SUMMARY REPORT 325 ASH STREET (FORMERLY 332 ASH STREET) LAUREL BAY MILITARY HOUSING AREA MARINE CORPS AIR STATION BEAUFORT BEAUFORT, SC

> Revision: 0 Prepared for:

Department of the Navy Naval Facilities Engineering Command, Mid-Atlantic 9324 Virginia Avenue Norfolk, Virginia 23511-3095

and



Naval Facilities Engineering Command Atlantic 9324 Virginia Avenue Norfolk, Virginia 23511-3095

**JUNE 2021** 

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9324 Virginia Avenue Norfolk, Virginia 23511-3095

**Prepared by:** 



CDM - AECOM Multimedia Joint Venture 10560 Arrowhead Drive, Suite 500 Fairfax, Virginia 22030

Contract Number: N62470-14-D-9016 CTO WE52 JUNE 2021



Summary Report 325 Ash Street (Formerly 332 Ash Street) Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort June 2021

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#### **List of Acronyms**

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
СТО	Contract Task Order
COPC	constituents of potential concern
ft	feet
IDIQ	Indefinite Delivery, Indefinite Quantity
IGWA	Initial Groundwater Assessment
JV	Joint Venture
LBMH	Laurel Bay Military Housing
MCAS	Marine Corps Air Station
NAVFAC Mid-Lant	Naval Facilities Engineering Command Mid-Atlantic
NFA	No Further Action
PAH	polynuclear aromatic hydrocarbon
QAPP	Quality Assurance Program Plan
RBSL	risk-based screening level
SCDHEC	South Carolina Department of Health and Environmental Control
Site	LBMH area at MCAS Beaufort, South Carolina
UST	underground storage tank
VISL	vapor intrusion screening level



#### **1.0 INTRODUCTION**

The CDM - AECOM Multimedia Joint Venture (JV) was contracted by the Naval Facilities Engineering Command, Mid-Atlantic (NAVFAC Mid-Lant) to provide reporting services for the heating oil underground storage tanks (USTs) located in Laurel Bay Military Housing (LBMH) area at the Marine Corps Air Station (MCAS) Beaufort, South Carolina (Site). This work has been awarded under Contract Task Order (CTO) WE52 of the Indefinite Delivery, Indefinite Quantity (IDIQ) Multimedia Environmental Compliance Contract (Contract No. N62470-14-D-9016).

As of January 2014, the LBMH addresses were re-numbered to comply with the E-911 emergency response addressing system; however, in order to remain consistent with historical sampling and reporting for LBMH area, the residences will continue to be referenced with their original address numbers in sample nomenclature and reporting documents.

This report summarizes the results the environmental investigation activities associated with the storage of home heating oil and the potential release of petroleum constituents at the referenced property. Based on the results of the investigation, a No Further Action (NFA) determination has been made by the South Carolina Department of Health and Environmental Control (SCDHEC) for 325 Ash Street (Formerly 332 Ash Street). This NFA determination indicates that there are no unacceptable risks to human health or the environment for the petroleum constituents associated with the home heating oil USTs. The following information is included in this report:

- Background information;
- Sampling activities and results; and
- A determination of the property status.

#### **1.1 Background Information**

The LBMH area is located approximately 3.5 miles west of MCAS Beaufort. The area is approximately 970 acres in size and serves as an enlisted and officer family housing area. The area is configured with single family and duplex residential structures, and includes recreation, open space, and community facilities. The community includes approximately 1,300 housing units, including legacy Capehart style homes and newer duplex style homes. The housing area



is bordered on the west by salt marshes and the Broad River, and to the north, east and south by uplands. Forested areas lie along the northern and northeastern borders.

Capehart style homes within the LBMH area were formerly heated using heating oil stored in USTs at each residence. There were 1,100 Capehart style housing units in the LBMH area. The newer duplex homes within the LBMH area never utilized heating oil tanks. Heating oil has not been used at Laurel Bay since the mid-1980s. As was the accepted practice at the time, USTs were drained, filled with dirt, capped, and left in place when they were removed from service. Residential USTs are not regulated in the State of South Carolina (i.e., there are no federal or state laws governing installation, management, or removal).

In 2007, MCAS Beaufort began a voluntary program to remove the unregulated, residential USTs and conduct sampling activities to determine if, and to what extent, petroleum constituents may have impacted the surrounding environment. MCAS Beaufort coordinated with SCDHEC to develop removal procedures that were consistent with procedural requirements for regulated USTs. All tank removal activities and follow-on actions are conducted in coordination with SCDHEC. To date, all known USTs have been removed from all residential properties within the LBMH area.

#### **1.2 UST Removal and Assessment Process**

During the UST removal process, a soil sample was collected from beneath the UST excavations (approximately 4 to 6 feet [ft] below ground surface [bgs]) and analyzed for a predetermined list of constituents of potential concern (COPCs) associated with the petroleum compounds found in home heating oil. These COPCs, derived from the *Quality Assurance Program Plan (QAPP) for the Underground Storage Tank Management Division, Revision 3.1* (SCDHEC, 2016) and the *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service,* (SCDHEC, 2018), are as follows:

- benzene, toluene, ethylbenzene, and xylenes (BTEX),
- naphthalene, and
- five select polynuclear aromatic hydrocarbon (PAHs): benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and dibenz(a,h)anthracene.

Soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form. In accordance with SCDHEC's *QAPP for the UST Management* 



*Division* (SCDHEC, 2016), the soil screening levels consists of SCDHEC risk-based screening levels (RBSLs). It should be noted that the RBSLs for select PAHs were revised in Revision 2.0 of the QAPP (SCDHEC, 2013) and were revised again in Revision 3.0 (SCDHEC, 2015). The screening levels used for evaluation at each site were those levels that were in effect at the time of reporting and review by SCDHEC.

The results of the soil sampling at each former UST location were used to determine if a potential for groundwater contamination exists (i.e., soil results greater than RBSLs) and subsequently to select properties for follow-up initial groundwater assessment (IGWA) sampling. The results of the IGWA sampling (if necessary) are used to determine the presence or absence of the aforementioned COPCs in groundwater and identify whether former UST locations will require additional delineation of COPCs in groundwater. In order to delineate the extent of impact to groundwater, permanent wells are installed and a sampling program is established for those former UST locations where IGWA sampling has indicated the presence of COPCs in excess of the SCDHEC RBSLs for groundwater. Groundwater analytical results are also compared to the site specific groundwater vapor intrusion screening levels (VISLs) to evaluate the potential for vapor intrusion and the necessity for an investigation associated with this media. A multi-media investigation selection process tree, applicable to the LBMH UST investigations, is presented as Appendix A.

#### 2.0 SAMPLING ACTIVITIES AND RESULTS

The following section presents the sampling activities and associated results for 325 Ash Street (Formerly 332 Ash Street). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 332 Ash Street* (MCAS Beaufort, 2011). The UST Assessment Report is provided in Appendix B. Details regarding the IGWA sampling activities at this site are provided in the *Initial Groundwater Investigation Report – November and December 2015* (Resolution Consultants, 2016). The laboratory report that includes the pertinent IGWA analytical results for this site is presented in Appendix C.

#### 2.1 UST Removal and Soil Sampling

On August 8, 2011, a single 280 gallon heating oil UST was removed from the front landscaped bed area adjacent to the driveway at 325 Ash Street (Formerly 332 Ash Street). The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). The UST was removed, cleaned, and shipped offsite for recycling. There was no visual evidence (i.e.,



staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depth to the base of the UST was 5'5" bgs and a single soil sample was collected from that depth. The sample was collected from the fill port side of the former UST to represent a worst case scenario.

Following UST removal, a soil sample was collected from the base of the excavation and shipped to an offsite laboratory for analysis of the petroleum COPCs. Sampling was performed in accordance with applicable South Carolina regulation R.61-92, Part 280 (SCDHEC, 2017) and assessment guidelines.

#### 2.2 Soil Analytical Results

A summary of the laboratory analytical results and SCDHEC RBSLs is presented in Table 1. A copy of the laboratory analytical data report is included in the UST Assessment Report presented in Appendix B. The laboratory analytical data report includes the soil results for the additional PAHs that were analyzed, but do not have associated RBSLs.

The soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form (Appendix B). The results of the soil sampling at the former UST location were used by MCAS Beaufort, in consultation with SCDHEC, to determine a path forward (i.e., additional sampling or NFA) for the property. The soil results collected from 325 Ash Street (Formerly 332 Ash Street) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated July 1, 2015, SCDHEC requested an IGWA for 325 Ash Street (Formerly 332 Ash Street) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix D.

#### 2.3 Groundwater Sampling

On November 10, 2015, a temporary monitoring well was installed at 325 Ash Street (Formerly 332 Ash Street), in accordance with the South Carolina Well Standards and Regulations (R.61-71.H-I, updated June 24, 2016). In order to provide data that can be used to determine whether COPCs are migrating to underlying groundwater, the monitoring well was placed in the same general location as the former heating oil UST. The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). Further details are provided in the *Initial Groundwater Investigation Report – November and December 2015* (Resolution Consultants, 2016).



The sampling strategy for this phase of the investigation required a one-time sampling event of the temporarily installed monitoring well. Following well installation and development, groundwater samples were collected using low-flow methods and shipped to an offsite laboratory for analysis of the petroleum COPCs. Upon completion of groundwater sampling, the temporary well was abandoned in accordance with the South Carolina Well Standards and Regulations R.61-71 (SCDHEC, 2016). Field forms are provided in the *Initial Groundwater Investigation Report – November and December 2015* (Resolution Consultants, 2016).

#### 2.4 Groundwater Analytical Results

A summary of the laboratory analytical results and SCDHEC RBSLs is presented in Table 2. A copy of the laboratory analytical data report is included in Appendix C.

The groundwater results collected from 325 Ash Street (Formerly 332 Ash Street) were less than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 2), which indicated that the groundwater was not impacted by COPCs associated with the former UST at concentrations that present a potential risk to human health and the environment.

#### 3.0 **PROPERTY STATUS**

Based on the analytical results for groundwater, SCDHEC made the determination that NFA was required for 325 Ash Street (Formerly 332 Ash Street). This NFA determination was obtained in a letter dated June 8, 2016. SCDHEC's NFA letter is provided in Appendix D.

#### 4.0 **REFERENCES**

- Marine Corps Air Station Beaufort, 2011. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 332 Ash Street, Laurel Bay Military Housing Area*, December 2011.
- Resolution Consultants, 2016. *Initial Groundwater Investigation Report November and December 2015 for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, April 2016.



- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2013. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 2.0*, April 2013.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2015. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.0*, May 2015.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2016. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.1*, February 2016.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2017. *R.61-92, Part 280, Underground Storage Tank Control Regulations,* March 2017.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2018. *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service*, March 2018.
- South Carolina Department of Health and Environmental Control Bureau of Water, 2016. *R.61-71, Well Standards*, June 2016.

Tables



# Table 1Laboratory Analytical Results - Soil325 Ash Street (Formerly 332 Ash Street)Laurel Bay Military Housing AreaMarine Corps Air Station BeaufortBeaufort, South Carolina

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Results Sample Collected 08/08/11		
Volatile Organic Compounds Analyzed	d by EPA Method 8260B (mg/kg)			
Benzene	0.003	ND		
Ethylbenzene	1.15	0.00922		
Naphthalene	0.036	0.0560		
Toluene	0.627	ND		
Xylenes, Total	13.01	0.00670		
Semivolatile Organic Compounds Ana	lyzed by EPA Method 8270D (mg/kg)			
Benzo(a)anthracene	0.66	8.57		
Benzo(b)fluoranthene	0.66	3.26		
Benzo(k)fluoranthene	0.66	3.70		
Chrysene	0.66	5.55		
Dibenz(a,h)anthracene	0.66	0.407		

Notes:

<sup>(1)</sup> South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.0 and 3.1 (SCDHEC, May 2015 and SCDHEC, February 2016) and the Underground Storage Tank Assessment Guidelines (SCDHEC, February 2006).

Bold font indicates the analyte was detected.

Bold font and shading indicates the concentration exceeds the SCDHEC RBSL.

EPA - United States Environmental Protection Agency

mg/kg - milligrams per kilogram

ND - not detected at the reporting limit (or method detection limit if shown on the laboratory report). The soil laboratory report is provided in Appendix B.

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

# Table 2Laboratory Analytical Results - Groundwater325 Ash Street (Formerly 332 Ash Street)Laurel Bay Military Housing AreaMarine Corps Air Station BeaufortBeaufort, South Carolina

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Site-Specific Groundwater VISLs (µg/L) <sup>(2)</sup>	Results Sample Collected 11/10/15
Volatile Organic Compounds Analyzed	by EPA Method 8260B (µg	/L)	
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	0.27
Naphthalene	25	29.33	ND
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	ND
Semivolatile Organic Compounds Ana	lyzed by EPA Method 8270	) (µg/L)	
Benzo(a)anthracene	10	NA	0.49
Benzo(b)fluoranthene	10	NA	0.34
Benzo(k)fluoranthene	10	NA	0.24
Chrysene	10	NA	0.37
Dibenz(a,h)anthracene	10	NA	0.16

#### Notes:

<sup>(1)</sup> South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.1 (SCDHEC, February 2016).

<sup>(2)</sup> Site-specific groundwater VISLs were calculated using the EPA JE Model Spreadsheets (Version 3.1, February 2004) and conservative modeling inputs representative of a small single-story house with an 8 foot ceiling. Site-specific groundwater VISLs were developed based on a target risk level of 1x10<sup>-6</sup>, a target hazard quotient of 1 (per target organ), and a default residential exposure scenario, assuming exposure for 24 hours/day, 350 days/year, for 26 years. Modeling was performed for a range of depths to groundwater for application as appropriate in different areas of the Laurel Bay Military Housing Area. The most conservative levels are presented for comparison. Refer to Appendix H of the Uniform Federal Policy Sampling Analysis and Sampling Plan for Vapor Media, Revision 4 (Resolution Consultants, April 2017) for additional information.

Bold font indicates the analyte was detected.

Bold font and shading indicates the concentration exceeds the SCDHEC RBSL and/or the Site-Specific Groundwater VISL.

EPA - United States Environmental Protection Agency

JE - Johnson & Ettinger

NA - Not Applicable

ND - not detected at the reporting limit (or method detection limit if shown on the laboratory report). The groundwater laboratory report is provided in Appendix C.

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

µg/L - micrograms per liter

VISL - Vapor Intrusion Screening Level

Appendix A Multi-Media Selection Process for LBMH





#### **Appendix A - Multi-Media Selection Process for LBMH**

Appendix B UST Assessment Report



Attachment 1

#### South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank (UST) Assessment Report

Date Received State Use Only	Only Only	
		Columbia, South Carolina 29201 Telephone (803) 896-7957
KELEIVE!)		
DEC 0 8 2011		
ST DHEC - Euraau of Land & Waste Management		
	I. OWNERSHI	P OF UST (S)
MCAS Beaufort, Commanding Owner Name (Corporation, Individua		
	i, i uone Ageney, Other)	
P.O. Box 55001 Mailing Address		
Beaufort,	South Carolina	29904-5001
City	State	Zip Code
843	228-7317	Craig Ehde
Area Code	Telephone Number	Contact Person

#### II. SITE IDENTIFICATION AND LOCATION

Permit I.D. # Laurel Bay Military	- y Housing Area, Marine Corps Air Station, <u>Beaufort, SC</u>				
Facility Name or Company S					
332 Ash Street, Laurel Bay Military Housing Area Street Address or State Road (as applicable)					
Beaufort,	Beaufort				
City	County				

Г

Attachment 2

#### **Insurance Statement**

The petroleum release reported to DHEC on \_\_\_\_\_\_ at Permit ID Number \_\_\_\_\_ may qualify to receive state monies to pay for appropriate site rehabilitation activities. Before participation is allowed in the State Clean-up fund, written confirmation of the existence or non-existence of an environmental insurance policy is required. <u>This section must be completed.</u>

Is there now, or has there ever been an insurance policy or other financial mechanism that covers this UST release? **YES NO** (check one)

If you answered **YES** to the above question, please complete the following information:

My policy provider is: \_\_\_\_\_\_ The policy deductible is: \_\_\_\_\_\_ The policy limit is:

If you have this type of insurance, please include a copy of the policy with this report.

#### IV. REQUEST FOR SUPERB FUNDING

I **DO** / DO **NOT** wish to participate in the SUPERB Program. (Circle one.)

#### V. CERTIFICATION (To be signed by the UST owner)

I certify 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 responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Name (Type or print.)

Signature

#### To be completed by Notary Public:

Sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

(Name)

Notary Public for the state of \_\_\_\_\_\_. Please affix State seal if you are commissioned outside South Carolina

#### VI. **UST INFORMATION**

	VI. UST INFORMATION	332Ash
A.	Product(ex. Gas, Kerosene)	Heating oil
B.	Capacity(ex. 1k, 2k)	280 gal
C.	Age	Late 1950s
D.	Construction Material(ex. Steel, FRP)	Steel
Е·	Month/Year of Last Use	Mid 1980s
F.	Depth (ft.) To Base of Tank	5'5"
G.	Spill Prevention Equipment Y/N	No
H·	Overfill Prevention Equipment Y/N	No
I.	Method of Closure Removed/Filled	Removed
J <sub>.</sub>	Date Tanks Removed/Filled	8/8/11
K.	Visible Corrosion or Pitting Y/N	Yes
L.	Visible Holes Y/N	Yes

Method of disposal for any USTs removed from the ground (attach disposal manifests) Μ. UST 332Ash was removed from the ground, cleaned and recycled. See Attachment "A."

N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests) Contaminated water was pumped from UST 332Ash and disposed by MCAS.

О. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST Corrosion, pitting and holes were found throughout the tank.

#### VII. PIPING INFORMATION

		332Ash
		Steel
A.	Construction Material(ex. Steel, FRP)	& Copper
B.	Distance from UST to Dispenser	N/A
C.	Number of Dispensers	N/A
D.	Type of System Pressure or Suction	Suction
E.	Was Piping Removed from the Ground? Y/N	No
F.	Visible Corrosion or Pitting Y/N	Yes
G.	Visible Holes Y/N	No
H.	Age	Late 1950s
I.	If any corrosion, pitting, or holes were observed, de	scribe the location and extent for each piping run.

Corrosion and pitting were found on the surface of the steel vent pipe. Copper supply and return lines were sound.

#### VIII. BRIEF SITE DESCRIPTION AND HISTORY

The USTs at the residences are constructed of single wall steel and formerly contained fuel oil for heating. These USTs were installed in the late 1950s and last used in the mid 1980s.

IX. SITE	<b>CONDITIONS</b>
----------	-------------------

	Yes	No	Unk
A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells?		х	
If yes, indicate depth and location on the site map.			
B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells?		х	
If yes, indicate location on site map and describe the odor (strong, mild, etc.)			
C. Was water present in the UST excavation, soil borings, or trenches?		Х	
If yes, how far below land surface (indicate location and depth)?			
D. Did contaminated soils remain stockpiled on site after closure?		х	
If yes, indicate the stockpile location on the site map.			
Name of DHEC representative authorizing soil removal:			
E. Was a petroleum sheen or free product detected on any excavation or boring waters?		х	
If yes, indicate location and thickness.			

### X. SAMPLE INFORMATION

## A. SCDHEC Lab Certification Number 84009

В.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
332Ash	Excav at fill end		Sandy	5'5"	8/8/11 1230 hrs	P. Shaw	
			-				
8							
9			-				
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

\* = Depth Below the Surrounding Land Surface

#### XI. SAMPLING METHODOLOGY

Provide a detailed description of the methods used to collect <u>and</u> store the samples. Also include the preservative used for each sample. Please use the space provided below.

Sampling was performed in accordance with SC DHEC R.61-92 Part 280 and SC DHEC Assessment Guidelines. Sample containers were prepared by the testing laboratory. The grab method was utilized to fill the sample containers leaving as little head space as possible and immediately capped. Soil samples were extracted from area below tank. The samples were marked, logged, and immediately placed in a sample cooler packed with ice to maintain an approximate temperature of 4 degrees Centigrade. Tools were thoroughly cleaned and decontaminated with the seven step decon process after each use. The samples remained in custody of SBG-EEG, Inc. until they were transferred to Test America Incorporated for analysis as documented in the Chain of Custody Record.

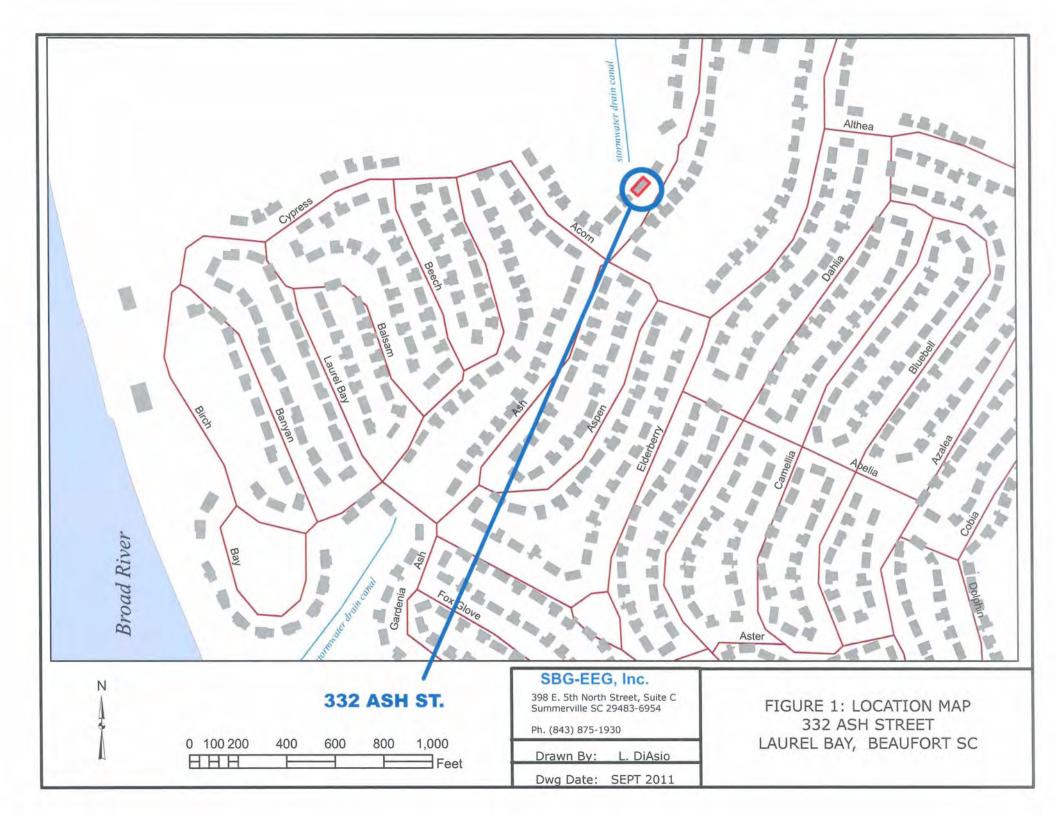
### **XII. RECEPTORS**

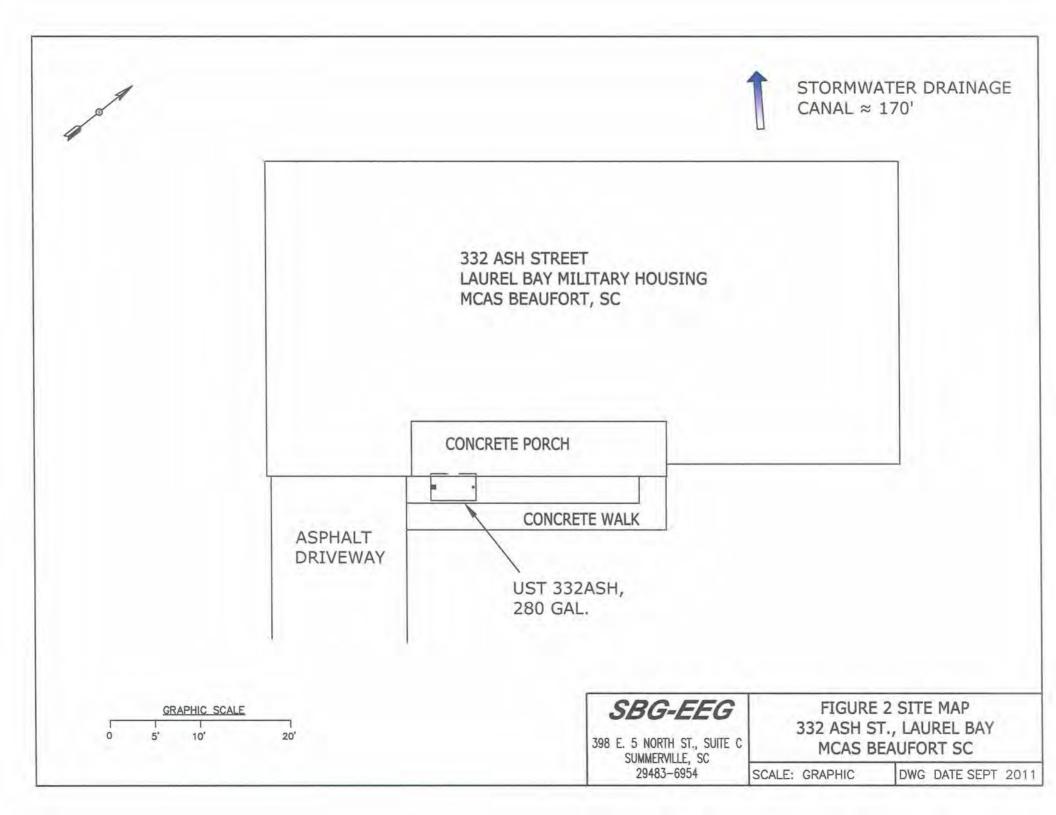
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?	*X	
	*~170' to stormwater car	hal	
	If yes, indicate type of receptor, distance, and direction on site map.		
В.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		Х
	If yes, indicate type of well, distance, and direction on site map.		
C.	Are there any underground structures (e.g., basements) Located within 100 feet of the UST system?		Х
	If yes, indicate type of structure, distance, and direction on site map.		
D.	Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the	*X	
	contamination? *Sewer, water, electri cable & fiber o		
	If yes, indicate the type of utility, distance, and direction on the site map.		
E.	Has contaminated soil been identified at a depth less than 3 feet below land surface in an area that is not capped by asphalt or concrete?		Х
	If yes, indicate the area of contaminated soil on the site map.		

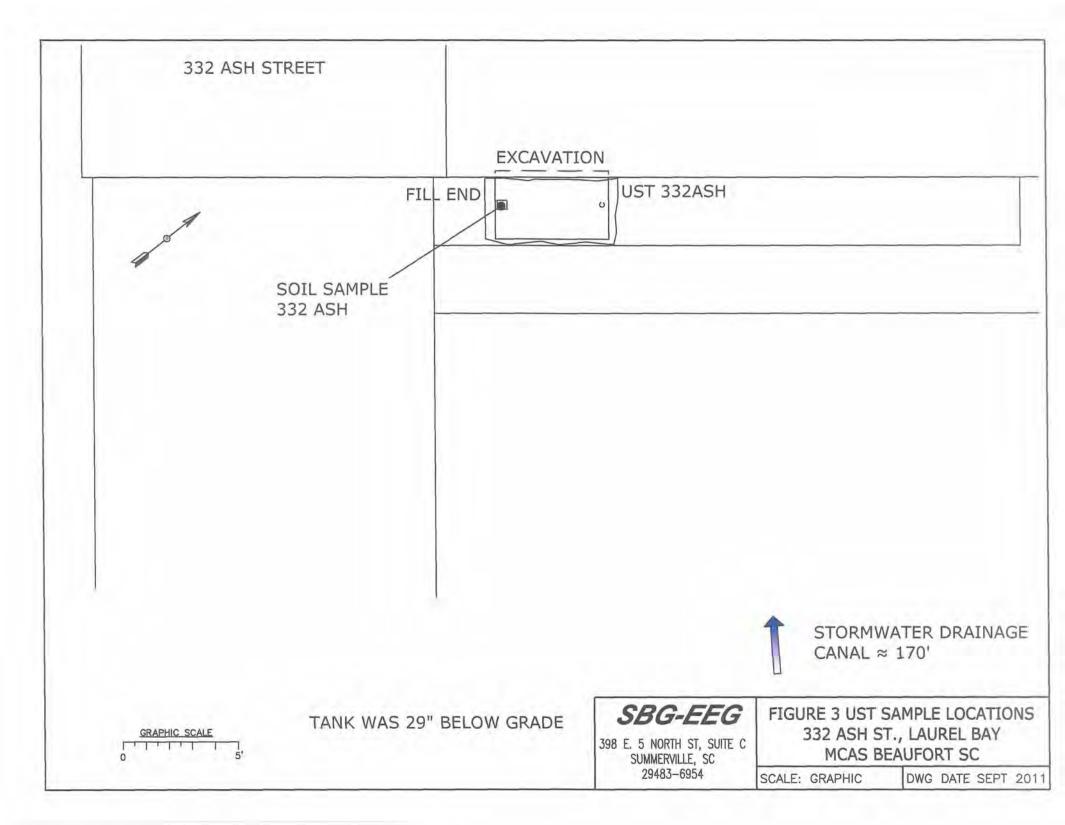
#### XIII. SITE MAP

You must supply a <u>scaled</u> site map. It should include all buildings, road names, utilities, tank and dispenser island locations, labeled sample locations, extent of excavation, and any other pertinent information.

(Attach Site Map Here)









Picture 1: Location of UST 332Ash.



Picture 2: UST 332Ash excavation in progress.

#### XIV. SUMMARY OF ANALYSIS RESULTS

Enter the soil analytical data for each soil boring for all COC in the table below and on the following page.

CoC UST	332Ash				
Benzene	ND				
Toluene	ND				
Ethylbenzene	0.00922 mg/k	g			
Xylenes	0.00670 mg/k	g			
Naphthalene	0.0560 mg/kg				
Benzo (a) anthracene	8.57 mg/kg				
Benzo (b) fluoranthene	3.26 mg/kg				
Benzo (k) fluoranthene	3.70 mg/kg				
Chrysene	5.55 mg/kg				
Dibenz (a, h) anthracene	0.407 mg/kg				
ТРН (ЕРА 3550)					

CoC				
Benzene				
Toluene				
Ethylbenzene				
Xylenes				
Naphthalene				
Benzo (a) anthracene	:			
Benzo (b) fluoranthene				
Benzo (k) fluoranthene				
Chrysene				
Dibenz (a, h) anthracene		 		
ТРН (ЕРА 3550)				

SUMMARY OF ANALYSIS RESULTS (cont'd) Enter the ground water analytical data for each sample for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

CoC	RBSL (µg/l)	W-1	W-2	W -3	W -4
Free Product Thickness	None				
Benzene	5				
Toluene	1,000				
Ethylbenzene	700				
Xylenes	10,000				
Total BTEX	N/A				
МТВЕ	40				
Naphthalene	25				
Benzo (a) anthracene	10				
Benzo (b) flouranthene	10				
Benzo (k) flouranthene	10				
Chrysene	10				
Dibenz (a, h) anthracene	10				
EDB	.05				
1,2-DCA	5				
Lead	Site specific				

#### XV. ANALYTICAL RESULTS

You must submit the laboratory report and chain-of-custody form for the samples. These samples must be analyzed by a South Carolina certified laboratory.

(Attach Certified Analytical Results and Chain-of-Custody Here) (Please see Form #4)



#### THE LEADER IN ENVIRONMENTAL TESTING

## **ANALYTICAL REPORT**

#### TestAmerica Laboratories, Inc.

TestAmerica Nashville 2960 Foster Creighton Road Nashville, TN 37204 Tel: 800-765-0980

#### TestAmerica Job ID: NUH1974

Client Project/Site: [none] Client Project Description: Laurel Bay Housing Project

#### For:

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EEG - Small Business Group, Inc. (2449) 10179 Highway 78 Ladson, SC 29456

Attn: Tom McElwee

Sem Sa Hay

Authorized for release by: 08/29/2011 06:57:15 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

	Matrix	Collected	Received
JUH1974-01 332 Ash	Soil	08/08/11 12:30	08/13/11 08:00
IUH1974-02 111 Birch	Soil	08/09/11 14:00	08/13/11 08:00

Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

#### Qualifiers

GCMS Vola	tiles	4
Qualifier	Qualifier Description	
ZX	Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.	
GCMS Sem	ivolatiles	
Qualifier	Qualifier Description	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
Glossary		

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¢-	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit (Dioxin)
EPA	United States Environmental Protection Agency
NDL	Method Detection Limit
ЛL	Minimum Level (Dioxin)
1D	Not detected at the reporting limit (or method detection limit if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
EF	Toxicity Equivalent Factor (Dioxin)
EQ	Toxicity Equivalent Quotient (Dioxin)

#### Lab Sample ID: NUH1974-01 Matrix: Soil Percent Solids: 84.2

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#### Client Sample ID: 332 Ash Date Collected: 08/08/11 12:30 Date Received: 08/13/11 08:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00248	0.00137	mg/kg dry	\$	08/08/11 12:30	08/16/11 20:22	1.00
Ethylbenzene	0.00922		0,00248	0.00122	mg/kg dry	¢	08/08/11 12:30	08/16/11 20:22	1.00
Naphthalene	0.0560		0.00621	0.00211	mg/kg dry	\$	08/08/11 12:30	08/16/11 20:22	1.00
Toluene	ND		0.00248	0.00111	mg/kg dry	¢2	08/08/11 12:30	08/16/11 20:22	1.00
Xylenes, total	0.00670		0.00621	0.00236	mg/kg dry	¢	08/08/11 12:30	08/16/11 20:22	1.00
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	93		67 - 138				08/08/11 12:30	08/16/11 20:22	1.00
Dibromofluoromethane	92		75 - 125				08/08/11 12:30	08/16/11 20:22	1.00
Toluene-d8	119		76 - 129				08/08/11 12:30	08/16/11 20:22	1.00
4-Bromofluorobenzene	287	ZX	67 - 147				08/08/11 12:30	08/16/11 20:22	1.00

#### Method: SW846 8270D - Polyaromatic Hydrocarbons by EPA 8270D

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.801		0.0791	0.0165	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:26	1.00
Acenaphthylene	0.181		0.0791	0.0236	mg/kg dry	a	08/15/11 11:05	08/15/11 18:26	1.00
Anthracene	3.29		0.0791	0.0106	mg/kg dry	¢	08/15/11 11:05	08/15/11 18:26	1.00
Benzo (a) pyrene	3.30		0.0791	0.00945	mg/kg dry	\$2	08/15/11 11:05	08/15/11 18:26	1.00
Benzo (b) fluoranthene	3.26		0.0791	0.0449	mg/kg dry	13	08/15/11 11:05	08/15/11 18:26	1.00
Benzo (g,h,i) perylene	0.913		0.0791	0.0106	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:26	1.00
Benzo (k) fluoranthene	3.70		0.0791	0.0437	mg/kg dry	¢	08/15/11 11:05	08/15/11 18:26	1.00
Dibenz (a,h) anthracene	0,407		0.0791	0.0177	mg/kg dry	¢	08/15/11 11:05	08/15/11 18:26	1.00
Fluorene	2.42		0.0791	0.0236	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:26	1.00
Indeno (1,2,3-cd) pyrene	1.02		0.0791	0.0366	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:26	1.00
Naphthalene	ND		0.0791	0.0165	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:26	1.00
1-Methylnaphthalene	0.815		0.0791	0.0142	mg/kg dry	\$	08/15/11 11:05	08/15/11 18:26	1.00
2-Methylnaphthalene	1.56		0.0791	0.0248	mg/kg dry	ą	08/15/11 11:05	08/15/11 18:26	1.00
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	93		18 - 120				08/15/11 11:05	08/15/11 18:26	1.00

# Terphenyl-d14 93 18 - 120 08/15/11 11:05 08/15/11 11:26 1.00 2-Fluorobiphenyl 70 14 - 120 08/15/11 11:05 08/15/11 11:05 08/15/11 11:26 1.00 Nitrobenzene-d5 76 17 - 120 08/15/11 11:05 08/15/11 11:05 08/15/11 11:26 1.00

#### Method: SW846 8270D - Polyaromatic Hydrocarbons by EPA 8270D - RE1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo (a) anthracene	8.57		0.791	0.130	mg/kg dry	Ø	08/15/11 11:05	08/16/11 17:03	10.0
Chrysene	5,55		0.791	0.366	mg/kg dry	0	08/15/11 11:05	08/16/11 17:03	10.0
Fluoranthene	26.0		0.791	0.130	mg/kg dry	ø	08/15/11 11:05	08/16/11 17:03	10.0
Phenanthrene	11.5		0.791	0.118	mg/kg dry	æ	08/15/11 11:05	08/16/11 17:03	10.0
Pyrene	18.9		0.791	0.272	mg/kg dry	ä	08/15/11 11:05	08/16/11 17:03	10.0
Method: SW-846 - General Che	emistry Paramete	rs							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
% Dry Solids	84.2		0.500	0.500	%		08/19/11 12:43	08/22/11 09:04	1.00

#### Client Sample ID: 111 Birch

Date Collected: 08/09/11 14:00 Date Received: 08/13/11 08:00 Lab Sample ID: NUH1974-02 Matrix: Soil Percent Solids: 76.1

Method: SW846 8260B - V	olatile Organic Compou	inds by EPA Method 8260B
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Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ND		0.00235	0.00129	mg/kg dry	10	08/09/11 14:00	08/16/11 20:53	1.00
0.00764		0.00235	0.00115	mg/kg dry	-	08/09/11 14:00	08/16/11 20:53	1.00
0.0344		0.00589	0.00200	mg/kg dry	¢	08/09/11 14:00	08/16/11 20:53	1.00
ND		0.00235	0.00105	mg/kg dry	¢	08/09/11 14:00	08/16/11 20:53	1.00
0.178		0.00589	0.00224	mg/kg dry	¢	08/09/11 14:00	08/16/11 20:53	1.00
% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
94		67 - 138				08/09/11 14:00	08/16/11 20:53	1.00
89		75 - 125				08/09/11 14:00	08/16/11 20:53	1.00
141	ZX	76 - 129				08/09/11 14:00	08/16/11 20:53	1.00
146		67 - 147				08/09/11 14:00	08/16/11 20:53	1.00
	ND 0.00764 0.0344 ND 0.178 % Recovery 94 89 141	0.00764 0.0344 ND 0.178 <u>% Recovery</u> <u>Qualifier</u> 94 89 141 ZX	ND         0.00235           0.00764         0.00235           0.0344         0.00589           ND         0.00235           0.178         0.00589           % Recovery         Qualifier         Limits           94         67 - 138         89           75 - 125         141         ZX         76 - 129	ND         0.00235         0.00129           0.00764         0.00235         0.00115           0.0344         0.00589         0.00200           ND         0.00235         0.00105           0.178         0.00589         0.00224           % Recovery         Qualifier         Limits           94         67 - 138           89         75 - 125           141         ZX         76 - 129	ND         0.00235         0.00129         mg/kg dry           0.00764         0.00235         0.00115         mg/kg dry           0.0344         0.00589         0.00200         mg/kg dry           ND         0.00235         0.00105         mg/kg dry           ND         0.00235         0.00105         mg/kg dry           0.178         0.00589         0.00224         mg/kg dry           % Recovery         Qualifier         Limits           94         67 - 138           89         75 - 125           141         ZX         76 - 129	ND         0.00235         0.00129         mg/kg dry         Image: Constraint of the system           0.00764         0.00235         0.00115         mg/kg dry         Image: Constraint of the system         Image: Constraint of the system	ND         0.00235         0.00129         mg/kg dry         G         08/09/11         14:00           0.00764         0.00235         0.00115         mg/kg dry         G         08/09/11         14:00           0.0344         0.00589         0.00200         mg/kg dry         G         08/09/11         14:00           ND         0.00235         0.00105         mg/kg dry         G         08/09/11         14:00           ND         0.00235         0.00105         mg/kg dry         G         08/09/11         14:00           0.178         0.00589         0.00224         mg/kg dry         G         08/09/11         14:00           % Recovery         Qualifier         Limits         Prepared         08/09/11         14:00           89         75 - 125         08/09/11         08/09/11         08/09/11         14:00           141         ZX         76 - 129         08/09/11         08/09/11         14:00	ND         0.00235         0.00129         mg/kg dry         ©         08/09/11         08/16/11         20:53           0.00764         0.00235         0.00115         mg/kg dry         ©         08/09/11         14:00         08/16/11         20:53           0.00764         0.00235         0.00115         mg/kg dry         ©         08/09/11         14:00         08/16/11         20:53           0.0344         0.00589         0.00200         mg/kg dry         ©         08/09/11         14:00         08/16/11         20:53           ND         0.00235         0.00105         mg/kg dry         ©         08/09/11         14:00         08/16/11         20:53           0.178         0.00589         0.00224         mg/kg dry         ©         08/09/11         14:00         08/16/11         20:53           % Recovery         Qualifier         Limits          Prepared         Analyzed           94         67 - 138          08/09/11         14:00         08/16/11         20:53           141         ZX         76 - 129         08/09/11         14:00         08/16/11         20:53

#### Method: SW846 8270D - Polyaromatic Hydrocarbons by EPA 8270D

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.944		0.0872	0.0182	mg/kg dry	<i>p</i>	08/15/11 11:05	08/15/11 18:51	1.00
Acenaphthylene	0.313		0.0872	0.0260	mg/kg dry	Ø	08/15/11 11:05	08/15/11 18:51	1.00
Anthracene	0.408		0.0872	0.0117	mg/kg dry	Ø	08/15/11 11:05	08/15/11 18:51	1.00
Benzo (a) anthracene	0.360		0.0872	0.0143	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:51	1.00
Benzo (a) pyrene	0.162		0.0872	0.0104	mg/kg dry	Φ	08/15/11 11:05	08/15/11 18:51	1.00
Benzo (b) fluoranthene	0.198		0.0872	0.0494	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:51	1.00
Benzo (g,h,i) perylene	0.0503	3	0.0872	0.0117	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:51	1.00
Benzo (k) fluoranthene	0.141		0.0872	0.0481	mg/kg dry	\$	08/15/11 11:05	08/15/11 18:51	1.00
Chrysene	0.333		0.0872	0.0403	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:51	1.00
Dibenz (a,h) anthracene	ND		0.0872	0.0195	mg/kg dry	¢	08/15/11 11:05	08/15/11 18:51	1.00
Fluoranthene	1.08		0.0872	0.0143	mg/kg dry	¢	08/15/11 11:05	08/15/11 18:51	1.00
Fluorene	2.06		0.0872	0.0260	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:51	1.00
Indeno (1,2,3-cd) pyrene	0.0577	L	0.0872	0.0403	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:51	1.00
Naphthalene	ND		0.0872	0.0182	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:51	1.00
Pyrene	1.06		0.0872	0.0299	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:51	1.00
2-Methylnaphthalene	1.85		0,0872	0.0273	mg/kg dry	ø	08/15/11 11:05	08/15/11 18:51	1.00
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	87		18-120				08/15/11 11:05	08/15/11 18:51	1.00
2-Fluorobiphenyl	70		14 - 120				08/15/11 11:05	08/15/11 18:51	1.00
Nitrobenzene-d5	70		17 - 120				08/15/11 11:05	08/15/11 18:51	1.00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	4.93		0.436	0.0650	mg/kg dry	Ø	08/15/11 11:05	08/16/11 17:29	5.00
1-Methylnaphthalene	4.61		0.436	0.0781	mg/kg dry	¢	08/15/11 11:05	08/16/11 17:29	5.00
Method: SW-846 - General Ch	emistry Paramete	rs							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
% Dry Solids	76.1		0.500	0.500	%	_	08/19/11 12:43	08/22/11 09:04	1.00

#### Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B

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#### Lab Sample ID: 11H3862-BLK1 Matrix: Soil

Analysis Batch: U014639

#### Client Sample ID: Method Blank Prep Type: Total Prep Batch: 11H3862\_P

**Client Sample ID: Method Blank** 

08/16/11 13:29

08/16/11 13:29

Prep Type: Total

**Client Sample ID: Lab Control Sample** 

50.0

50.0

08/16/11 10:21

08/16/11 10:21

Prep Type: Total

Prep Batch: 11H3862\_P

	Blank	Blank							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.00110	mg/kg wet		08/16/11 10:21	08/16/11 12:58	1.00
Ethylbenzene	ND		0.00200	0.000980	mg/kg wet		08/16/11 10:21	08/16/11 12:58	1.00
Naphthalene	ND		0.00500	0.00170	mg/kg wet		08/16/11 10:21	08/16/11 12:58	1.00
Toluene	ND		0.00200	0.000890	mg/kg wet		08/16/11 10:21	08/16/11 12:58	1.00
Xylenes, total	ND		0.00500	0.00190	mg/kg wet		08/16/11 10:21	08/16/11 12:58	1.00
	Blank	Blank							
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	96		67 - 138				08/16/11 10:21	08/16/11 12:58	1.00
Dibromofluoromethane	95		75-125				08/16/11 10:21	08/16/11 12:58	1.00
Toluene-d8	107		76 - 129				08/16/11 10:21	08/16/11 12:58	1.00
4-Bromofluorobenzene	111		67 - 147				08/16/11 10:21	08/16/11 12:58	1.00

#### Lab Sample ID: 11H3862-BLK2 Matrix: Soil Analysis Batch: U014639

#### Blank Blank RL MDL Unit Analyte Result Qualifier Prepared Analyzed Dil Fac D Benzene ND 0.100 0.0550 mg/kg wet 08/16/11 10:21 08/16/11 13:29 50.0 50.0 Ethylbenzene ND 08/16/11 13:29 0.100 0.0490 mg/kg wet 08/16/11 10:21 50.0 Naphthalene ND 0.250 0.0850 mg/kg wet 08/16/11 10:21 08/16/11 13:29 Toluene ND 0.100 0.0445 mg/kg wet 08/16/11 10:21 08/16/11 13:29 50.0 Xylenes, total ND 0.250 0.0950 mg/kg wet 08/16/11 10:21 08/16/11 13:29 50.0 Blank Blank Dil Fac Surrogate % Recovery Qualifier Limits Analyzed Prepared 1,2-Dichloroethane-d4 92 67 - 138 08/16/11 10:21 08/16/11 13:29 50.0 Dibromofluoromethane 08/16/11 13:29 50 0 92 75-125 08/16/11 10:21

76-129

67 - 147

## Lab Sample ID: 11H3862-BS1

Matrix: Soil

4-Bromofluorobenzene

Toluene-d8

Analysis Batch: U014639							Prep Batch: 11H	3862_P
	Spike	LCS	LCS				% Rec.	
Analyte	Added	Result	Qualifier	Unit	D	% Rec	Limits	
Benzene	50.0	53,2		ug/kg		106	78 - 126	
Ethylbenzene	50.0	54.3		ug/kg		109	79 - 130	
Naphthalene	50.0	47.4		ug/kg		95	72 - 150	
Toluene	50.0	51.3		ug/kg		103	76 - 126	
Xylenes, total	150	162		ug/kg		108	80 - 130	

LUS	LUS	
% Recovery	Qualifier	Limits
92	-	67 - 138
96		75 - 125
106		76 - 129
113		67 - 147
	% Recovery 92 96 106	92 96 106

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#### Method: SW846 8260B - Volatile Organic Compounds by EPA Method 8260B (Continued)

Lab Sample ID: 11H3862-MS1 Matrix: Soil								Client S	Sample ID: Matrix Spike Prep Type: Total
Analysis Batch: U014639								1	Prep Batch: 11H3862_P
	Sample	Sample	Spike	Matrix Spike	Matrix Spi	ke			% Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	% Rec	Limits
Benzene	0.615		1.89	2.89	_	mg/kg wet		120	42 - 141
Ethylbenzene	0.0777		1.89	2.36		mg/kg wet		121	21 - 165
Naphthalene	0.0645		1.89	1.79		mg/kg wet		91	10 - 160
Toluene	1.20		1.89	3.33		mg/kg wet		113	45 - 145
Xylenes, total	0.367		5.66	7.19		mg/kg wet		121	31 - 159
	Matrix Spike	Matrix Spike							
Surrogate	% Recovery	Qualifier	Limits						

Surrogate	% Recovery	Qualifier	Limits
1,2-Dichloroethane-d4	91		67 - 138
Dibromofluoromethane	98		75 - 125
Toluene-d8	107		76 - 129
4-Bromofluorobenzene	115		67 - 147

#### Lab Sample ID: 11H3862-MSD1 Matrix: Soil

#### Analysis Batch: U014639

Analysis Batch: U014639								1	rep Batch	: 11H3	862_P
	Sample	Sample	Spike	Matrix Spike Dup	Matrix Spi	ke Duş			% Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	% Rec	Limits	RPD	Limit
Benzene	0.615		1.89	2.86		mg/kg wet	-	119	42 - 141	0.7	50
Ethylbenzene	0.0777		1.89	2.37		mg/kg wet		122	21 - 165	0,6	50
Naphthalene	0.0645		1.89	1.83		mg/kg wet		93	10 - 160	2	50
Toluene	1.20		1.89	3.41		mg/kg wet		117	45 - 145	2	50
Xylenes, total	0.367		5,66	7.28		mg/kg wet		122	31 - 159	1	50

	Matrix Spike Dup	Matrix Spike Dup			
Surrogate	% Recovery	Qualifier	Limits		
1,2-Dichloroethane-d4	87		67 - 138		
Dibromofluoromethane	92		75 - 125		
Toluene-d8	108		76 - 129		
4-Bromofluorobenzene	111		67 - 147		

#### Method: SW846 8270D - Polyaromatic Hydrocarbons by EPA 8270D

#### Lab Sample ID: 11H3481-BLK1 Matrix: Soil

#### Analysis Batch: 11H3481

#### **Client Sample ID: Method Blank** Prep Type: Total Prep Batch: 11H3481\_P

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total

	Blank	Blank							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0670	0.0140	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Acenaphthylene	ND		0.0670	0.0200	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Anthracene	ND		0.0670	0.00900	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Benzo (a) anthracene	ND		0.0670	0.0110	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Benzo (a) pyrene	ND		0.0670	0.00800	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Benzo (b) fluoranthene	ND		0.0670	0.0380	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Benzo (g,h,i) perylene	ND		0.0670	0.00900	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Benzo (k) fluoranthene	ND		0.0670	0.0370	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Chrysene	ND		0.0670	0.0310	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1,00
Dibenz (a,h) anthracene	ND		0.0670	0.0150	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Fluoranthene	ND		0.0670	0.0110	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Fluorene	ND		0.0670	0.0200	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Indeno (1,2,3-cd) pyrene	ND		0.0670	0.0310	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00

#### Method: SW846 8270D - Polyaromatic Hydrocarbons by EPA 8270D (Continued)

Lab Sample ID: 11H3481-BLK1 Matrix: Soil Analysis Batch: 11H3481	21-1	The state						mple ID: Metho Prep Typ Prep Batch: 11F	e: Total
Analyte		Blank Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND	Quanner	0,0670	0.0140	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
Phenanthrene	ND		0.0670	0.0100			08/15/11 11:05	08/15/11 16:17	1.00
Pyrene	ND		0.0670	0.0230	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
1-Methylnaphthalene	ND		0.0670	0.0120	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
2-Methylnaphthalene	ND		0.0670	0.0210	mg/kg wet		08/15/11 11:05	08/15/11 16:17	1.00
	Blank	Blank							
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	103		18 - 120				08/15/11 11:05	08/15/11 16:17	1.00
2-Fluorobiphenyl	83		14 - 120				08/15/11 11:05	08/15/11 16:17	1.00
Nitrobenzene-d5	90		17 - 120				08/15/11 11:05	08/15/11 16:17	1.00

#### Lab Sample ID: 11H3481-BS1

#### Matrix: Soil

#### Analysis Batch: 11H3481

#### **Client Sample ID: Lab Control Sample**

Prep Type: Total Prep Batch: 11H3481 P

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Analysis baton, Thistor							Frep Daton. Thistor F
	Spike	LCS	LCS				% Rec.
Analyte	Added	Result	Qualifier	Unit	D	% Rec	Limits
Acenaphthene	1.67	1.51		mg/kg wet		91	49 - 120
Acenaphthylene	1.67	1.56		mg/kg wet		94	52 - 120
Anthracene	1.67	1.63		mg/kg wet		98	58 - 120
Benzo (a) anthracene	1.67	1.62		mg/kg wet		97	57 - 120
Benzo (a) pyrene	1.67	1.74		mg/kg wet		105	55 - 120
Benzo (b) fluoranthene	1.67	1.54		mg/kg wet		92	51 - 123
Benzo (g,h,i) perylene	1.67	1.65		mg/kg wet		99	49 - 121
Benzo (k) fluoranthene	1.67	1.44		mg/kg wet		86	42 - 129
Chrysene	1.67	1.52		mg/kg wet		91	55 - 120
Dibenz (a,h) anthracene	1.67	1.71		mg/kg wet		103	50 - 123
Fluoranthene	1.67	1.59		mg/kg wet		95	58 - 120
Fluorene	1.67	1.53		mg/kg wet		92	54 - 120
Indeno (1,2,3-cd) pyrene	1.67	1.69		mg/kg wet		101	50 - 122
Naphthalene	1.67	1.40		mg/kg wet		84	28 - 120
Phenanthrene	1.67	1.56		mg/kg wet		94	56 - 120
Pyrene	1.67	1.60		mg/kg wet		96	56 - 120
1-Methylnaphthalene	1.67	1.05		mg/kg wet		63	36 - 120
2-Methylnaphthalene	1.67	1,29		mg/kg wet		77	36 - 120

	200	L03	
Surrogate	% Recovery	Qualifier	Limits
Terphenyl-d14	102	-	18 - 120
2-Fluorobiphenyl	81		14 - 120
Nitrobenzene-d5	82		17 - 120

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#### Lab Sample ID: 11H3481-MS1 Matrix: Soil

#### Analysis Batch: 11H3481

Analysis Batch: 11H3481									Prep Batch:	11H3481_P
	Sample	Sample	Spike	Matrix Spike	Matrix Spi	ke			% Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	% Rec	Limits	
Acenaphthene	ND		1.64	1.35		mg/kg wet	-	82	42 - 120	
Acenaphthylene	ND		1.64	1.38		mg/kg wet		84	32 - 120	
Anthracene	ND		1.64	1.46		mg/kg wet		89	10 - 200	
Benzo (a) anthracene	ND		1.64	1.44		mg/kg wet		88	41 - 120	

TestAmerica Nashville 08/29/2011

Client Sample ID: Matrix Spike

Prep Type: Total

## Method: SW846 8270D - Polyaromatic Hydrocarbons by EPA 8270D (Continued)

Lab Sample ID: 11H3481-MS1	
Matrix: Soil	
Analysis Batch: 11H3481	

Client Sample ID: Matrix Spike Prep Type: Total Prep Batch: 11H3481\_P

	Sample	Sample	Spike	Matrix Spike	Matrix Spil	ke			% Rec.	-
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	% Rec	Limits	100
Benzo (a) pyrene	ND		1.64	1.56		mg/kg wet		95	33 - 121	6
Benzo (b) fluoranthene	ND		1.64	1.46		mg/kg wet		89	26 - 137	
Benzo (g.h.i) perylene	ND		1.64	1.53		mg/kg wet		93	21 - 124	
Benzo (k) fluoranthene	ND		1.64	1,47		mg/kg wet		89	14 - 140	
Chrysene	ND		1.64	1.39		mg/kg wet		84	28 - 123	
Dibenz (a,h) anthracene	ND		1.64	1.55		mg/kg wet		94	25 - 127	
Fluoranthene	ND		1.64	1.44		mg/kg wet		88	38 - 120	
Fluorene	ND		1.64	1.36		mg/kg wet		83	41 - 120	
Indeno (1,2,3-cd) pyrene	ND		1.64	1.52		mg/kg wet		92	25 - 123	
Naphthalene	ND		1.64	1.31		mg/kg wet		80	25 - 120	
Phenanthrene	ND		1.64	1.39		mg/kg wet		84	37 - 120	
Pyrene	ND		1.64	1.44		mg/kg wet		87	29 - 125	
1-Methylnaphthalene	ND		1.64	1.01		mg/kg wet		62	19 - 120	
2-Methylnaphthalene	ND		1.64	1.21		mg/kg wet		74	11 - 120	
	Matrix Spike	Matrix Spike								
Currente			10.00							

	Indulix Spike	Maura Spine	
Surrogate	% Recovery	Qualifier	Limits
Terphenyl-d14	93		18-120
2-Fluorobiphenyl	74		14 - 120
Nitrobenzene-d5	76		17 - 120

#### Lab Sample ID: 11H3481-MSD1 Matrix: Soil Analysis Batch: 11H3481

Client Sample ID: Matrix Spike Duplicate Prep Type: Total Prep Batch: 11H3481 P

Analysis Daten. Thistor									riep batti	r. runo	401 F
	Sample	Sample	Spike	Aatrix Spike Dup	Matrix Spi	ke Dut			% Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	% Rec	Limits	RPD	Limit
Acenaphthene	ND		1.64	1.46		mg/kg wet		89	42 - 120	8	40
Acenaphthylene	ND		1.64	1.50		mg/kg wet		91	32 - 120	9	30
Anthracene	ND		1.64	1.55		mg/kg wet		94	10 - 200	6	50
Benzo (a) anthracene	ND		1.64	1.56		mg/kg wet		95	41 - 120	8	30
Benzo (a) pyrene	ND		1.64	1.61		mg/kg wet		98	33 - 121	3	33
Benzo (b) fluoranthene	ND		1.64	1.50		mg/kg wet		91	26 - 137	3	42
Benzo (g,h,i) perylene	ND		1.64	1.62		mg/kg wet		99	21 - 124	6	32
Benzo (k) fluoranthene	ND		1.64	1.37		mg/kg wet		83	14 - 140	7	39
Chrysene	ND		1.64	1.49		mg/kg wet		91	28 - 123	7	34
Dibenz (a,h) anthracene	ND		1.64	1.68		mg/kg wet		102	25 - 127	8	31
Fluoranthene	ND		1.64	1.54		mg/kg wet		94	38 - 120	7	35
Fluorene	ND		1.64	1.49		mg/kg wet		91	41 - 120	9	37
Indeno (1,2,3-cd) pyrene	ND		1.64	1.64		mg/kg wet		100	25 - 123	7	32
Naphthalene	ND		1.64	1.38		mg/kg wet		84	25 - 120	5	42
Phenanthrene	ND		1.64	1,50		mg/kg wet		91	37 - 120	8	32
Pyrene	ND		1.64	1.57		mg/kg wet		96	29 - 125	9	40
1-Methylnaphthalene	ND		1.64	1.03		mg/kg wet		63	19 - 120	2	45
2-Methylnaphthalene	ND		1.64	1.22		mg/kg wet		74	11 - 120	0.5	50

	Matrix Spike Dup	Matrix Spike Dup			
Surrogate	% Recovery	Qualifier	Limits		
Terphenyl-d14	101		18 - 120		
2-Fluorobiphenyl	78		14 - 120		
Nitrobenzene-d5	77		17 - 120		

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#### Method: SW-846 - General Chemistry Parameters

Lab Sample ID: 11H4500-DUP1 Matrix: Soil							Client Sample ID: I Prep Ty		
nalysis Batch: 11H4500						Prep Batch: 11H4500			00 P
	Sample	Sample	Duplicate	Duplicate					RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RF	D	Limit
% Dry Solids	89.5		84.9		%			5	20

#### GCMS Volatiles

#### Analysis Batch: U014639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11H3862-BLK1	Method Blank	Total	Soil	SW846 8260B	11H3862_P
11H3862-BLK2	Method Blank	Total	Soil	SW846 8260B	11H3862_P
11H3862-BS1	Lab Control Sample	Total	Soil	SW846 8260B	11H3862_P
11H3862-MS1	Matrix Spike	Total	Soil	SW846 8260B	11H3862_P
11H3862-MSD1	Matrix Spike Duplicate	Total	Soil	SW846 8260B	11H3862_P
NUH1974-01	332 Ash	Total	Soil	SW846 8260B	11H3862_P
NUH1974-02	111 Birch	Total	Soil	SW846 8260B	11H3862_P
rep Batch: 11H386	2_P				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11H3862-BLK1	Method Blank	Total	Soil	EPA 5035	
11H3862-BLK2	Method Blank	Total	Soil	EPA 5035	
11H3862-BS1	Lab Control Sample	Total	Soil	EPA 5035	

11H3862-BS1	Lab Control Sample	Total	Soil	EPA 5035
11H3862-MS1	Matrix Spike	Total	Solt	EPA 5035
11H3862-MSD1	Matrix Spike Duplicate	Total	Soil	EPA 5035
NUH1974-01	332 Ash	Total	Soil	EPA 5035
NUH1974-02	111 Birch	Total	Soil	EPA 5035

### GCMS Semivolatiles

#### Analysis Batch: 11H3481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11H3481-BLK1	Method Blank	Total	Soil	SW846 8270D	11H3481_P
11H3481-BS1	Lab Control Sample	Total	Soil	SW846 8270D	11H3481_P
11H3481-MS1	Matrix Spike	Total	Soil	SW846 8270D	11H3481_P
11H3481-MSD1	Matrix Spike Duplicate	Total	Soil	SW846 8270D	11H3481_P
NUH1974-01	332 Ash	Total	Soil	SW846 8270D	11H3481_P
NUH1974-01 - RE1	332 Ash	Total	Soil	SW846 8270D	11H3481_P
NUH1974-02	111 Birch	Total	Soil	SW846 8270D	11H3481_P
NUH1974-02 - RE1	111 Birch	Total	Soil	SW846 8270D	11H3481 P

#### Prep Batch: 11H3481\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11H3481-BLK1	Method Blank	Total	Soil	EPA 3550C	
11H3481-BS1	Lab Control Sample	Total	Soil	EPA 3550C	
11H3481-MS1	Matrix Spike	Total	Soil	EPA 3550C	
11H3481-MSD1	Matrix Spike Duplicate	Total	Soil	EPA 3550C	
NUH1974-01	332 Ash	Total	Soil	EPA 3550C	
NUH1974-01 - RE1	332 Ash	Total	Soil	EPA 3550C	
NUH1974-02	111 Birch	Total	Soil	EPA 3550C	
NUH1974-02 - RE1	111 Birch	Total	Soil	EPA 3550C	

#### Extractions

#### Analysis Batch: 11H4500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11H4500-DUP1	Duplicate	Total	Soil	SW-846	11H4500_P
NUH1974-01	332 Ash	Total	Soil	SW-846	11H4500_P
NUH1974-02	111 Birch	Total	Soil	SVV-846	11H4500_P

## QC Association Summary

Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

## Extractions (Continued)

#### Prep Batch: 11H4500\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11H4500-DUP1	Duplicate	Total	Soil	% Solids	3
NUH1974-01	332 Ash	Total	Soil	% Solids	
NUH1974-02	111 Birch	Total	Soil	% Solids	

#### Client Sample ID: 332 Ash

Date Collected: 08/08/11 12:30 Date Received: 08/13/11 08:00

	Batch	Batch		Dilution	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Number	Or Analyzed	Analyst	Lab
Total	Prep	EPA 5035		1.05	11H3862_P	08/08/11 12:30	AAN	TAL NSH
Total	Analysis	SW846 8260B		1.00	U014639	08/16/11 20:22	ККК Н	TAL NSH
Total	Prep	EPA 3550C		0,994	11H3481_P	08/15/11 11:05	CAG	TAL NSH
Total	Analysis	SW846 8270D		1.00	11H3481	08/15/11 18:26	BES	TAL NSH
Total	Prep	EPA 3550C	RE1	0,994	11H3481_P	08/15/11 11:05	CAG	TAL NSH
Total	Analysis	SW846 8270D	RE1	10.0	11H3481	08/16/11 17:03	BES	TAL NSH
Total	Prep	% Solids		1.00	11H4500_P	08/19/11 12:43	RRS	TAL NSH
Total	Analysis	SW-846		1.00	11H4500	08/22/11 09:04	RRS	TAL NSH

## Client Sample ID: 111 Birch Date Collected: 08/09/11 14:00

#### Date Received: 08/13/11 08:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	Or Analyzed	Analyst	Lab
Total	Prep	EPA 5035	_	0.896	11H3862_P	08/09/11 14:00	AAN	TAL NSH
Total	Analysis	SW846 8260B		1.00	U014639	08/16/11 20:53	ККК Н	TAL NSH
Total	Prep	EPA 3550C		0.990	11H3481_P	08/15/11 11:05	CAG	TAL NSH
Total	Analysis	SW846 8270D		1.00	11H3481	08/15/11 18:51	BES	TAL NSH
Total	Prep	EPA 3550C	RE1	0.990	11H3481_P	08/15/11 11:05	CAG	TAL NSH
Total	Analysis	SW846 8270D	RE1	5.00	11H3481	08/16/11 17:29	BES	TAL NSH
Total	Prep	% Solids		1.00	11H4500_P	08/19/11 12:43	RRS	TAL NSH
Total	Analysis	SW-846		1.00	11H4500	08/22/11 09:04	RRS	TAL NSH

#### Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Road, Nashville, TN 37204, TEL 800-765-0980

TestAmerica Job ID: NUH1974

#### Lab Sample ID: NUH1974-01 Matrix: Soil

Lab Sample ID: NUH1974-02

Matrix: Soil

Percent Solids: 76.1

Percent Solids: 84.2

Method	Method Description	Protocol	Laboratory	
SW-846	General Chemistry Parameters		TAL NSH	
SW846 8260B	Volatile Organic Compounds by EPA Method 8260B		TAL NSH	
SW846 8270D	Polyaromatic Hydrocarbons by EPA 8270D		TAL NSH	

#### Protocol References:

#### Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Road, Nashville, TN 37204, TEL 800-765-0980

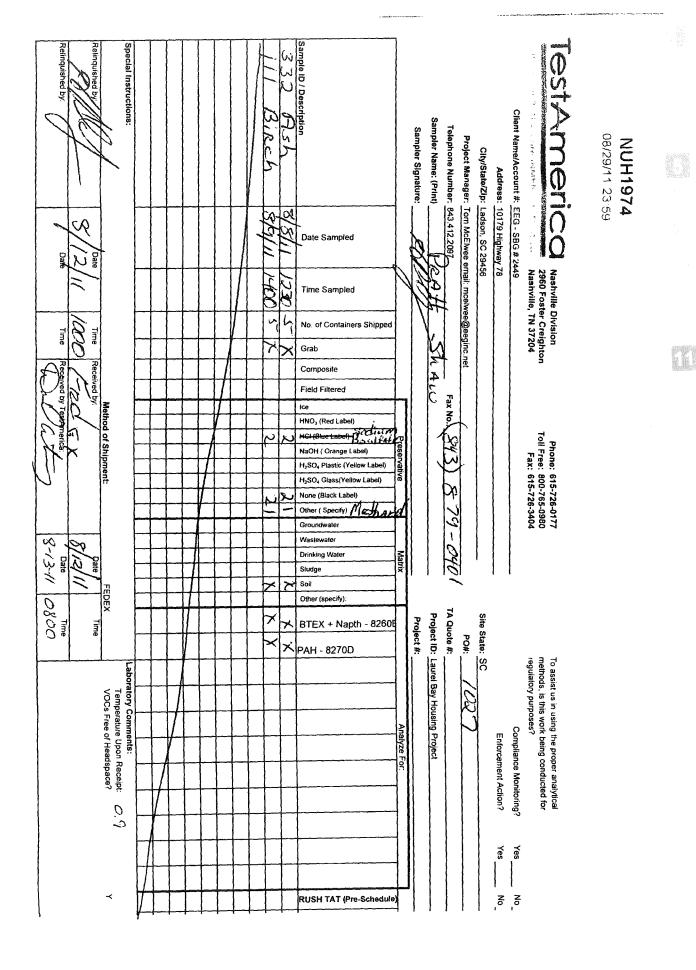
## **Certification Summary**

Client: EEG - Small Business Group, Inc. (2449) Project/Site: [none]

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Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Nashville	A2LA	ISO/IEC 17025		0453.07
TestAmerica Nashville	A2LA	WY UST		453.07
TestAmerica Nashville	AIHA	IHLAP		100790
TestAmerica Nashville	Alabama	State Program	4	41150
TestAmerica Nashville	Alaska	Alaska UST	10	UST-087
TestAmerica Nashville	Arizona	State Program	9	AZ0473
TestAmerica Nashville	Arkansas	State Program	6	88-0737
TestAmerica Nashville	CALA	CALA		3744
TestAmerica Nashville	California	NELAC	9	1168CA
TestAmerica Nashville	Colorado	State Program	8	N/A
TestAmerica Nashville	Connecticut	State Program	1	PH-0220
TestAmerica Nashville	Florida	NELAC	4	E87358
TestAmerica Nashville	Illinois	NELAC	5	200010
TestAmerica Nashville	Iowa	State Program	7	131
TestAmerica Nashville	Kansas	NELAC	7	E-10229
TestAmerica Nashville	Kentucky	Kentucky UST	4	19
TestAmerica Nashville	Kentucky	State Program	4	90038
TestAmerica Nashville	Louisiana	NELAC	6	30613
TestAmerica Nashville	Louisiana	NELAC	6	LA100011
TestAmerica Nashville	Maryland	State Program	3	316
TestAmerica Nashville	Massachusetts	State Program	1	M-TN032
TestAmerica Nashville	Minnesota	NELAC	5	047-999-345
TestAmerica Nashville	Mississippi	State Program	4	N/A
TestAmerica Nashville	Montana	MT DEQ UST	8	NA
TestAmerica Nashville	Nevada	State Program	9	TN00032
TestAmerica Nashville	New Hampshire	NELAC	1	2963
TestAmerica Nashville	New Jersey	NELAC	2	TN965
TestAmerica Nashville	New York	NELAC	2	11342
TestAmerica Nashville	North Carolina	North Carolina DENR	4	387
TestAmerica Nashville	North Dakota	State Program	8	R-146
TestAmerica Nashville	Ohio	OVAP	5	CL0033
TestAmerica Nashville	Oklahoma	State Program	6	9412
TestAmerica Nashville	Oregon	NELAC	10	TN200001
TestAmerica Nashville	Pennsylvania	NELAC	3	68-00585
TestAmerica Nashville	Rhode Island	State Program	1	LAO00268
TestAmerica Nashville	South Carolina	State Program	4	84009
TestAmerica Nashville	South Carolina	State Program	4	84009
TestAmerica Nashville	Tennessee	State Program	4	2008
TestAmerica Nashville	Texas	NELAC	6	T104704077-09-TX
TestAmerica Nashville	USDA	USDA		S-48469
TestAmerica Nashville	Utah	NELAC	8	TAN
TestAmerica Nashville	Virginia	NELAC Secondary AB	3	460152
TestAmerica Nashville	Virginia	State Program	3	00323
TestAmerica Nashville	Washington	State Program	10	C789
TestAmerica Nashville	West Virginia	West Virginia DEP	3	219

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



## ATTACHMENT A

## **UST Certificate of Disposal**

## **CONTRACTOR**

Small Business Group, Inc. 10179 Highway 78 Ladson, SC 29456

TEL (843) 879-0403 FAX (843) 879-0401

## **TANK ID & LOCATION**

UST 332Ash; 332 Ash Street, Laurel Bay Housing Area, MCAS Beaufort, S.C.

## **DISPOSAL LOCATION**

Coastal Auto Salvage Co., Inc. 130 Laurel Bay Road Beaufort, S.C. 29906

## TYPE OF TANK SIZE (GAL)

Steel

280

## **CLEANING/DISPOSAL METHOD**

The tank and piping were unearthed, cut open, cleaned with a pressure washer, cut into sections, and recycled.

## **DISPOSAL CERTIFICATION**

I certify that the above tank, piping and equipment has been properly cleaned and disposed of.

(Name) (Date)

Appendix C Laboratory Analytical Report - Groundwater



## Volatile Organic Compounds by GC/MS

#### Client: AECOM - Resolution Consultants

Description: BEALB332TW01WG20151110

Laboratory ID: QK11025-011 Matrix: Aqueous

Date Sampled:11/10/2015 1645

Date Received: 11/12/2015											
RunPrep Method15030B	Analytical Methoo 8260B			i <b>s Date Analyst</b> 015 1550 PAP	Prep	Date	<b>Batch</b> 89908				
Parameter		Nu	CAS mber	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzene		71	-43-2	8260B	0.45	U	5.0	0.45	0.21	ug/L	1
Ethylbenzene		100	-41-4	8260B	0.27	J	5.0	0.51	0.21	ug/L	1
Naphthalene		91	-20-3	8260B	0.96	U	5.0	0.96	0.14	ug/L	1
Toluene		108	-88-3	8260B	0.48	U	5.0	0.48	0.24	ug/L	1
Xylenes (total)		1330	-20-7	8260B	0.57	U	5.0	0.57	0.32	ug/L	1
Surrogate	Q %	Run 1 Recovery	Acceptar Limit								
Bromofluorobenzene		96	75-120	)							
1,2-Dichloroethane-d4		98	70-120	)							
Toluene-d8		100	85-120	)							
Dibromofluoromethane		100	85-11	5							

PQL = Practical quantitation limitB = Detected in the method blankE = Quantitation of compound exceeded the calibration rangeH = Out of holding timeQ = Surrogate failureND = Not detected at or above the MDLJ = Estimated result < PQL and  $\geq$  MDLP = The RPD between two GC columns exceeds 40%N = Recovery is out of criteriaL = LCS/LCSD failureWhere applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"S = MS/MSD failureS = MS/MSD failure

Shealy Environmental Services, Inc. 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

## Semivolatile Organic Compounds by GC/MS (SIM)

Description: BEALB332TW01WG20151110

Laboratory ID: QK11025-011

ate Sampled 11/10/2015 1645

Matrix: Aqueous

Date Sampled. 11/10/2015 1045
Date Received: 11/12/2015

RunPrep Method13520C	Analytical Method Dilution 8270D (SIM) 1		<b>lysis Date Analyst</b> 8/2015 1426 RBH	Prep Date 11/13/2015 16	Batch 646 89585				
Parameter	Nu	CAS mber	Analytical Method	Result Q	LOQ	LOD	DL	Units	Run
Benzo(a)anthracene	56	-55-3	8270D (SIM)	0.49	0.20	0.040	0.019	ug/L	1
Benzo(b)fluoranthene	205	-99-2	8270D (SIM)	0.34	0.20	0.040	0.019	ug/L	1
Benzo(k)fluoranthene	207	-08-9	8270D (SIM)	0.24	0.20	0.040	0.024	ug/L	1
Chrysene	218	-01-9	8270D (SIM)	0.37	0.20	0.040	0.021	ug/L	1
Dibenzo(a,h)anthracene	53	-70-3	8270D (SIM)	0.16 J	0.20	0.080	0.040	ug/L	1
Surrogate	Run 1 Q % Recovery		otance imits						
2-Methylnaphthalene-d10	76	15	-139						
Fluoranthene-d10	81	23-	-154						

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time Q = Surrogate failure ND = Not detected at or above the MDL  $J = Estimated result < PQL and <math>\ge MDL$  $\mathsf{P}=\mathsf{The}\;\mathsf{RPD}\;\mathsf{between}\;\mathsf{two}\;\mathsf{GC}\;\mathsf{columns}\;\mathsf{exceeds}\;40\%$ N = Recovery is out of criteria L = LCS/LCSD failure S = MS/MSD failure Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Shealy Environmental Services, Inc. 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com Appendix D Regulatory Correspondence





Catherine E. Heigel, Director Promoting and protecting the health of the public and the environment

July 1, 2015

Commanding Officer Attention: NREAO Mr. William A. Drawdy United State Marine Corps Air Station Post Office Box 55001 Beaufort, SC 29904-5001

RE: IGWA Laurel Bay Underground Storage Tank Assessment Reports for: See attached sheet

Dear Mr. Drawdy,

The South Carolina Department of Health and Environmental Control (the Department) received the referenced Underground Storage Tank Assessment Reports for the addresses listed above. The regulatory authority for the investigation and cleanup of releases from these tank systems is the South Carolina Pollution Control Act (S.C. Code Ann. §48-1-10 <u>et seq.</u>, as amended).

The Department has reviewed the referenced assessment reports. The submitted analytical results indicate that petroleum constituents are above established Risk-Based Screening Levels and additional investigation is warranted. Specifically, the Department requests that a groundwater sampling proposal be generated to determine if there has been an impact to groundwater at this site.

Please note that the Department's decision is based on information provided by the Marine Corps Air Station (MCAS) to date. Any information found to be contradictory to this decision may require additional action. Furthermore, the Department retains the right to request further investigation if deemed necessary.

If you have any questions, please contact me at kriegkm@dhec.sc.gov or 803-898-0255.

Sincerely,

that M. They

Kent Krieg Department of Defense Corrective Action Section Bureau of Land and Waste Management South Carolina Department of Health and Environmental Control

Cc: Russell Berry (via email) Craig Ehde (via email) Bryan Beck (via email)



Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

Attachment to:

Krieg to Drawdy Subject: IGWA Dated 7/1/2015

## Laurel Bay Underground Storage Tank Assessment Reports for: (97 addresses/110 tanks)

118 Banyan	343 Ash Tank 2
126 Banyan	344 Ash Tank 2
127 Banyan	347 Ash Tank 2
130 Banyan Tank 1	378 Aspen Tank 2
141 Laurel Bay	379 Aspen
151 Laurel Bay	382 Aspen Tank 1
224 Cypress	382 Aspen Tank 2
227 Cypress	394 Acorn Tank 2
256 Beech Tank 2	400 Elderberry
257 Beech Tank 1	432 Elderberry
257 Beech Tank 2	436 Elderberry
264 Beech	473 Dogwood Tank 2
265 Beech Tank 2	482 Laurel Bay
265 Beech Tank 3	517 Laurel Bay
275 Birch	586 Aster
277 Birch Tank 1	632 Dahlia
285 Birch	639 Dahlia Tank 2
292 Birch Tank 3	643 Dahlia Tank 1
297 Birch	644 Dahlia Tank 1
301 Ash	644 Dahlia Tank 2
306 Ash	646 Dahlia Tank 1
310 Ash Tank 1	646 Dahlia Tank 2
313 Ash	665 Camellia
315 Ash Tank 2	699 Abelia
316 Ash	744 Blue Bell
319 Ash	745 Blue Bell Tank 1
320 Ash	747 Blue Bell Tank 1
321 Ash	747 Blue Bell Tank 2
329 Ash	747 Blue Bell Tank 3
330 Ash Tank 2	749 Blue Bell Tank 1
331 Ash	749 Blue Bell Tank 2
332 Ash	751 Blue Bell
333 Ash	762 Althea
335 Ash Tank 1	765 Althea Tank 2
335 Ash Tank 2	766 Althea Tank 4
341 Ash	767 Althea Tank 1
342 Ash Tank 1	768 Althea Tank 2
342 Ash Tank 2	768 Althea Tank 3

Laurel Bay Underground Storage Tank Assessment Reports for: (98 addresses/110 tanks) cont.

768 Althea Tank 4	1067 Gardenia
769 Althea Tank 1	1077 Heather
769 Althea Tank 2	1081 Heather
775 Althea	1101 Iris Tank 2
819 Azalea	1104 Iris
840 Azalea	1105 Iris Tank 2
878 Cobia	1124 Iris Tank 2
891 Cobia	1142 Iris Tank 2
913 Barracuda	1146 Iris Tank 2
916 Barracuda	1218 Cardinal
923 Albacore	1240 Dove
1004 Bobwhite	1266 Dove
1022 Foxglove	1292 Eagle
1031 Foxglove	1299 Eagle Tank 1
1034 Foxglove Tank 2	1302 Eagle
1061 Gardenia Tank 3	1336 Albatross
1064 Gardenia	1351 Cardinal



Catherine E. Heigel, Director Promoting and protecting the health of the public and the environment

> Division of Waste Management Bureau of Land and Waste Management

June 8, 2016

Commanding Officer Attention: NREAO Mr. William A. Drawdy United State Marine Corps Air Station Post Office Box 55001 Beaufort, SC 29904-5001

RE: Approval and Concurrence with Draft Final Initial Groundwater Investigation Report-November and December 2015 Laurel Bay Military Housing Area Multiple Properties Dated April 2015

Dear Mr. Drawdy,

The South Carolina Department of Health and Environmental Control (the Department) received groundwater data in the above referenced Groundwater Investigation Report for the attached addresses on May 2, 2016. The regulatory authority for the investigation and cleanup of releases from these tank systems is the South Carolina Pollution Control Act (S.C. Code Ann. §48-1-10 et seq., as amended).

Per the Department's request, groundwater samples were collected from the attached referenced addresses. The Department reviewed the groundwater data and previous investigations and it agrees with the conclusions and recommendations included in the document. To further assess the impact to groundwater, permanent wells should be installed at the 15 stated addresses. For the remaining 80 addresses, there is no indication of contamination on the property and therefore no further investigation is required at this time.

Please note that the Department's decision is based on information provided by the Marine Corps Air Station (MCAS) to date. Any information found to be contradictory to this decision may require additional action. Furthermore, the Department retains the right to request further investigation if deemed necessary.

If you have any questions, please contact me at petruslb@dhec.sc.gov or 803-898-0294.

Sincerely,

LISTS

Laurel Petrus RCRA Federal Facilities Section

Attachment: Specific Property Recommendations

Cc: Russell Berry, EQC Region 8 (via email) Shawn Dolan, Resolution Consultants (via email) Bryan Beck, NAVFAC MIDATLANTIC (via email) Craig Ehde (via email) Attachment to: Petrus to Drawdy

Subject: Draft Final Initial Groundwater Investigation Report-November and December 2015 Specific Property Recommendations Dated June 8, 2016

## Draft Final Initial Groundwater Investigation Report for (95 addresses)

Permanent Monitoring Well Investigation recommendation (15 addresses)			
130 Banyan Drive	473 Dogwood Drive		
256 Beech Street	747 Blue Bell Lane		
285 Birch Drive	749 Blue Bell Lane		
292 Birch Drive	775 Althea Street		
330 Ash Street	1034 Foxglove Street		
331 Ash Street	1104 Iris Lane		
335 Ash Street	1124 Iris Lane		
342 Ash Street			

118 Banyan Drive	644 Dahlia Drive	
126 Banyan Drive	646 Dahlia Drive	
127 Banyan Drive	665 Camellia Drive	
141 Laurel Bay Blvd	699 Abelia Street	
151 Laurel Bay Blvd	744 Blue Bell Lane	10
224 Cypress Street	745 Blue Bell Lane	
227 Cypress Street	751 Blue Bell Lane	
257 Beech Street	762 Althea Street	
264 Beech Street	765 Althea Street	
265 Beech Street	766 Althea Street	
275 Birch Drive	767 Althea Street	
277 Birch Drive	768 Althea Street	
297 Birch Drive	769 Althea Street	
301 Ash Street	819 Azalea Drive	
306 Ash Street	840 Azalea Drive	
310 Ash Street	878 Cobia Drive	
313 Ash Street	891 Cobia Drive	
315 Ash Street	913 Barracuda Drive	
316 Ash Street	916 Barracuda Drive	
319 Ash Street	923 Wren Lane	
320 Ash Street	1004 Bobwhite Drive	
321 Ash Street	1022 Foxglove Street	
329 Ash Street	1031 Foxglove Street	
332 Ash Street	1061 Gardenia Drive	
333 Ash Street	1064 Gardenia Drive	
341 Ash Street	1067 Gardenia Drive	
347 Ash Street	1077 Heather Street	
378 Aspen Street	1081 Heather Street	
379 Aspen Street	1101 Iris Lane	
382 Aspen Street	1105 Iris Lane	
394 Acorn Street	1142 Iris Lane	
400 Elderberry Drive	1146 Iris Lane	
432 Elderberry Drive	1218 Cardinal Lane	
436 Elderberry Drive	1240 Dove Lane	
482 Laurel Bay Blvd	1266 Dove Lane	
517 Laurel Bay Blvd	1292 Eagle Lane	
586 Aster Street	1299 Eagle Lane	
632 Dahlia Drive	1302 Eagle Lane	
639 Dahlia Drive	1336 Albatross Drive	
643 Dahlia Drive	1351 Cardinal Lane	

Attachment to: Petrus to Drawdy Subject: Draft Final Initial Groundwater Investigation Report-November and December 2015 Specific Property Recommendations Dated June 8, 2016, Page 2