg/kg TPH DRO. This concentration is below the NCDENR screening level of 10 mg/kg. There was no detection above laboratory reporting limits of TPH GRO in the sample collected.

5.0 FREE PRODUCT INVESTIGATION AND RECOVERY REPORT

Free product was not encountered during field activities.

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 CONCLUSIONS

One 250-gallon UST located at the Roy Barry Bostick property, NCDOT Parcel 48, was closed by removal on March 24, 2008. Solutions-IES personnel collected a closure sample from beneath the tank to determine whether or not a release had occurred from the UST, and to document permanent closure of the UST. No elevated volatile vapors were detected during field screening with the FID and no evidence of staining or odors was apparent. The closure sample collected from below the tank did not exceed the screening level. Therefore, no additional assessment is necessary associated with this UST closure.

TABLES

TABLE B-1
SITE HISTORY – UST SYSTEM INFORMATION
NCDOT Parcel 48 – Roy Barry Bostick Property
3569 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	#2 Fuel Oil	Unknown	1'	250	Single walled steel tank	2' x 4'	No Product Lines	Unknown	Permanently Closed 3/24/08	No

Note: UST ID Numbers correspond to UST locations on Figure 3

* 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 48 – Roy Barry Bostick Property
3569 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-3258
Name of Owner		Dates of Operation		
NCDOT by Permanent Easement		Unknown		
Street Address				
3569 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				
3569 US Hwy 1				
City	State	Zip	Telephone Number	
Hoffman	NC	28347	Unknown	

TABLE B-3A
SUMMARY OF FIELD SCREEN RESULTS
NCDOT Parcel 48 – Roy Barry Bostick Property
3569 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)
48-T1-1	3'	Tank Pit	Soil	ND

ND = Not detected.

TABLE B-3B
SUMMARY OF SOIL SAMPLING RESULTS
NCDOT Parcel 48 – Roy Barry Bostick Property
3569 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 Information					Total Petroleum Hydrocarbons	
Sample ID	Date Collected	Location	Depth (ft bgs)	Incident Phase	Diesel Range (mg/kg)	Gasoline Range (mg/kg)
48-T1-1	3/24/08	Tank Pit 1 – midpoint of tank	3'	Closure	6.0 J	<5.3

Notes:

Diesel Range analytical method = TPH Method 3545/8015MOD

Gasoline Range analytical method = TPH Method 5030/8015MOD

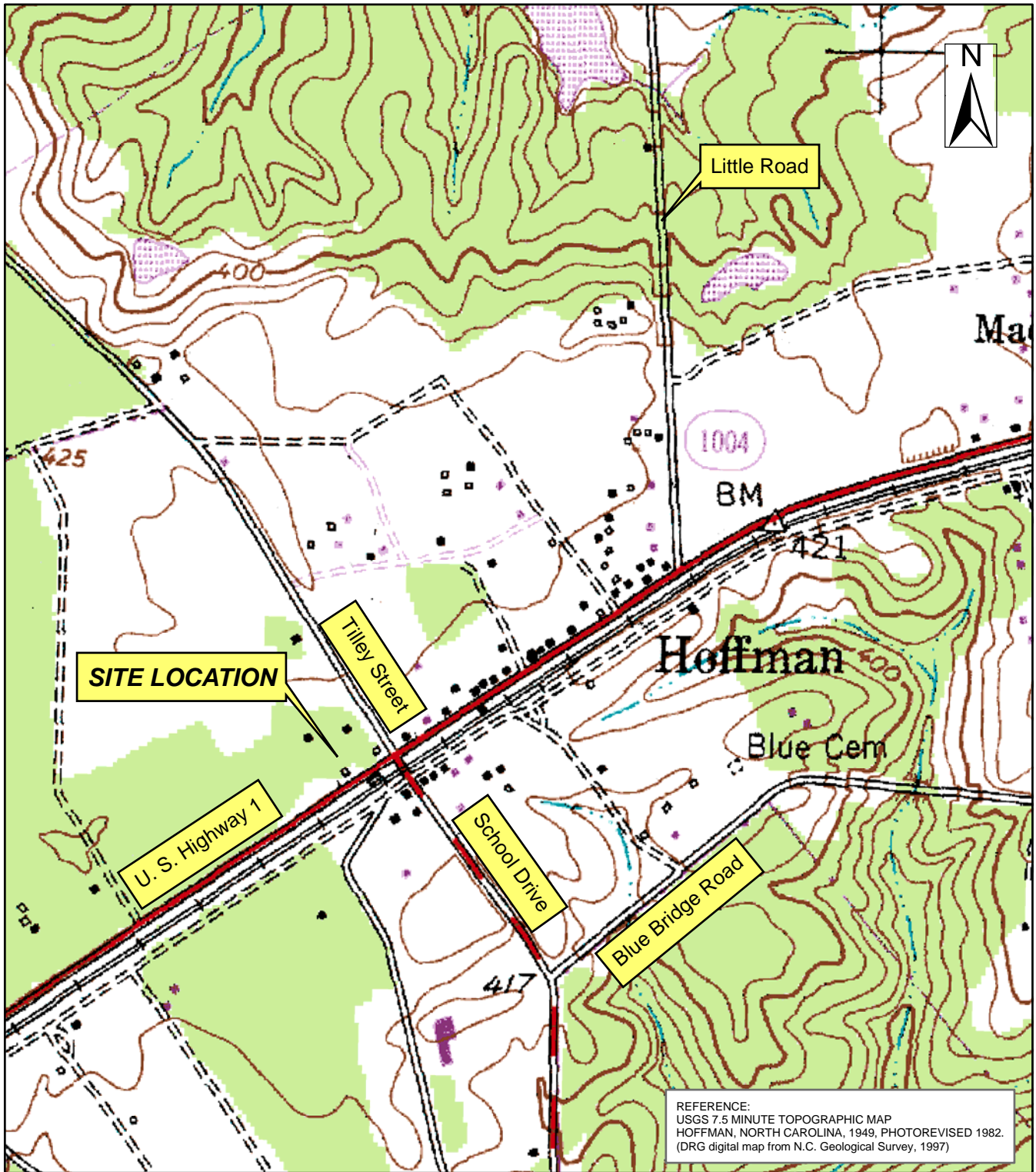
ft bgs = feet below ground surface

J = the analyte was positively identified but the value is estimated below the reporting limit

mg/kg - milligrams per kilogram

Bold text indicates analyte was detected above the laboratory reporting limit

FIGURES



1:10,000

SITE LOCATION MAP
 PARCEL 48
 ROY BARRY BOSTICK 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

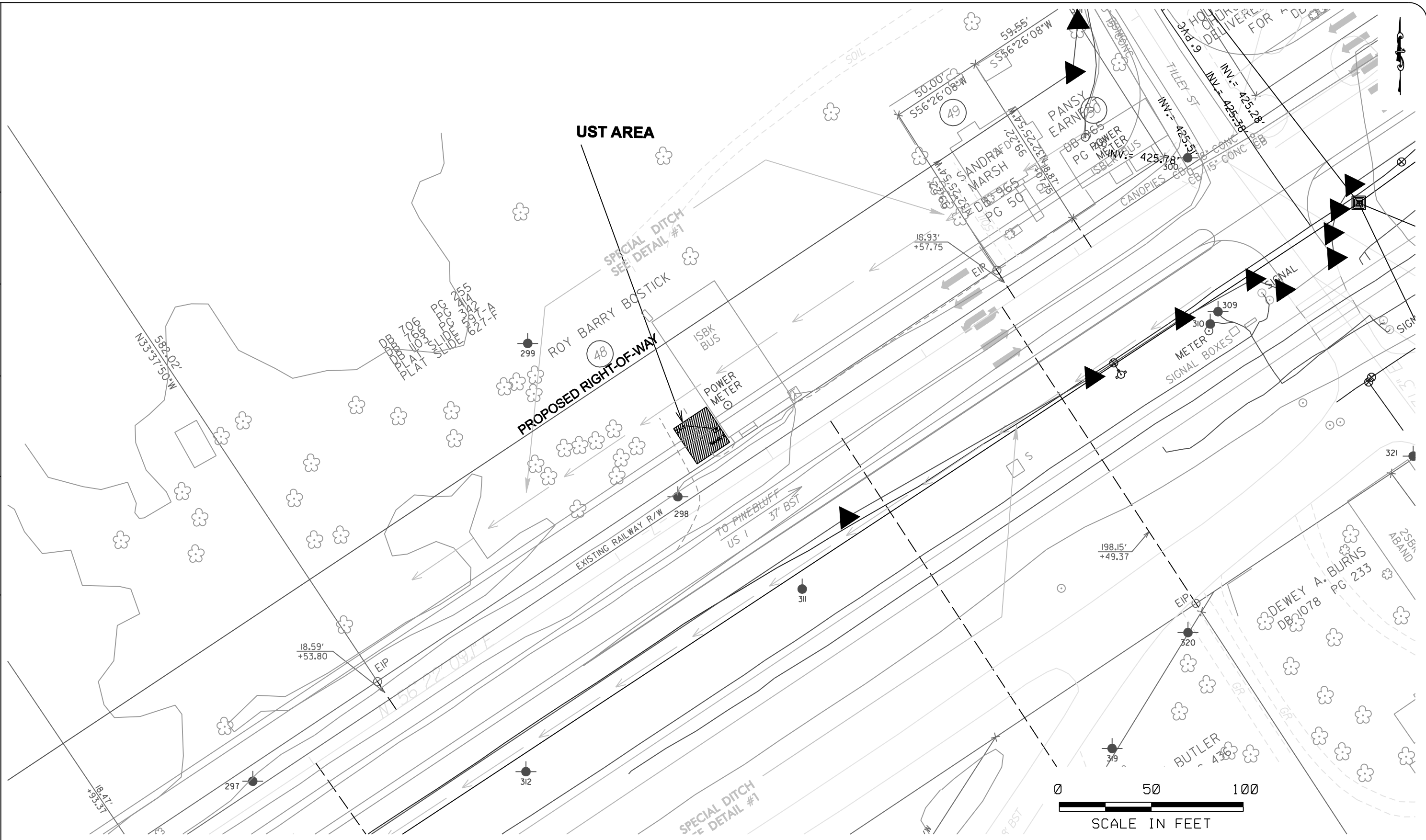
CHECKED BY
JD

PROJECT MANAGER
SK

DATE
APRIL 2008

FILE
Figure2.dgn

FILE



NOTE:

1. BASEMAP PROVIDED BY NCDOT
2. LOCATIONS ARE APPROXIMATE

PROJECT NUMBER
6000.08AZ.NDOT

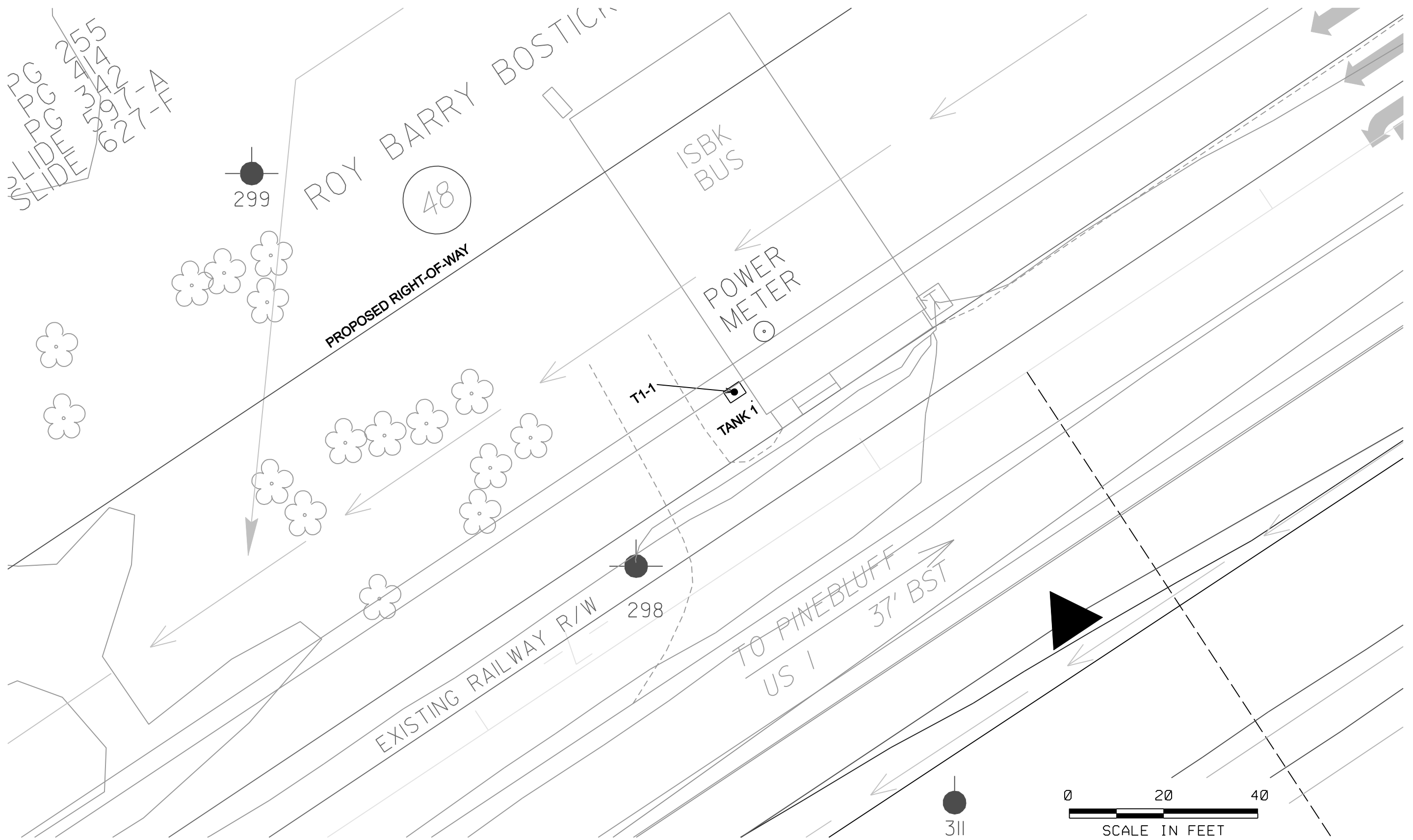
DRAFTER
JC

CHECKED BY
JD

PROJECT MANAGER
SK

DATE
APRIL 2008

FILE
Figure3.dgn



2) LIDG 255
 SLIDE 344
 5342
 5977-A
 6277-A

NOTE:
 1. BASEMAP PROVIDED BY NCDOT
 2. LOCATIONS ARE APPROXIMATE

NCDOT PARCEL 48 - ROY BOSTICK PROPERTY
 3569 US HIGHWAY 1
 HOFFMAN, RICHMOND COUNTY, NORTH CAROLINA
 WBS ELEMENT: 34438.1.I
 STATE PROJECT: R-2502A

CLOSURE SAMPLE LOCATION

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-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
3569 US Highway 1

Facility ID # (If known)

City County
Hoffman Richmond

Street Address
3569 US Highway 1

State Zip Code
NC 28347

City County Zip Code
Hoffman Richmond 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	250	2' x 4'	Gasoline, Ga	unknown	03/24/08		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<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"/>

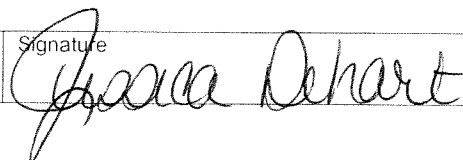
* If the tank owner address is different from the one listed in Section I., then enter the street address, city, state, zip code and telephone no. below:

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 Roy Barry Bostick Property - Parcel #48		
Street Address 3569 US Hwy-1		Facility ID # (If known) Unknown		
City Hoffman	County Richmond	Street Address 3569 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"> Contact local fire marshal. Plan entire closure event. Conduct Site Soil Assessment. 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"> Provide a sketch locating piping, tanks and soil sampling locations. Submit a closure report in the format of UST-12 (including the form UST-2) within thirty (30) days following the site investigation. If a release from the tanks has occurred, the site assessment portion of the tank closure must be conducted under the supervision of | <ol style="list-style-type: none"> 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. 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

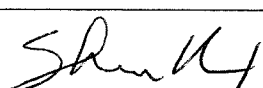
Tank ID No.	Size in Gallons	Last Contents	Proposed Activity		
			Closure		Change-In-Service New Contents Stored
			Removal	Abandonment in Place *	
1	1000	Petroleum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>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

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)

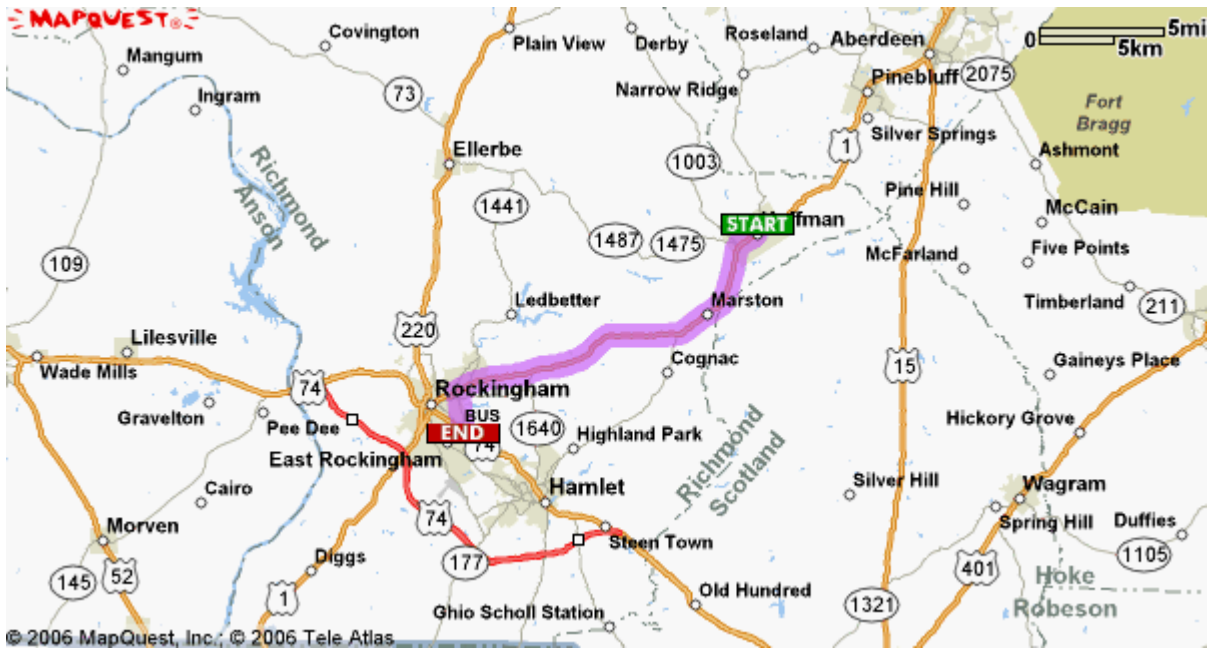
EMS/FIRE/POLICE: 911

SOLUTIONS-IES HEALTH AND SAFETY OFFICER:

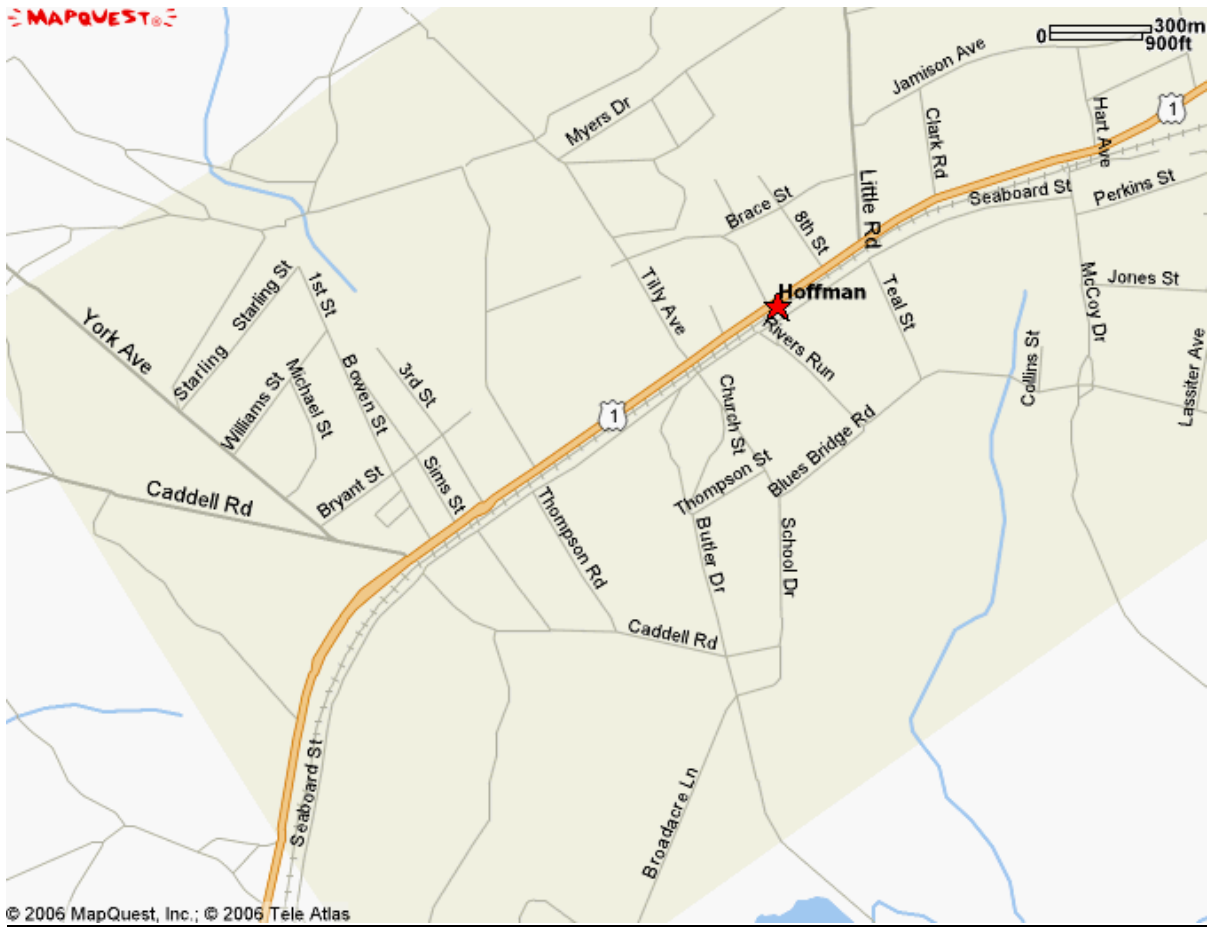
Walt Beckwith, Office (919) 873-1060; Mobile (919) 345-1310

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

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

TANK DISPOSAL CERTIFICATE



SOIL SOLUTIONS

TANK DISPOSAL CERTIFICATE

Tank Owner: NCDOT (Parcel 48)

Site Address: 3569 US-1
Hoffman, NC

Tank Description:

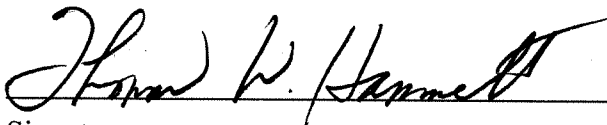
<u>Tank Number</u>	<u>Size of Tank</u>	<u>Contents</u>
1	275 Gallons	#2 Fuel Oil

Transporter: Soil Solutions, Inc.

SSI Project #: 030808

Disposal Certification:

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



Signature

Thomas W. Hammett
Vice President
Soil Solutions, Inc.



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

Project Manager: Angela D. Overcash

Signature:

Robbi A. Jones

Signature:

Robbi Jones for A. Overcash

Review Date: 04/15/08

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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449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



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
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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-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 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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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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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
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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

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 Attn: Jessica Dehart
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 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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 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-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
 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
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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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
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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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
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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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
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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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
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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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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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



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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 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-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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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
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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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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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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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
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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



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
<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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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

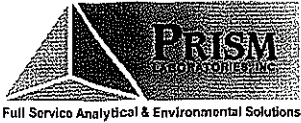
Client Sample ID: 50-E
 Prism Sample ID: 209849
 COC Group: G0308809
 Time Collected: 03/25/08 9:55
 Time Submitted: 03/27/08 7:15

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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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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Project ID: NC DOT - Richmond
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 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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 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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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
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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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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 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-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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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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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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04/15/08

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 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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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
							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

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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-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
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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-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
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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-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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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-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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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
Percent Solids Determination									
Percent Solids	94.7	%			1	SM2540 G	03/31/08 13:30	mbarber	
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
		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



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

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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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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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	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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NC Certification No. 402
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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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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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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
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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 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

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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

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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Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



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

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
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
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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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

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



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

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

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 WBS# 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	0-1A TL	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

Pressed Down Firmly - 3 COPIES

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

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

Additional Comments: CO308809

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

Kalash NC 27107

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 + SD

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 Remedial Unit

Address: Releigh 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

PRESERVATIVES

SAMPLE CONTAINER

MATRIX (SOIL, WATER OR SLUDGE)

TIME COLLECTED

DATE COLLECTED

CLIENT SAMPLE DESCRIPTION

REMARKS

THD 020

none/methanol

TYPE NO. SIZE

Soil

14:25

3/24

SD-T2-1

PRISM LAB ID NO.

2091851

2091852

2091853

2091854

2091855

2091856

2091857

PRESS DOWN FIRMLY - 3 COPIES

PRISM USE ONLY

Site Arrival Time:

Site Departure Time:

Field Tech Fee:

Mileage:

Additional Comments:

Military Hours

Date

Date

Date

DOC Group No.

60303809

Affiliation: Solutions-IES

Sampled By (Print Name) Tim Parker

Sampler's Signature Tim Parker

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)

Received By: (Signature)

Received By: (Signature)

Received For Prism Laboratories By:

Method of Shipment: 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.

Fed Ex UPS Hand-delivered Prism Field Service Other

NPDES: NC SC NC SC NC SC

GROUNDWATER: NC SC NC SC

DRINKING WATER: NC SC NC SC

SOLID WASTE: NC SC NC SC

RCRA: NC SC NC SC

CERCLA: NC SC NC SC

OTHER: NC SC NC SC

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

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name:	<u>N. C. Department of Transportation</u>	Laboratory Name:	<u>Prism Laboratories, Inc.</u>
Project Name:	<u>NC DOT - Richmond County UST</u>	NC Certification # (Lab):	<u>402</u>
Site Location:	<u>Richmond County, NC</u>	Sample Matrix:	<u>Soil</u>

Sample Information and Analytical Results						
Method for Ranges: MADEP VPH						
VPH Surrogate Standards: Aliphatic - 2,5-Dibromotoluene / Aromatic - 2,5-Dibromotoluene						
Sample Identification:		209845	209846	209847	209848	209849
Collection Option (for soil*):		1	1	1	1	1
Date Collected:		03/25/08	03/25/08	03/25/08	03/25/08	03/25/08
Date Received:		03/27/08	03/27/08	03/27/08	03/27/08	03/27/08
Date Extracted:		04/05/08	04/05/08	04/05/08	04/05/08	04/05/08
Date Analyzed:		04/05/08	04/05/08	04/05/08	04/05/08	04/05/08
% Dry Solids:		95.9	95.2	94.2	83.0	95.3
Dilution Factor:		1	1	1	1	1
Hydrocarbon Ranges in mg/kg:		Sample Results	Sample Results	Sample Results	Sample Results	Sample Results
C5-C8 Aliphatics		<5.2	<5.3	<5.3	<6.0	<5.2
C9-C12 Aliphatics		<5.2	<5.3	<5.3	<6.0	<5.2
C9-C10 Aromatics		<5.2	<5.3	<5.3	<6.0	<5.2
Blank:	C5-C8 Aliphatics	<5.0	<5.0	<5.0	<5.0	<5.0
	C9-C12 Aliphatics	<5.0	<5.0	<5.0	<5.0	<5.0
	C9-C10 Aromatics	<5.0	<5.0	<5.0	<5.0	<5.0
RL:	C5-C8 Aliphatics	5.2	5.3	5.3	6.0	5.2
	C9-C12 Aliphatics	5.2	5.3	5.3	6.0	5.2
	C9-C10 Aromatics	5.2	5.3	5.3	6.0	5.2
MDL:	C5-C8 Aliphatics	1.0	1.0	1.0	1.2	1.0
	C9-C12 Aliphatics	1.6	1.6	1.6	1.9	1.6
	C9-C10 Aromatics	0.031	0.032	0.032	0.036	0.031
Surrogate Acceptance Range:	Blank	70-130 %	70-130 %	70-130 %	70-130 %	70-130 %
Aliphatic Surrogate % Rec. - FID:	93	110	107	109	105	112
Aromatic Surrogate % Rec. - PID:	119	117	115	119	112	125

- * Option 1 = Established fill line on vial
- * Option 2 = Sampling device (indicate brand, e.g., EnCore TM)
- * Option 3 = Field weight of soil

MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank or Trip Blank
(whichever is higher - indicate type)

Were all performance/acceptance standards for required QA/QC procedures achieved? **YES** No - Details Attached

Were any significant modifications to the VPH method made? **NO** Yes - Details Attached

Comments: VPH trip blank was not submitted to the laboratory.

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name:	<u>N. C. Department of Transportation</u>	Laboratory Name:	<u>Prism Laboratories, Inc.</u>
Project Name:	<u>NC DOT - Richmond County UST</u>	NC Certification # (Lab):	<u>402</u>
Site Location:	<u>Richmond County, NC</u>	Sample Matrix:	<u>Soil</u>

Sample Information and Analytical Results			
Method for Ranges: MADEP VPH			
VPH Surrogate Standards: Aliphatic - 2,5-Dibromotoluene / Aromatic - 2,5-Dibromotoluene			
Sample Identification:		209850	
Collection Option (for soil*):		1	
Date Collected:		03/25/08	
Date Received:		03/27/08	
Date Extracted:		04/05/08	
Date Analyzed:		04/05/08	
% Dry Solids:		81.7	
Dilution Factor:		1	
Hydrocarbon Ranges in mg/kg:		Sample Results	
C5-C8 Aliphatics		<6.1	
C9-C12 Aliphatics		<6.1	
C9-C10 Aromatics		<6.1	
Blank:	C5-C8 Aliphatics	<5.0	
	C9-C12 Aliphatics	<5.0	
	C9-C10 Aromatics	<5.0	
RL:	C5-C8 Aliphatics	6.1	
	C9-C12 Aliphatics	6.1	
	C9-C10 Aromatics	6.1	
MDL:	C5-C8 Aliphatics	1.2	
	C9-C12 Aliphatics	1.9	
	C9-C10 Aromatics	0.037	
Surrogate Acceptance Range:	Blank	70-130 %	
Aliphatic Surrogate % Rec. - FID:	93	105	
Aromatic Surrogate % Rec. - PID:	119	116	

- * Option 1 = Established fill line on vial
- * Option 2 = Sampling device (indicate brand, e.g., EnCore TM)
- * Option 3 = Field weight of soil

MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank or Trip Blank
(whichever is higher - indicate type)

Were all performance/acceptance standards for required QA/QC procedures achieved? **YES** No - Details Attached

Were any significant modifications to the VPH method made? **NO** Yes - Details Attached

Comments: VPH trip blank was not submitted to the laboratory.

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: N. C. Department of Transportation Laboratory Name: Prism Laboratories, Inc.
 Project Name: NC DOT - Richmond County UST NC Certification # (Lab): 402
 Site Location: Richmond County, NC Sample Matrix: Soil

Sample Information and Analytical Results						
Method for Ranges: MADEP EPH						
EPH Surrogate Standards: Aliphatic - 1-Chloro-octadecane / Aromatic - o-Terphenyl						
EPH Fractionation Surrogates: #1 - 2-Bromonaphthalene / #2 - Fluorobiphenyl						
Sample Identification:		209845	209846	209847	209848	209849
Date Collected:		03/25/08	03/25/08	03/25/08	03/25/08	03/25/08
Date Received:		03/27/08	03/27/08	03/27/08	03/27/08	03/27/08
Date Extracted:		04/08/08	04/08/08	04/08/08	04/08/08	04/08/08
Date Analyzed:		04/13/08	04/13/08	04/13/08	04/13/08	04/13/08
% Dry Solids:		95.9	95.2	94.2	83.0	95.3
Dilution Factor:		1	1	1	1	1
Hydrocarbon Ranges in mg/kg:		Sample Results	Sample Results	Sample Results	Sample Results	Sample Results
C9-C18 Aliphatics		<10	<10	<11	<12	<10
C19-C36 Aliphatics		<10	<10	<11	<12	<10
C11-C22 Aromatics		<10	<10	<11	<12	<10
Blank:	C9-C18 Aliphatics	<10	<10	<10	<10	<10
	C19-C36 Aliphatics	<10	<10	<10	<10	<10
	C11-C22 Aromatics	<10	<10	<10	<10	<10
RL:	C9-C18 Aliphatics	10	10	11	12	10
	C19-C36 Aliphatics	10	10	11	12	10
	C11-C22 Aromatics	10	10	11	12	10
MDL:	C9-C18 Aliphatics	0.94	0.93	0.98	1.1	0.93
	C19-C36 Aliphatics	1.4	1.4	1.5	1.6	1.4
	C11-C22 Aromatics	1.8	1.8	1.9	2.1	1.8
Surrogate Acceptance Range:	Blank	40-140 %	40-140 %	40-140 %	40-140 %	40-140 %
Aliphatic Surrogate % Rec.:	47	47	45	40	43	41
Aromatic Surrogate % Rec.:	53	76	74	70	75	76
Fractionation Surrogate Accep. Range:	Blank	40-140 %	40-140 %	40-140 %	40-140 %	40-140 %
Frac. Surrogate #1 % Rec.:	41	133	124	126	126	114
Frac. Surrogate #2 % Rec.:	69	111	104	105	103	98

MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank

Were all performance/acceptance standards for required QA/QC procedures achieved?

YES No - Details Attached

Was blank correction applied as a significant modification of the method?

Yes **NO**

Were any significant modifications to the EPH method made?

NO Yes - Details Attached

Comments:

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name:	<u>N. C. Department of Transportation</u>	Laboratory Name:	<u>Prism Laboratories, Inc.</u>
Project Name:	<u>NC DOT - Richmond County UST</u>	NC Certification # (Lab):	<u>402</u>
Site Location:	<u>Richmond County, NC</u>	Sample Matrix:	<u>Soil</u>

Sample Information and Analytical Results			
Method for Ranges: MADEP EPH			
EPH Surrogate Standards: Aliphatic - 1-Chloro-octadecane / Aromatic - o-Terphenyl			
EPH Fractionation Surrogates: #1 - 2-Bromonaphthalene / #2 - Fluorobiphenyl			
Sample Identification:		209850	
Date Collected:		03/25/08	
Date Received:		03/27/08	
Date Extracted:		04/08/08	
Date Analyzed:		04/14/08	
% Dry Solids:		81.7	
Dilution Factor:		1	
Hydrocarbon Ranges in mg/kg:		Sample Results	
C9-C18 Aliphatics		<12	
C19-C36 Aliphatics		<12	
C11-C22 Aromatics		<12	
Blank:	C9-C18 Aliphatics	<10	
	C19-C36 Aliphatics	<10	
	C11-C22 Aromatics	<10	
RL:	C9-C18 Aliphatics	12	
	C19-C36 Aliphatics	12	
	C11-C22 Aromatics	12	
MDL:	C9-C18 Aliphatics	1.1	
	C19-C36 Aliphatics	1.6	
	C11-C22 Aromatics	2.1	
Surrogate Acceptance Range:	Blank	40-140 %	
Aliphatic Surrogate % Rec.:	47	40	
Aromatic Surrogate % Rec.:	53	71	
Fractionation Surrogate Accep. Range:	Blank	40-140 %	
Frac. Surrogate #1 % Rec.:	41	117	
Frac. Surrogate #2 % Rec.:	69	100	

MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank

Were all performance/acceptance standards for required QA/QC procedures achieved?	YES	No - Details Attached
Was blank correction applied as a significant modification of the method?	Yes	NO
Were any significant modifications to the EPH method made?	NO	Yes - Details Attached

Comments:

APPENDIX E
PHOTOGRAPHS



Photograph 1 – Tank removal



Photograph 2 – Tank