SUMMARY REPORT 149 BEECH STREET (FORMERLY 268 BEECH 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

SUMMARY REPORT 149 BEECH STREET (FORMERLY 268 BEECH 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

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



#### Table of Contents

1.0	INTRODUCTION	1
1.1 1.2	Background Information UST Removal and Assessment Process	
2.0	SAMPLING ACTIVITIES AND RESULTS	3
2.1 2.2 2.3 2.4 2.5 2.6	UST REMOVAL AND SOIL SAMPLING Soil Analytical Results Initial Groundwater Sampling Initial Groundwater Analytical Results Permanent Well Groundwater Sampling Permanent Well Groundwater Analytical Results	. 4 . 5 . 5
3.0	PROPERTY STATUS	6
4.0	REFERENCES	6

#### Tables

- Table 2Laboratory Analytical Results Initial Groundwater
- Table 3
   Laboratory Analytical Results Permanent Monitoring Well Groundwater

#### Appendices

- Appendix A Multi-Media Selection Process for LBMH
- Appendix B UST Assessment Report
- Appendix C Laboratory Analytical Report Initial Groundwater
- Appendix D Laboratory Analytical Report Permanent Well Groundwater
- Appendix E Regulatory Correspondence



## 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 149 Beech Street (Formerly 268 Beech 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 heating oil 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, February 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, February 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, April 2013) and were revised again in Revision 3.0 (SCDHEC, May 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 IGWA sampling process utilizes temporary groundwater sampling points that are typically installed and sampled within the same day. The intent of the sampling point is to determine the presence or absence of the aforementioned COPCs in groundwater and identify whether former UST locations may require additional delineation of COPCs in groundwater. These sampling points are not subjected to the same installation standards as permanent monitoring wells and, as such; the data obtained from the IGWA wells can sometimes be biased high and is considered preliminary data. In order to confirm the presence of any impact to groundwater, a permanent well is installed where IGWA sampling has indicated the presence of COPCs is in excess of the SCDHEC RBSLs for groundwater. If COPCs are found to be present in the permanent well, additional permanent wells are installed to delineate the extent of impact to groundwater and a sampling program is established. Groundwater analytical results from permanent wells 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 149 Beech Street (Formerly 268 Beech Street). The sampling activities at 149 Beech Street (Formerly 268 Beech Street) comprised a soil investigation, IGWA sampling and installation and sampling of a permanent well. Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 268 Beech Street* (MCAS Beaufort, 2009). 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 – February and March 2017* (Resolution Consultants, 2017). The laboratory report that includes the pertinent IGWA analytical results for this site is presented in Appendix C. Details regarding the permanent well installation and



sampling activities at this site are provided in the *Groundwater Assessment Report – March and April 2018* (Resolution Consultants, 2018). The laboratory report that includes the pertinent groundwater analytical results for this site is presented in Appendix D.

#### 2.1 UST Removal and Soil Sampling

On April 6, 2009, a single 280 gallon heating oil UST was removed from the front landscaped bed area adjacent to the driveway at 149 Beech Street (Formerly 268 Beech Street). The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). The UST was removed and properly disposed of (i.e., shipped offsite for recycling or transported to a landfill). 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 5'7" 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 149 Beech Street (Formerly 268 Beech Street) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated December 14, 2016, SCDHEC requested an IGWA for 149 Beech Street (Formerly 268 Beech Street) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix E.



#### 2.3 Initial Groundwater Sampling

On March 6, 2017, a temporary monitoring well was installed at 149 Beech Street (Formerly 268 Beech 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 – February and March 2017* (Resolution Consultants, 2017).

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.H-I (SCDHEC, 2016). Field forms are provided in the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017).

#### 2.4 Initial 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 149 Beech Street (Formerly 268 Beech Street) were greater than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 2), which indicated further investigation was required. In a letter dated July 27, 2017, SCDHEC requested a permanent well be installed for 149 Beech Street (Formerly 268 Beech Street) to confirm the impact to groundwater detected in the temporary well sample. SCDHEC's request letter is provided in Appendix E.

#### 2.5 Permanent Well Groundwater Sampling

On March 14, 2018, a permanent monitoring well was installed at 149 Beech Street (Formerly 268 Beech 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 and the IGWA sample location. The former UST location is indicated on Figures 2 and 3 of the UST Assessment Report (Appendix B). Further details are provided in the *Groundwater Assessment Report – March and April 2018* (Resolution Consultants, 2018).

The sampling strategy for this phase of the investigation required a one-time sampling event of the permanent 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. Field forms are provided in the *Groundwater Assessment Report – March and April 2018* (Resolution Consultants, 2018).

#### 2.6 Permanent Well Groundwater Analytical Results

A summary of the laboratory analytical results and SCDHEC RBSLs is presented in Table 3. A copy of the laboratory analytical data report is included in Appendix D.

The groundwater results collected from 149 Beech Street (Formerly 268 Beech Street) were less than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 3), 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 collected from the permanent monitoring well, SCDHEC made the determination that NFA was required for 149 Beech Street (Formerly 268 Beech Street). This NFA determination was obtained in a letter dated October 25, 2018. SCDHEC's NFA letter is provided in Appendix E.

#### 4.0 REFERENCES

- Marine Corps Air Station Beaufort, 2009. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report 268 Beech Street, Laurel Bay Military Housing Area*, April 2009.
- Resolution Consultants, 2017. Initial Groundwater Investigation Report February and March 2017 for Laurel Bay Military Housing Area, Multiple Properties, Marine Corps Air Station Beaufort, Beaufort, South Carolina, June 2017.



- Resolution Consultants, 2018. *Groundwater Assessment Report March and April 2018 for Laurel Bay Military Housing Area, Multiple Properties, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, September 2018.
- 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 1 Laboratory Analytical Results - Soil 149 Beech Street (Formerly 268 Beech Street) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Results Sample Collected 04/06/09
Volatile Organic Compounds Analyz	ed by EPA Method 8260B (mg/kg)	
Benzene	0.003	ND
Ethylbenzene	1.15	0.169
Naphthalene	0.036	3.97
Toluene	0.627	0.00617
Xylenes, Total	13.01	0.665
Semivolatile Organic Compounds Ar	alyzed by EPA Method 8270D (mg/kg)	
Benzo(a)anthracene	0.066	ND
Benzo(b)fluoranthene	0.066	ND
Benzo(k)fluoranthene	0.066	ND
Chrysene	0.066	ND
Dibenz(a,h)anthracene	0.066	ND

Notes:

<sup>(1)</sup> South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 1.0 (SCDHEC, May 2001).

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 2 Laboratory Analytical Results - Initial Groundwater 149 Beech Street (Formerly 268 Beech Street) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Site-Specific Groundwater VISLs (µg/L) <sup>(2)</sup>	Results Sample Collected 03/06/17
Volatile Organic Compounds Analyze	ed by EPA Method 8260B	(µg/L)	
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	5.0
Naphthalene	25	29.33	28
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	15
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (µg/L)			
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA	ND
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	ND
Dibenz(a,h)anthracene	10	NA	ND

#### Notes:

(1) 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

#### Table 3 Laboratory Analytical Results - Permanent Well Groundwater 149 Beech Street (Formerly 268 Beech Street) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Site-Specific Groundwater VISLs (µg/L) <sup>(2)</sup>	Results Sample Collected 03/20/18
Volatile Organic Compounds Analyze	d by EPA Method 8260B	6 (µg/L)	
Benzene	5	16.24	ND
Ethylbenzene	700	45.95	6.2
Naphthalene	25	29.33	19
Toluene	1000	105,445	ND
Xylenes, Total	10,000	2,133	19
Semivolatile Organic Compounds Analyzed by EPA Method 8270D (µg/L)			
Benzo(a)anthracene	10	NA	ND
Benzo(b)fluoranthene	10	NA	ND
Benzo(k)fluoranthene	10	NA	ND
Chrysene	10	NA	ND
Dibenz(a,h)anthracene	10	NA	ND

#### Notes:

(1) 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 D.

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	

Submit Completed Form To: UST Program SCDHEC 2600 Bull Street Columbia, South Carolina 29201 Telephone (803) 896-7957

## I. OWNERSHIP OF UST (S)

MCAS Beaufort, Co	ommanding Officer Attn	: NREAO (Craig Ehde)
Owner Name (Corporatio	n, Individual, Public Agency, Oth	er)
P.O. Box 55001		
Mailing Address		
Beaufort,	South Carolina	a 29904-5001
City	State	Zip Code
843	228-7317	Craig Ehde
Area Code	Telephone Number	Contact Person

## II. SITE IDENTIFICATION AND LOCATION

	Military Housing Area, Marine Corps Air Station, Beaufort, SC Company Site Identifier
	Laurel Bay Military Housing Area
Street Address or	State Road (as applicable)
Beaufort,	Beaufort
City	County

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. This section must be completed.

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

		268Beech
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
E.	Month/Year of Last Use	Mid 1980s
F.	Depth (ft.) To Base of Tank	517"
G.	Spill Prevention Equipment Y/N	No
H.	Overfill Prevention Equipment Y/N	No
I.	Method of Closure Removed/Filled	Removed
J.	Date Tanks Removed/Filled	4/6/09
K.	Visible Corrosion or Pitting Y/N	Yes
L.	Visible Holes Y/N	Yes

M. Method of disposal for any USTs removed from the ground (attach disposal manifests) <u>Tank was removed from the ground, cleaned and recycled. See</u> Attachment "A."

N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests)

Fluid was pumped from the tank and disposed of by MCAS.

O. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST Corrosion, pitting and holes were found on the entire surface.

15

# VII. PIPING INFORMATION

		268Beech		
		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	Yes		
F.	Visible Corrosion or Pitting Y/N	Yes		
G.	Visible Holes Y/N	No		
H.	Age	Early 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. The copper supply and return piping was 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.

4

# IX. SITE CONDITIONS

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

.

# X. SAMPLE INFORMATION

# A. SCDHEC Lab Certification Number 96012001

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
68 Beech	Excav at fill end	Soil	Clay	5'7"	4/6/09 1345 hrs	P. Shaw	
					. <u>.</u>		
8							
9							<u> </u>
10			·····				-
11 12							
12							
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.

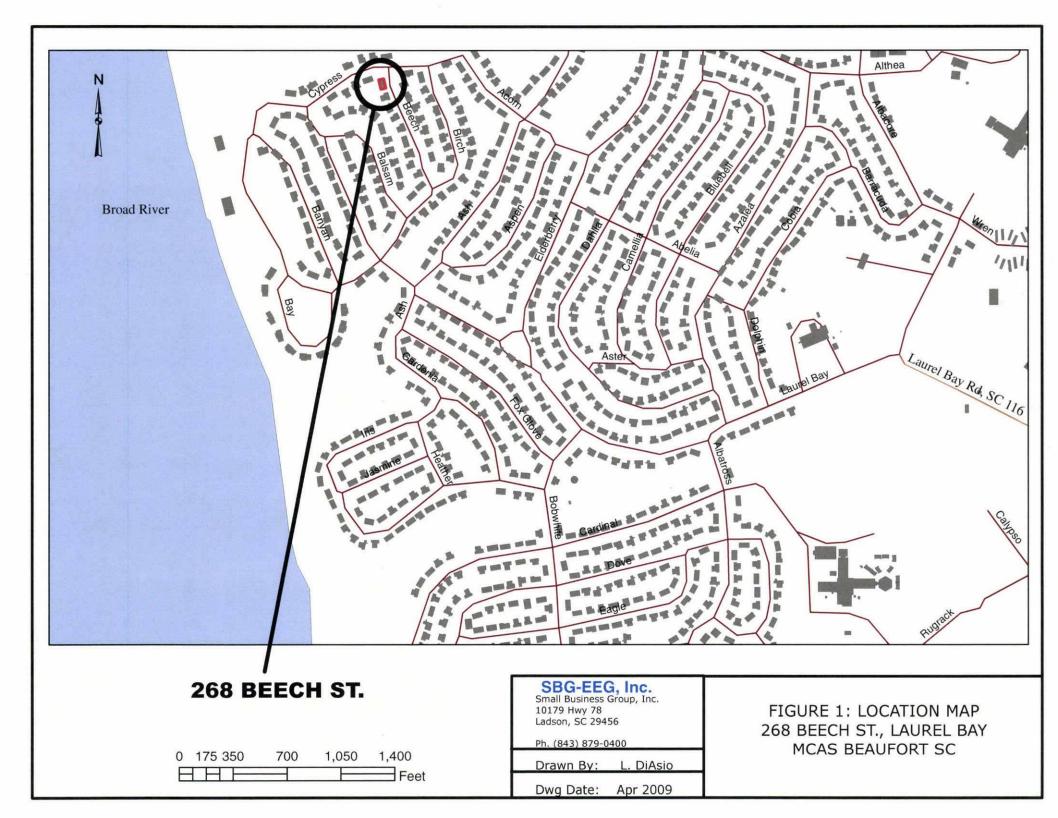
# XII. RECEPTORS

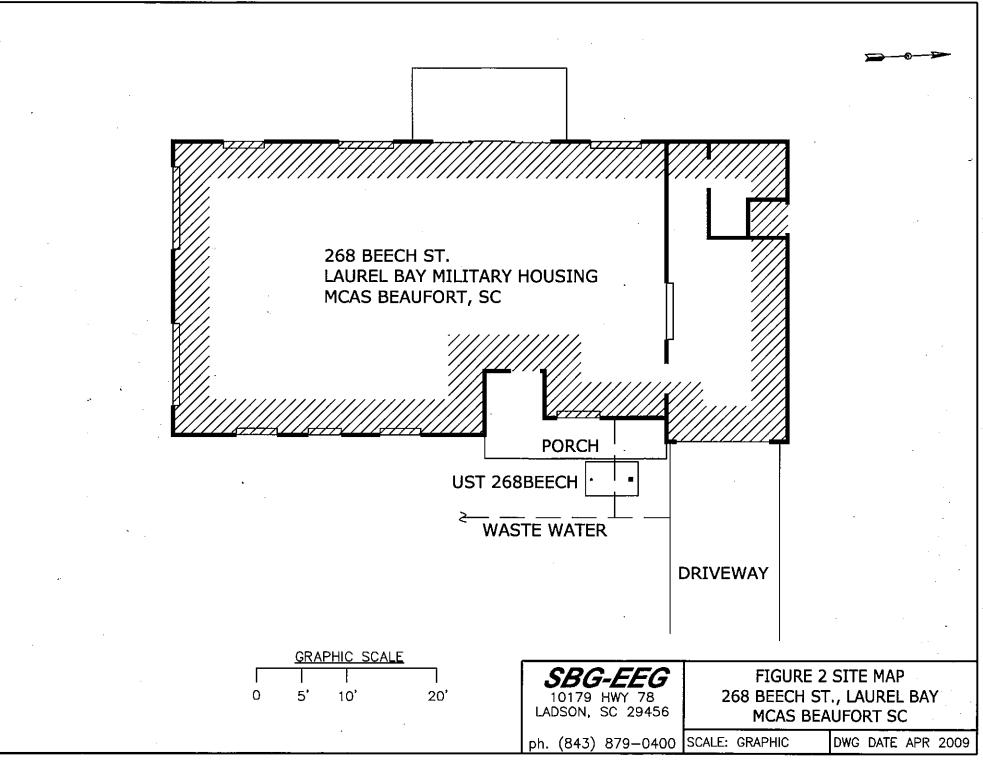
, 		Yes	No
А.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?		x
	If yes, indicate type of receptor, distance, and direction on site map.		
B.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		Х
	If yes, indicate 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 contamination? *Sewer, water.	X*	
	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.		

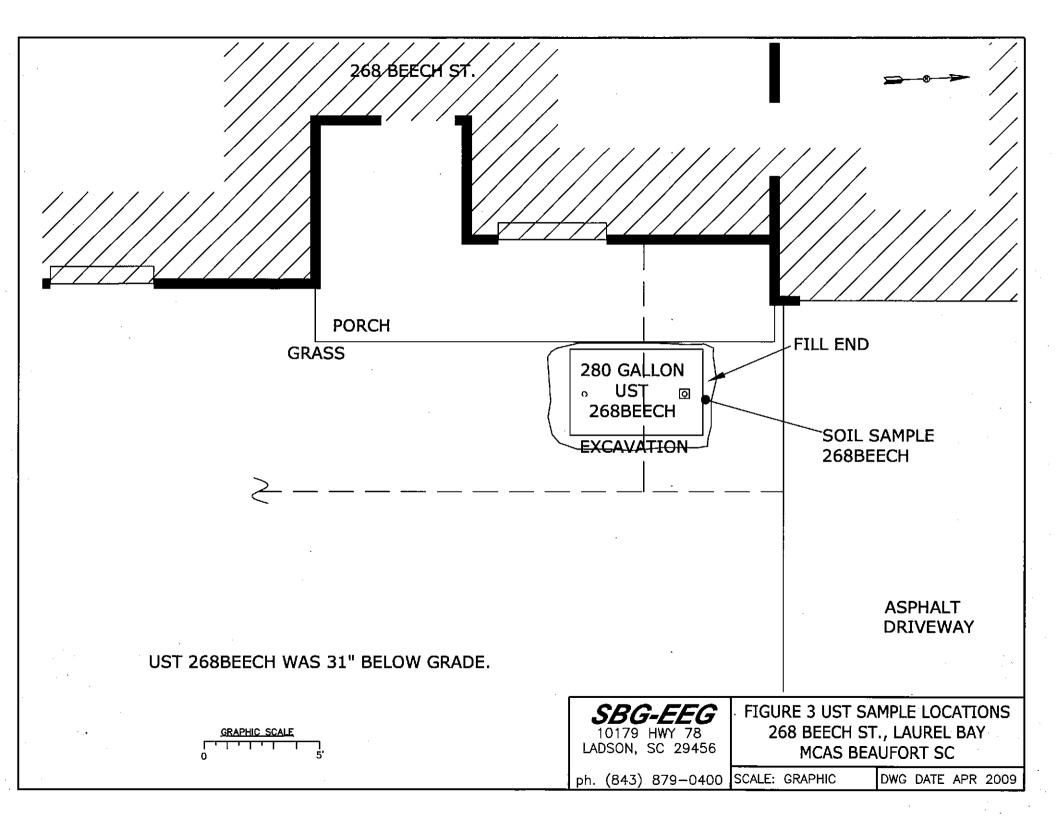
# XIII. SITE MAP

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: UST 268Beech excavation site. Tank was located beneath the two closest shrubs.

# 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.

a for each box coning for an elec on the table below and on the following page.
268Beech
ND
0.00617 mg/kg
0.169 mg/kg
0.665 mg/kg
3.97 mg/kg
ND

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	<b>W-</b> 1	W-2	W -3	W -4
Free Product Thickness	(µg/l) 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				

23

#### 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

**IestAmerica** 

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

April 24, 2009 12:33:16PM

Client: EEG - Env. Enterprise Group (2449) 10179 Highway 78 Ladson, SC 29456 Tom McElwee Attn:

#### SAMPLE IDENTIFICATION

268 Beech 255 Beech-1 255 Beech-2

279 Birch

Work Order: Project Name: Project Nbr: P/O Nbr: Date Received: NSD0949 Laurel Bay Housing Project [none] 0829 04/10/09

#### LAB NUMBER

NSD0949-01 NSD0949-02 NSD0949-03 NSD0949-04

#### COLLECTION DATE AND TIME

04/06/09 13:45 04/07/09 10:40 04/07/09 14:45 04/09/09 14:20

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

South Carolina Certification Number: 84009001

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

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

All solids results are reported in wet weight unless specifically stated.

Estimated uncertainty is available upon request, This report has been electronically signed. Report Approved By:

10 Has

Ken A. Hayes Senior Project Manager

THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica** 

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

			· · · · ·	-
Client	EEG - Env. Enterprise Group (2449)	Work Order:	NSD0949	
	10179 Highway 78	Project Name:	Laurel Bay Housing Project	
	Ladson, SC 29456	Project Number	[none]	
Attn	Tom McElwee	Received:	04/10/09 08:10	

#### ANALYTICAL REPORT

		4	NALYTICAL	REPORT				
Апајуte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batel
Sample ID: NSD0949-01 (268 Be	ech - Soil) Sam	pled: 04/0	6/09 13:45					
General Chemistry Parameters								
% Dry Solids	78.0		%	0.500	1	04/16/09 08:12	SW-846	904232
Selected Volatile Organic Compounds	s by EPA Method	8260B	· ·					
Benzene	ND		mg/kg dry	0.00205	1	04/20/09 15:32	SW846 8260B	904305
Ethylbenzene	0.169		mg/kg dry	0.00205	1	04/20/09 15:32	SW846 8260B	904305
Naphthalene	3.97	H2	mg/kg dry	0.283	50	04/21/09 18:39	SW846 8260B	904320
Toluene	0.00617		mg/kg dry	0.00205	1	04/20/09 15:32	SW846 8260B	904305
Xylenes, total	0.665		mg/kg dry	0.00513	1	04/20/09 15:32	SW846 8260B	904305
Surr: 1,2-Dichloroethane-d4 (41-150%)	99%			0100212		04/20/09 15:32	SW846 8260B	904303
Surr: 1,2-Dichloroethane-d4 (41-150%)	124 %					04/21/09 18:39	SW846 8260B	90432(
Surr: Dibromofluoromethane (55-139%)	102 %					04/20/09 15:32	SW846 8260B	90430
Surr: Dibromofluoromethane (55-139%)	98 %					04/21/09 18:39	SW846 8260B	90432
Surr: Toluene-d8 (57-148%)	111%					04/20/09 15:32	SW846 8260B	90430
urr: Toluene-d8 (57-148%)	97 %					04/21/09 18:39	SW846 8260B	90432
urr: 4-Bromofluorobenzene (58-150%)	122 %					04/20/09 15:32	SW846 8260B	90430
urr: 4-Bromofluorobenzene (58-150%)	118 %					04/21/09 18:39	SW846 8260B	90432
Polyaromatic Hydrocarbons by EPA 8	3270D			۰.				. '
Acenaphthene	ND		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
Acenaphthylene	ND		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
Anthracene	ND		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
Benzo (a) anthracene	ND		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
Benzo (a) pyrene	ND		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
Benzo (b) fluoranthene	ND		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
Senzo (g,h,i) perylene	ND		mg/kg dry	0.0842		04/15/09 15:38	SW846 8270D	904179
Benzo (k) fluoranthene	ND		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
Chrysene	ND		mg/kg dry	0.0842	· 1	04/15/09 15:38	SW846 8270D	904179
Dibenz (a,h) anthracene	ND			0.0842	1	04/15/09 15:38	SW846 8270D	904175
			mg/kg dry		-			
Fluoranthene	ND		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
luorene	0.633		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
ndeno (1,2,3-cd) pyrene	ND		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
Japhthalene	0.393		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
henanthrene	1.25		mg/kg dry	0.0842	- 1	04/15/09 15:38	SW846 8270D	904179
yrene	ND		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
-Methylnaphthalene	2,40		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	904179
-Methylnaphthalene	3.32		mg/kg dry	0.0842	1	04/15/09 15:38	SW846 8270D	90417
urr: Terphenyl-d14 (26-128%)	64 %				:	04/15/09 15:38	SW846 8270D	90417
Surr: 2-Fluorobiphenyl (19-109%)	65 %					04/15/09 15:38	SW846 8270D	90417
Surr: Nitrobenzene-d5 (22-104%)	69 %		•		1	04/15/09 15:38	SW846 8270D	90417

<u>TestAmerica</u>

THE LEADER IN ENVIRONME	ENTAL TESTING		2960 Fost	er Creighton Road Nashv	ille, TN 37204 * 800	-765-0980 * Fax 615-	726-3404	
				·····				
Client EEG - Env. Enterprise Group (	2449)	· · · ·		Work Order:	NSD0949			
10179 Highway 78				Project Name:	Laurel Bay Hou	sing Project		
Ladson, SC 29456				Project Number:	[none]	ising r toject		
				Received:	04/10/09 08:10			
Attn ' Tom McElwee		· · ·		Received:				
	•	A	NALYTICA	L REPORT				
				· ···	Dilution	Analysis		
Analyte	Result	Flag	Units	MRL		Date/Time	Method	Batch
Sample ID: NSD0949-02 (255 Bo	ech-1 - Soil) Sar	npled: 04	/07/09 10:40	•				
General Chemistry Parameters	· · · · · · · · · · · · · · · · · · ·					:		
% Dry Solids	81.6		%	0.500	1	04/16/09 08:12	SW-846	9042321
Selected Volatile Organic Compound	ls by EPA Method	8260B						
Benzene	ND		mg/kg dry	0.0019	9 1	04/20/09 16:02	SW846 8260B	9043056
Ethylbenzene	ND		mg/kg dry	0.0019	9 1	04/20/09 16:02	SW846 8260B	9043056
Naphthalene	0.0115		mg/kg dry	0.0050	0 1	04/21/09 18:08	SW846 8260B	9043200
Toluene	0.00529		mg/kg dry	0.0019	9 1	04/20/09 16:02	SW846 8260B	9043056
Xylenes, total	ND		mg/kg dry	0.0049	8 : 1	04/20/09 16:02	SW846 8260B	9043056
Surr: 1,2-Dichloroethane-d4 (41-150%)	94 %					04/20/09 16:02	SW846 8260B	9043056
Surr: 1,2-Dichloroethane-d4 (41-150%)	131 %					04/21/09 18:08	SW846 8260B	9043200
Surr: Dibromofluoromethane (55-139%)	99 %					04/20/09 16:02	SW846 8260B	9043056
Surr: Dibromofluoromethane (55-139%)	103 %					04/21/09 18:08	SW846 8260B	9043200
Surr: Toluene-d8 (57-148%)	98 %					04/20/09 16:02	SW846 8260B	9043056
Surr: Toluene-d8 (57-148%)	99 %					04/21/09 18:08	SW846 8260B	9043200
Surr: 4-Bromofluorobenzene (58-150%)	103 %	· ·				04/20/09 16.02	SW846 8260B	9043056
Surr: 4-Bromofluorobenzene (58-150%)	147 %					04/21/09 18:08	SW846 8260B	9043200
Polyaromatic Hydrocarbons by EPA	8270D		:		· · · · · ·			:
Acenaphthene	ND		mg/kg dry	0.0808	3 1	04/15/09 16:00	SW846 8270D	9041798
Acenaphthylene	ND		mg/kg dry	0.0808	3 1	04/15/09 16:00	SW846 8270D	9041798
Anthracene	ND		mg/kg dry	0.0808	3 1	04/15/09 16:00	SW846 8270D	9041798
Benzo (a) anthracene	ND		mg/kg dry	0.0808	3 1	04/15/09 16:00	SW846 8270D	9041798

Annacene	ND	mg/kg ci y	0.0406	Ι.	04/13/09 10:00	3 W 840 82 / VD	9041798
Benzo (a) anthracene	ND	mg/kg dry	0.0808	I	04/15/09 16:00	SW846 8270D	9041798
Benzo (a) pyrene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Benzo (b) fluoranthene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Benzo (g,h,i) perylene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Benzo (k) fluoranthene	ND /	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Chrysene	• ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Dibenz (a,h) anthracene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Fluoranthene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Fluorene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Indeno (1,2,3-cd) pyrene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Naphthalene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Phenanthrene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Pyrene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
1-Methylnaphthalene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
2-Methylnaphthalene	ND	mg/kg dry	0.0808	1	04/15/09 16:00	SW846 8270D	9041798
Surr: Terphenyl-d14 (26-128%)	45 %				04/15/09 16:00	SW846 8270D	9041798
Surr: 2-Fluorobiphenyl (19-109%)	58 %		·	•	04/15/09 16:00	SW846 8270D	9041798
Surr: Nitrobenzene-d5 (22-104%)	57 %				04/15/09 16:00	SW846 8270D	9041798

Page 3 of 18

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

Client EEG - Env. Enterprise Gra 10179 Highway 78 Ladson, SC 29456 Attn Tom McElwee	oup (2449)		Work Order: Project Name: Project Number: Received:	NSD0949 Laurel Bay Hou: [none] 04/10/09 08:10	sing Project		
		ANALYTICA	L REPORT				
Analyte	Result	Flag Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NSD0949-03 (255	5 Beech-2 - Soil) Samp	led: 04/07/09 14:45					
General Chemistry Parameters							
% Dry Solids	79.1	%	0.500	1	04/16/09 08:12	SW-846	9042321
•							
Selected Volatile Organic Comp	-						
Benzene	ND	mg/kg dry	0.0021		04/20/09 16:33	SW846 8260B	9043056
Ethylbenzene	ND	mg/kg dry	0.0021		04/20/09 16:33	SW846 8260B	9043056
Naphthalene	0.0123	mg/kg dry	0.0054		04/20/09 16:33	SW846 8260B	9043056
Toluene Vulezos total	0.00536	mg/kg dry	0.0021		04/20/09 16:33	SW846 8260B	9043056
Xylenes, total Surr: 1,2-Dichloroethane-d4 (41-150	ND %) 93 %	mg/kg dry	0.0054	4 1	04/20/09 16:33	SW846 8260B	9043056
Surr: 1,2-Dicnioroeinane-a4 (41-130 Surr: Dibromofluoromethane (55-139					04/20/09 16:33 04/20/09 16:33	SW846 8260B SW846 8260B	904305 904305
Surr: Toluene-d8 (57-148%)	94%				04/20/09 16:33	SW846 8260B	904305
Surr: 4-Bromofluorobenzene (58-150					04/20/09 16:33	SW846 8260B	904305
Polyaromatic Hydrocarbons by E	EPA 8270D						
Acenaphthene	ND	mg/kg dry	0.0845	1	04/15/09 16:23	SW846 8270D	9041798
Acenaphthylene	ND	mg/kg dry	0.0845		04/15/09 16:23	SW846 8270D	9041798
Anthracene	ND	mg/kg dry	0.0845		04/15/09 16:23	SW846 8270D	9041798
Benzo (a) anthracene	0.0967	mg/kg dry	0.0845		04/15/09 16:23	SW846 8270D	9041798
Benzo (a) pyrene	ND	mg/kg dry	0.0845		04/15/09 16:23	SW846 8270D	9041798
Benzo (b) fluoranthene	ND	mg/kg dry	0.0845	1 -	04/15/09 16:23	SW846 8270D	9041798
Benzo (g,h,i) perylene	ND	mg/kg dry	0.0845	1	04/15/09 16:23	SW846 8270D	9041798
Benzo (k) fluoranthene	ND	mg/kg dry	0.0845	1	04/15/09 16:23	SW846 8270D	9041798
Chrysene	ND	mg/kg dry	0.0845	1	04/15/09 16:23	SW846 8270D	9041798
Dibenz (a,h) anthracene	ND	mg/kg dry	0.0845	1	04/15/09 16:23	SW846 8270D	9041798
Fluoranthene	0.287	mg/kg dry	0.0845	. 1	04/15/09 16:23	SW846 8270D	9041798
Fluorene	. ND	mg/kg dry	0.0845	. 1	04/15/09 16:23	SW846 8270D	9041798
Indeno (1,2,3-cd) pyrene	ND	mg/kg dry	0.0845	1	04/15/09 16:23	SW846 8270D	9041798
Naphthalene	ND	mg/kg dry	0.0845	1	04/15/09 16:23	SW846 8270D	9041798
Phenanthrene	0.207	mg/kg dry	0.0845	1	04/15/09 16:23	SW846 8270D	9041798
Pyrene	0.266	mg/kg dry	0.0845	1	04/15/09 16:23	SW846 8270D	9041798
1-Methylnaphthalene	ND	mg/kg dry	0.0845	1	04/15/09 16:23	SW846 8270D	9041798
2-Methylnaphthalene	ND	mg/kg dry	0.0845	1	04/15/09 16:23	SW846 8270D	9041798
Surr: Terphenyl-d14 (26-128%)	69 %				04/15/09 16:23	SW846 8270D	904179
Surr: 2-Fluorobiphenyl (19-109%)	60 %			:	04/15/09 16:23	SW846 8270D	9041798
Surr: Nitrobenzene-d5 (22-104%)	59 %				04/15/09 16:23	SW846 8270D	904179

:

THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica** 

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

			· · · · · · · · · · · · · · · · · · ·	· ·
Client	EEG - Env. Enterprise Group (2449)	Work Order:	NSD0949	
	10179 Highway 78	Project Name:	Laurel Bay Housing Project	
	Ladson, SC 29456	Project Number:	[none]	
Attn	Tom McElwee	Received:	04/10/09 08:10	•

### ANALYTICAL REPORT

				Dilution	Analysis		
Analyte	Result	Flag Unit	s MRL	Factor	Date/Time	Method	Batch
Sample ID: NSD0949-04 (279 General Chemistry Parameters	Birch - Soil) Sam	pled: 04/09/09 14:	20				
% Dry Solids	72.8	%	0.500	1	04/16/09 08:12	SW-846	904232
Selected Volatile Organic Compour	nds by EPA Method	8260B					
Benzene	ND	mg/kg di	y 0.00210	· · · 1	04/20/09 17:04	SW846 8260B	9043050
Ethylbenzene	0.0125	mg/kg di	y 0.00210	1	04/20/09 17:04	SW846 8260B	9043050
Naphthalene	0.188	mg/kg di	y 0.00524	1	04/20/09 17:04	SW846 8260B	9043056
Toluene	0.00370	mg/kg di	y 0.00210	1	04/20/09 17:04	SW846 8260B	9043056
Xylenes, total	ND <sup>1</sup>	mg/kg di		1	04/20/09 17:04	SW846 8260B	9043056
Surr: 1,2-Dichloroethane-d4 (41-150%)	103 %				04/20/09 17:04	SW846 8260B	904305
Surr: Dibromofluoromethane (55-139%)	102 %		: .: .		04/20/09 17:04	SW846 8260B	904305
Surr: Toluene-d8 (57-148%)	93 %				04/20/09 17.04	SW846 8260B	904305
Surr: 4-Bromofluorobenzene (58-150%)	100 %			e e e	04/20/09 17:04	SW846 8260B	904305
Polyaromatic Hydrocarbons by EPA	A 8270D		; .			:	
Acenaphthene	ND	mg/kg di	y 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Acenaphthylene	ND	mg/kg di	y 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Anthracene	0.0972	mg/kg di	y 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Benzo (a) anthracene	ND	mg/kg di	y 0.0904	- 1	04/15/09 17:08	SW846 8270D	9041798
Benzo (a) pyrene	ND	mg/kg di	y 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Benzo (b) fluoranthene	ND	mg/kg di	y 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Benzo (g,h,i) perylene	ND	mg/kg di	у 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Benzo (k) fluoranthene	ND	mg/kg di	y 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Chrysene	ND	mg/kg di	y 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Dibenz (a,h) anthracene	ND	mg/kg di	y 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Fluoranthene	0.584	mg/kg di	у 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Fluorene	ND	mg/kg di	ý. 0.0904	. 1	04/15/09 17:08	SW846 8270D	9041798
Indeno (1,2,3-cd) pyrene	ND	mg/kg di	у 0.0904	I	04/15/09 17:08	SW846 8270D	9041798
Naphthalene	0.0913	mg/kg di	y 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Phenanthrene	0.387	mg/kg di	y 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
Pyrene	0.370	mg/kg di	y 0.0904	1	04/15/09 17:08	SW846 8270D	9041798
1-Methylnaphthalene	0.291	mg/kg dr		1	04/15/09 17:08	SW846 8270D	9041798
2-Methylnaphthalene	0.419	mg/kg dr	· · · · · · · · · · · · · · · · · · ·	1	04/15/09 17:08	SW846 8270D	9041798
Surr: Terphenyl-d14 (26-128%)	66 %				04/15/09 17:08	SW846 8270D	904179
Surr: 2-Fluorobiphenyl (19-109%)	50 %	· ·.	· · ·		04/15/09 17:08	SW846 8270D	904179
Surr: Nitrobenzene-d5 (22-104%)	53 %				04/15/09 17:08	SW846 8270D	904179

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

Page 6 of 18

Client	EEG - Env. Enterprise Group (2449)	Work Order:	NSD0949
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	04/10/09 08;10

### SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
Polyaromatic Hydrocarbons	by EPA 8270D		•••••••••••••				
SW846 8270D	9041798	NSD0949-01	30.61	1.00	04/13/09 10:35	TEM	EPA 3550B
SW846 8270D	9041798	NSD0949-02	30.50	1.00	04/13/09 10:35	TEM	EPA 3550B
SW846 8270D	9041798	NSD0949-03	30.06	1.00	04/13/09 10:35	TEM	EPA 3550B
SW846 8270D	9041798	NSD0949-04	30.54	1.00	04/13/09 10:35	TEM	EPA 3550B
Selected Volatile Organic Co	ompounds by EPA Method	8260B					
SW846 8260B	9043056	NSD0949-01	6.25	5.00	04/06/09 13:45	JRL.	EPA 5035
SW846 8260B	9043200	NSD0949-01RE1	5.66	5.00	04/06/09 13:45	JRL	EPA 5035
SW846 8260B	9043056	NSD0949-02	6.15	5.00	04/07/09 10:40	JRL	EPA 5035
SW846 8260B	9043200	NSD0949-02RE1	6.13	5.00	04/07/09 10:40	JRL	EPA 5035
SW846 8260B	9043056	NSD0949-03	5.81	5.00	04/07/09 14:45	JRL	EPA 5035
SW846 8260B	9043056	NSD0949-04	6.55	5.00	04/09/09 14:20	JRL	EPA 5035
							. 1

THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica** 

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

·••				
Client	EEG - Env. Enterprise Group (2449)	Work Order:	NSD0949	
	10179 Highway 78	Project Name:	Laurel Bay Housing Project	
	Ladson, SC 29456	Project Number:	[none]	
Attn	Tom McElwee	Received:	04/10/09 08:10	

		PROJECT	CQUALITY CO Blank	ONTROL DATA	<b>A</b> · ·		
Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time	
Selected Volatile Organic Compo	ounds by EPA Method	1 8260B		• • • • • • • • • • • • • • • • •			
9043056-BLK1	• .						
Benzene	<0.000670		mg/kg wet	9043056	9043056-BLK1	04/20/09 14:30	
Ethylbenzene	<0.000670		mg/kg wet	9043056	9043056-BLK1	04/20/09 14:30	
Naphthalene	<0.00151		mg/kg wet	9043056	9043056-BLK1	04/20/09 14:30	
Toluene	<0.000670		mg/kg wet	9043056	9043056-BLK1	04/20/09 14:30	
Xylenes, total	< 0.00172		mg/kg wet	9043056	9043056-BLK1	04/20/09 14:30	
Surrogate: 1,2-Dichloroethane-d4	102%		1	9043056	9043056-BLK1	04/20/09 14:30	
Surrogate: Dibromofluoromethane	103%			9043056	9043056-BLK1	04/20/09 14:30	
Surrogate: Toluene-d8	92%			9043056	9043056-BLK1	04/20/09 14:30	
Surrogate: 4-Bromofluorobenzene	84%			9043056	9043056-BLK1	04/20/09 14:30	
			1				
9043200-BLK1							
Benzene	<0.000670		mg/kg wet	9043200	9043200-BLK1	04/21/09 11:56	
Ethylbenzene	<0.000670		mg/kg wet	9043200	9043200-BLK1	04/21/09 11:56	:
Naphthalenc	<0.00151		mg/kg wet	9043200	9043200-BLK1	04/21/09 11:56	
Toluene	<0.000670		mg/kg wet	9043200	9043200-BLK1	04/21/09 11:56	•
Xylenes, total	<0.00172		mg/kg wet	9043200	9043200-BLK1	04/21/09 11:56	
Surrogate: 1,2-Dichloroethane-d4	128%			9043200	9043200-BLK1	04/21/09 11:56	
Surrogate: Dibromofluoromethane	101%			9043200	9043200-BLK1	04/21/09 11:56	
Surrogate: Toluene-d8	93%			9043200	9043200-BLK1	04/21/09 11:56	
Surrogate: 4-Bromofluorobenzene	110%			9043200	9043200-BLK1	04/21/09 11:56	•
Polyaromatic Hydrocarbons by l	EPA 8270D						
9041798-BLK1			-				•
Acenaphthene	<0.0310		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	
Accnaphthylene	<0.0320		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	
Anthracene	<0.0330		mg/kg wet	9041798	9041798-BLKI	04/14/09 17:34	
Benzo (a) anthracene	<0.0380		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	· · · ·
Benzo (a) pyrene	<0.0290		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	et e
Benzo (b) fluoranthene	<0.0320		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	*
Benzo (g,h,i) perylene	<0.0290		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	
Benzo (k) fluoranthene	<0.0290		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	
Chrysene	<0.0390		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	
Dibenz (a,h) anthracene	<0.0310		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	
Fluoranthene	<0.0340		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	
Fluorene	<0.0390		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	. :
Indeno (1,2,3-cd) pyrene	<0.0310		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	· •
Naphthalene	<0.0410		mg/kg wct	9041798	9041798-BLK1	04/14/09 17:34	
Phenanthrene	<0.0340		mg/kg wet	9041798	9041798-BLK1	04/14/09 17;34	· · · · · · · · · · · · · · · · · · ·
Ругепе	<0.0410		mg/kg wet	9041798	9041798-BLK1	04/14/09 17:34	
Surrogate: Terphenyl-d14	80%			9041798	9041798-BLK1	04/14/09 17:34	
Surrogate: 2-Fluarobiphenyl	81%			9041798	9041798-BLK1	04/14/09 17:34	
				1			· · · · ·

Page 7 of 18

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

		· · · ·	
Client	EEG - Env. Enterprise Group (2449)	Work Order:	NSD0949
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	04/10/09 08:10

#### PROJECT QUALITY CONTROL DATA Blank - Cont.

			_	Blank - Cor	nt.			
Analyte		Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time	
Polyaromatic Hy	drocarbons b	oy EPA 8270D		· · · · · · · · · · · · · · · · · · ·		• • • • • • • • • • • • • • • • • • • •		•••••••••••••••••••••••••••••••••••••••
9041798-BLK1 Surrogate: Nitrobenzo	ene-d5	83%			9041798	9041798-BLK	1 04/14/09 17:34	
					-		· ·	
	- - -							
	1.						÷	
				•				
				· · · · ·			· · ·	
				· · · ·			.:	
				· · ·				
		• • •						· · ·
							· · ·	· · ·
							· · ·	
· .	· · ·							
	• •		• • • •		:			· · · · · · · · · · · · · · · · · · ·
·.		· · · · · · · · · · · · · · · · · · ·	····· ;		· · · · · ·		· · · ·	
				· ·		· · ·		
:		· · · · ·				· · · · · · · · · · · · · · · · · · ·		
	: • •		•		· · · ·			Page 8 of 18
			•					
• •		· · · · · · · · · · · · · · · · · · ·			• 1	· · · · · · · · · · · · · · · · · · ·	· · ·	• •

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

		· · · · · ·	• • •	
Client	EEG - Env. Enterprise Group (2449)		Work Order:	NSD0949
	10179 Highway 78		Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456		Project Number:	[none]
Attn	Tom McElwee		Received:	04/10/09 08:10

# PROJECT QUALITY CONTROL DATA

Duplicate

Analyte	Orig. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	A % Rec. D	nalyzed atc/Time
General Chemistry Parameters			· · · · · · · · · · · · · · · · · · ·						•••••	
9042321-DUP1 % Dry Solids	86.1	84.8	· · · · .	%	2	20	<b>90423</b> 21	NSD0937-15	04/	16/09 08:12
								:		
	. ".		· · · ·							
								1		
					•				:	
: · · · · ·										
			: 							
								1 .		
			· ·							
			· .	•.						-
:			1. T							
			·	:						
	•		•	·					,	
 1	·**.									
									. :-	
			·1		:					
			. : .					· · · · · · · · · · · · · · · · · · ·		
			-					· :	:	•
						۰.		• •		· · · · ·
	•		· · · · · · · · · · · · · · · · · · ·	•••						· · · · ·
	···· · · ·			· · · · · · · · · · · · · · · · · · ·					•	
	· : · ·		· ··:: · · · · · · · · · · · · · · · ·		•					· · · ·
				:						· · · · ·
		. *							Page 9	of 18
				: ::: : 		· :	14 		.*	

#### THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

Client	EEG - Env. Enterprise Group (2449)		Work Order:	NSD0949
	10179 Highway 78	·	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456		Project Number:	[none]
Attn	Tom McElwee		Received:	04/10/09 08:10

# PROJECT QUALITY CONTROL DATA

LCS

Analyte	Known Val.	Analyzed Val	Q U	nits % Rec.	Target Range	Batch	Analyzed Date/Time
Selected Volatile Organic Compour	nds by EPA Method 2	8260B		·····	•		· · · • • • • · • • • • • • • • • • • •
9043056-BS1	· · · · · · · · · · · · · · · · · · ·	-					
Benzene	50.0	51.3	ug	/kg 103%	76 - 130	9043056	04/20/09 12:28
Ethylbenzene	50.0	44.5		/kg 89%	80 - 128	9043056	04/20/09 12:28
Naphthalene	50.0	36.3		/kg 73%	63 - 144	9043056	04/20/09 12:28
Toluene	50.0	45.6	-	/kg 91%	80 - 125	9043056	04/20/09 12:28
Xylenes, total	150	137	-	/kg 91%	79 - 130	9043056	04/20/09 12:28
Surrogate: 1,2-Dichloroethane-d4	50.0	51.0	-	102%	41 - 150	9043056	04/20/09 12:28
Surrogate: Dibromofluoromethane	50.0 •	53.1		106%	55 - 139	9043056	04/20/09 12:28
Surrogate: Toluene-d8	50.0	46.5		93%	57 - 148	9043056	04/20/09 12:28
Surrogate: 4-Bromofluorobenzene	50.0	42.1		84%	58 - 150	9043056	04/20/09 12:28
9043200-BS1							
Benzene	50.0	52.2	បន្ថ	/kg 104%	76 - 130	9043200	04/21/09 10:20
Ethylbenzene	50.0	55.9	បន្ត	/kg 112%	80 - 128	9043200	04/21/09 10:20
Naphthalene	50.0	62.2	ug	/kg 124%	63 - 144	9043200	04/21/09 10:20
Toluene	50.0	51.0	ug	/kg 102%	80 - 125	9043200	04/21/09 10:20
Xylenes, total	150	170	បន្ត	/kg 113%	79 - 130	9043200	04/21/09 10:20
Surrogate: 1,2-Dichloroethane-d4	50.0	66.4		133%	41 - 150	9043200	04/21/09 10:20
Surrogate: Dibromofluoromethane	50.0	49.9		100%	55 - 139	9043200	04/21/09 10:20
Surrogate: Toluene-d8	50.0	47.9		96%	57 - 148	9043200	04/21/09 10:20
Surrogate: 4-Bromofluorobenzene	50.0	56.6		113%	58 - 150	9043200	04/21/09 10:20
Polyaromatic Hydrocarbons by EP	A 8270D						
9041798-BS1						÷	
Acenaphthene	1.67	í.52	mg/l	g wet 91%	52 - 106	9041798	. 04/14/09 17:57
Accnaphthylene	1.67	1.52	m <b>g/l</b>	g wet 91%	53 - 109	9041798	04/14/09 17:57
Anthracene	1.67	1.65	mg/l	g wet 99%	54 - 124	9041798	04/14/09 17:57
Benzo (a) anthracene	1.67	1.47	mg/l	g wet 88%	53 - 111	9041798	04/14/09 17:57
Benzo (a) pyrene	1.67	1.56	mg/l	g wet 93%	52 - 122	9041798	04/14/09 17:57
Benzo (b) fluoranthene	1.67	1.48	mg/i	g wet 89%	48 - 115	9041798	04/14/09 17:57
Benzo (g,h,i) perylene	1.67	1.50	mg/l	g wet 90%	46 - 114	9041798	04/14/09 17:57
Benzo (k) fluoranthene	1.67	1.58	mg/l	g wet 95%	41 - 121	9041798	04/14/09 17:57
Chrysene	1.67	1.46	mg/l	g wet 87%	49 - 113	9041798	04/14/09 17:57
Dibenz (a,h) anthracene	1.67	·· 1.57	mg/I	g wet 94%	47 - 117	9041798	04/14/09 17:57
Fluoranthene	1.67	1.59	mg/l	g wet 95%	52 - 113	9041798	04/14/09 17:57
Fluorene	1.67	1.51	mg/l	g wet 90%	54 - 107	9041798	04/14/09 17:57
Indeno (1,2,3-cd) pyrene	1.67	1.57		g wet 94%	47 - 115	9041798	04/14/09 17:57
Naphthalene	1.67	1.28		g wet 77%	34 - 107	9041798	04/14/09 17:57
Phenanthrene	1.67	1.51		g wet 91%	53 - 108	9041798	04/14/09 17:57
							04/14/09 17:57
Pyrene	1.67	1.47	mg/)	g wet 88%	54 - 113	9041798	04/14/09 17.37
Pyrene Surrogate: Terphenyl-d14	1.67	1.47	mg/)	g wet 88% 80%	26 - 128	9041798 9041798	04/14/09 17:57

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

		1		· · · · ·	
Client	EEG - Env. Enterprise Group (2449)		Work Order:	NSD0949	
	10179 Highway 78		Project Name:	Laurel Bay Housing Project	
	Ladson, SC 29456		Project Number:	[none]	
Attn	Tom McElwee		Received:	04/10/09 08:10	. :

#### PROJECT QUALITY CONTROL DATA LCS - Cont.

nalyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
olyaromatic Hydrocarbons	· • • • • • • • • • • • • • • • • • • •						• • • • • • • • • • • • •	
041798-BS1								
Surrogate: Nitrobenzene-d5	1.67	1.30			78%	22 - 104	9041798	04/14/09 17:57
	· · ·							
	· · ·	,						
	·	:						
	· · ·							
	· ·							
• ·		Х.						i
								· · ·
	•							
	· · ·			:				
	•	•						
÷								
		·						
···· ÷ .			;					in a second s
						· · ·		•
						· · ·	* .	· · · ·
					: ``			
						. :		· · · · · · · · · · · · · · · · · · ·
	· · · ·							
	:		: : :		. :	: .	:	
			· .					·
		· · · · ·	i.				· .	
			н <sup>1</sup>		. •		-	
				-		۰.		· · · · · · · · · · · · · · · · · · ·
		· · · · · · ·		··· ···	· .	•		
•			· · ·			: .		age 11 of 18
							. Pe	age 11 of 18

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

Page 12 of 18

Client	EEG - Env. Enterprise Group (2449)	Work Order:	NSD0949
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
•	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	 Received:	04/10/09 08:10

PROJECT QUALITY CONTROL DATA LCS Dup											
Analyte	Orig, Val.	Duplicate Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
Selected Volatile Organic Comp	ounds by EPA	Method 8260B									
9043056-BSD1 Benzene	· · · · ·	51.4	ug/kg	50.0	103%	76 - 130	0.3	43	9043056		04/20/09 12:58
Ethylbenzene		45.1	ug/kg	50.0	90%	80 - 128	1	48	9043056		04/20/09 12:58
Naphthalene		41.0	ug/kg	50.0	82%	63 - 144	12	50	9043056		04/20/09 12:58
Тоцепс		45.2	ug/kg	50.0	90%	80 - 125	0.8	44	9043056		04/20/09 12:58
Xylenes, total		136	ug/kg	150	90%	79 - 130	1	48	9043056		04/20/09 12:58
Surrogate: 1,2-Dichloroethane-d4		50.5	ug/kg	50.0	101%	41 - 150			9043056		04/20/09 12:58
Surrogate: Dibromofluoromethane		52.6	ug/kg	50.0	105%	55 - 139			9043056		04/20/09 12:58
Surrogate: Toluene-d8		46.2	ug/kg	50.0	92%	57 - 148			9043056		04/20/09 12:58
Surrogale: 4-Bromofluorobenzene		49.1	ug/kg	50.0	98%	58 - 150			9043056		04/20/09 12:58
•		· · · ·									
9043200-BSD1										-	
Benzene		53.9	ug/kg	50.0	108%	76 - 130	3	43	9043200		04/21/09 10:51
Ethylbenzene	•	57.2	ug/kg	50.0	114%	80 - 128	2	48	9043200		04/21/09 10:51
Naphthalene		67.3	ug/kg	50.0	135%	63 - 144	8	50	9043200		04/21/09 10:51
Toluene		52.4	ug/kg	50.0	105%	80 - 125	. 3	44	9043200		04/21/09 10:51
Xylenes, total		174	ug/kg	150	116%	79 - 130	3	48	9043200		04/21/09 10:51
Surrogate: 1,2-Dichloroethane-d4		67.0	ug/kg	50.0	134%	41 - 150			9043200		04/21/09 10:51
Surrogate: Dibromofluoromethane		50.2	ug/kg	50.0	100%	55 - 139			9043200		04/21/09 10:51
Surrogate: Toluene-d8		49.0	ug/kg	50.0	98%	57 - 148			9043200		04/21/09 10:51
Surrogale: 4-Bromofluorobenzene	1	56.4	ug/kg	50.0	113%	58 - 150			9043200		04/21/09 10:51

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

Client	EEG - Env. Enterprise Group (2449)	Work Order:	NSD0949	
	10179 Highway 78	Project Name:	Laurel Bay Housing Project	
	Ladson, SC 29456	Project Number:	[none]	
Attn	Tom McElwee	Received:	04/10/09 08:10	· · ·

#### PROJECT QUALITY CONTROL DATA Matrix Spike

Analyte	Orig. Val.	MS Val	Q Units	Spike Conc	% Rcc.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Selected Volatile Organic Comp	• • • • • • • • • • • • • • • • • • • •					•••••		······································	• • • • • • • • • • • • • • • • • • • •
9043056-MS1	bunds by DI A Mici								
Benzene	ND	0.0301	mg/kg dry	0.0531	57%	33 - 146	9043056	NSD1692-05	04/20/09 22:10
Ethylbenzene	ND	0.0263	mg/kg dry	0.0531	49%	16 - 160	9043056	NSD1692-05	04/20/09 22:10
Naphthalene	0.00267	0.0146	mg/kg dry	0.0531	22%	10 - 151	9043056	NSD1692-05	04/20/09 22:10
Tolucne	0.00453	0.0322	mg/kg dry	0.0531	52%	30 - 145	9043056	NSD1692-05	04/20/09 22:10
Xylenes, total	ND	0.0764	mg/kg dry	0.159	48%	16 - 159	9043056	NSD1692-05	04/20/09 22:10
Surrogate: 1,2-Dichloroethane-d4		49.7	ug/kg	50.0	99%	41 - 150	9043056	NSD1692-05	04/20/09 22:10
Surrogate: Dibromofluoromethane		51.3	ug/kg	50.0	103%	55 - 139	9043056	NSD1692-05	04/20/09 22:10
Surrogate: Toluene-d8		47.3	ug/kg	50.0	95%	57 - 148	9043056	NSD1692-05	04/20/09 22:10
Surrogate: 4-Bromofluorobenzene		48.2	ug/kg	50.0	96%	58 - 150	9043056	NSD1692-05	04/20/09 22:10
9043200-MS1								· · ·	•
Benzene	4.70	49.7	ug/kg	50.0	90%	33 - 146	9043200	NSD0945-02	04/21/09 21:13
Ethylbenzene	3.33	54.3	ug/kg	50.Ò	102%	16 - 160	9043200	NSD0945-02	04/21/09 21:13
Naphthalene	1.59	37.5	ug/kg	50.0	72%	10 - 151	9043200	NSD0945-02	04/21/09 21:13
Tolucne	8.28	61.8	ug/kg	50.0	107%	30 - 145	9043200	NSD0945-02	04/21/09 21:13
Xylenes, total	8.45	163	ug/kg	150	103%	16 - 159	9043200	NSD0945-02	04/21/09 21:13
Surrogate: 1,2-Dichloroethane-d4		66.3	ug/kg	50.0	133%	41 - 150	9043200	NSD0945-02	04/21/09 21:13
Surrogate: Dibromofluoromethane		50.6	ug/kg	50.0	101%	55 - 139	9043200	NSD0945-02	04/21/09 21:13
Surrogate: Toluene-d8		49.8	ug/kg	50.0	100%	57 - 148	9043200	NSD0945-02	04/21/09 21:13
Surrogate: 4-Bromofluorobenzene		62.7	ug/kg	50.0	125%	58 - 150	9043200	NSD0945-02	04/21/09 21:13
Polyaromatic Hydrocarbons by 1	EPA 8270D		•						•
9041798-MS1									
Acenaphthene	ND	1.50	mg/kg dry	1.93	78%	28 - 117	9041798	NSD0980-01	04/14/09 18:20
Accnaphthylene	ND	1.66	mg/kg dry	1.93	86%	33 - 113	9041798	NSD0980-01	04/14/09 18:20
Anthracene	ND	1.77	mg/kg dry	1.93	92%	31 - 131	9041798	NSD0980-01	04/14/09 18:20
Benzo (a) anthracene	ND	1.63	mg/kg dry	1.93	85%	29 - 124	9041798	NSD0980-01	04/14/09 18:20
Benzo (a) pyrene	ND	1.70	mg/kg dry	1.93	88%	30 - 127	9041798	NSD0980-01	04/14/09 18:20
Benzo (b) fluoranthene	ND	1.85	mg/kg dry	1.93	96%	26 - 128	9041798	NSD0980-01	04/14/09 18:20
Benzo (g,h,i) perylene	ND	1.66	mg/kg dry	1.93	86%	21 - 122	9041798	NSD0980-01	04/14/09 18:20
Benzo (k) fluoranthene	ND	1.56	mg/kg dry	1.93	81%	20 - 130	9041798	NSD0980-01	04/14/09 18:20
Chrysene	ND	1.64	mg/kg dry	1.93	85%	30 - 119	9041798	NSD0980-01	04/14/09 18:20
Dibenz (a,h) anthracene	ND	1.72	mg/kg dry	1.93	90%	27 - 122	9041798	NSD0980-01	04/14/09 18:20
Fluoranthene	0.0443	1.66	mg/kg dry	1.93	84%	23 - 132	9041798	NSD0980-01	04/14/09 18:20
Fluorene	ND	1.67	mg/kg dry	1.93	87%	38 - 110	9041798	NSD0980-01	04/14/09 18:20
Indeno (1,2,3-cd) pyrene	ND	1.74	mg/kg dry	1.93	90%	24 - 122	9041798	NSD0980-01	04/14/09 18:20
Naphthalene	ND	1.35	mg/kg dry	1.93	70%	14 - 117	11	NSD0980-01	04/14/09 18:20
Phenanthrene	ND	1.66	mg/kg dry	1.93	86%	21 - 130	9041798	NSD0980-01	04/14/09 18:20
					. ::.:				:

Page 13 of 18

THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica** 

#### 2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

Page 14 of 18

Client	EEG - Env. Enterprise Group (2449)	Work Order:	NSD0949	
	10179 Highway 78	Project Name:	Laurel Bay Housing Project	
	Ladson, SC 29456	Project Number:	[none]	
Attn	Tom McElwee	Received:	04/10/09 08:10	· · · ·

#### PROJECT QUALITY CONTROL DATA Matrix Spike - Cont.

Analyte	Orig. Val.	MS Val	Q Units	Spike Cone	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/Time
Polyaromatic Hydrocarbons by EF	A 8270D								
9041798-MS1									
Рутепе	ND	1.58 .	mg/kg dry	1.93	82%	24 - 133	9041798	NSD0980-01	04/14/09 18:20
Surrogate: Terphenyl-d14		1.41	mg/kg dry	1.93	73%	26 - 128	9041798	NSD0980-01	04/14/09 18:20
Surrogate: 2-Fluorobiphenyl		1.47	mg/kg dry	1.93	76%	19 - 109	9041798	NSD0980-01	04/14/09 18:20
Surrogate: Nitrobenzene-d5		1.35	mg/kg dry	1.93	70%	22 - 104	9041798	NSD0980-01	04/14/09 18:20

THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica** 

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

Client	EEG - Env. Enterprise Group (2449)	Work Order: NSD094	<b>.9</b>
	10179 Highway 78	Project Name: Laurel B	lay Housing Project
	Ladson, SC 29456	Project Number: [none]	· · · · · · · · · · · · · · · · · · ·
Attn	Tom McElwee	Received: 04/10/09	08:10

		PR	OJEC	T QUALITY	CONT	ROLI	DATA					
, ,	Matrix Spike Dup											
	. '				Spike		Target				Sample	Analyzed
Analyte	Orig. Val.	Duplicate	Q	Units	Cone	% Rec.	Range	RPD	Limit	Batch	Duplicated	Date/Time
Selected Volatile Organic Compoun	ds by EPA	Method 820	60B									
9043056-MSD1									•			
Benzene	ND	0.0463		mg/kg dry	0.0515	90%	33 - 146	42	43	9043056	NSD1692-05	04/20/09 22:40
Ethylbenzene	ND	0.0431		mg/kg dry	0.0515	84%	16 - 160	48	48	9043056	NSD1692-05	04/20/09 22:40
Naphthalene	0.00267	0.0220		mg/kg dry	0.0515	38%	10 - 151	40	50	9043056	NSD1692-05	04/20/09 22:40
Toluene	0.00453	0.0489		mg/kg dry	0.0515	86%	30 - 145	41	44	9043056	NSD1692-05	04/20/09 22:40
Xylenes, total	ND	0.128	R	mg/kg dry	0.154	83%	16 - 159	51	48	9043056	NSD1692-05	04/20/09 22:40
Surrogate: 1,2-Dichloroethane-d4		48.5		ug/kg	50.0	97%	41 - 150			9043056	NSD1692-05	04/20/09 22:40
Surrogate: Dibromofluoromethane		51,3		ug/kg	50.0	103%	55 - 139			9043056	NSD1692-05	04/20/09 22:40
Surrogate: Toluene-d8		47.3		ug/kg	50.0	95%	57 - 148			9043056	NSD1692-05	04/20/09 22:40
Surrogate: 4-Bromofluorobenzene		50.8		ug/kg	50.0	102%				9043056	NSD1692-05	04/20/09 22:40
9043200-MSD1												
Benzene	5.77	55.7		ug/kg	50.0	100%	33 - 146	11	43	9043200	NSD0945-02	04/21/09 21:44
Ethylbenzene	4.09	57.5		ug/kg	50.0	107%	16 - 160	6	48	9043200	NSD0945-02	04/21/09 21:44
Naphthalene	1.96	35.0		ug/kg	50.0	66%	10 - 151	7	50	9043200	NSD0945-02	04/21/09 21:44
Toluenc	10.2	65.4		ug/kg	50.0	110%	30 - 145	6	44	9043200	NSD0945-02	04/21/09 21:44
Xylenes, total	10.4	172		ug/kg	150	108%	16 - 159	6	48	9043200	NSD0945-02	04/21/09 21:44
Surrogate: 1,2-Dichloroethane-d4		66.1		ug/kg	50.0	132%	41 - 150			9043200	NSD0945-02	04/21/09 21:44
Surrogate: Dibromofluoromethane		50.1		ug/kg	50.0	100%	55 - 139			9043200	NSD0945-02	04/21/09 21:44
Surrogate: Toluene-d8		49.1		ug/kg	50.0	98%	57 - 148			9043200	NSD0945-02	04/21/09 21:44
Surrogate: 4-Bromofluorobenzene		61.0		ug/kg	50.0	122%	58 - 150			9043200	NSD0945-02	04/21/09 21:44
Polyaromatic Hydrocarbons by EPA	A 8270D											
9041798-MSD1											. :	•
Accnaphthene	ND	1.48		mg/kg dry	1.91	77%	28 - 117	I	33	9041798	NSD0980-01	04/14/09 18:43
Accuaphthylene	ND	1.56		mg/kg dry	1.91	82%	33 - 113	6	38	9041798	NSD0980-01	04/14/09 18:43
Anthracene	ND	1.67		mg/kg dry	1.91	87%	31 - 131	6	32	9041798	NSD0980-01	04/14/09 18:43
Benzo (a) anthracene	ND	1.53		mg/kg dry	1.91	80%	29 - 124	7	26	9041798	NSD0980-01	04/14/09 18:43
Benzo (a) pyrene	ND	1.57		mg/kg dry	1.91	82%	30 - 127	8	31	9041798	NSD0980-01	04/14/09 18:43
Benzo (b) fluoranthene	ND	1.54		mg/kg dry	1.91	80%	26 - 128	18	37	9041798	NSD0980-01	04/14/09 18:43
Benzo (g,h,i) perylene	ND	1.52		mg/kg dry	1.91	80%	21 - 122	8	28	9041798	NSD0980-01	04/14/09 18:43
Benzo (k) fluoranthene	ND	1.66		mg/kg dry	1.91	87%	20 - 130	6	35	9041798	NSD0980-01	04/14/09 18:43
Chrysene	ND	1.53		mg/kg dry	1.91	80%	30 - 119	7	31	9041798	NSD0980-01	04/14/09 18:43
Dibenz (a,h) anthracene	ND	1.58		mg/kg dry	1.91	83%	27 - 122	9	32	9041798	NSD0980-01	04/14/09 18:43
Fluoranthene	0.0443	1.65		mg/kg dry	1.91	84%	23 - 132	<u>;</u> 1	36	9041798	NSD0980-01	04/14/09 18:43
Fluorene	ND	1.55		mg/kg dry	1.91	81%	38 - 110	7	35	9041798	NSD0980-01	04/14/09 18:43
Indeno (1,2,3-cd) pyrene	ND	1.59		mg/kg dry	1.91	83%	24 - 122	9	28	9041798	NSD0980-01	04/14/09 18:43
Naphthalene	ND	1.27		mg/kg dry	1.91	66%	14 - 117	6	34	9041798	NSD0980-01	04/14/09 18:43
Phenanthrene	ND	1.61		mg/kg dry	1.91	84%	21 - 130	3	33	9041798	NSD0980-01	04/14/09 18:43
Рутеле	ND	1.49		mg/kg dry	1.91	78%	24 - 133	6	36	9041798	NSD0980-01	04/14/09 18:43
Surrogate: Terphenyl-d14	. 1	1.30		mg/kg dry	1.91	68%	26 - 128			9041798	NSD0980-01	04/14/09 18:43
Surrogate: 2-Fluorobiphenyl	*	1.41		mg/kg dry	1.91		19 - 109			9041798	NSD0980-01	04/14/09 18:43
A CONTRACTOR OF A												U.1.1.07 10.75

Page 15 of 18

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

Client	EEG - Env. Enterprise Group (2449)	Work Order:	NSD0949
	10179 Highway 78	Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	04/10/09 08:10

PROJECT QUALITY CONTROL DATA Matrix Spike Dup - Cont.											
Апајује	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD Limit	Batch	Sample Duplicated	Analyzed Date/Time
Polyaromatic Hydrocarbons by EP 9041798-MSD1 Surrogate: Nitrobenzene-dS	A 8270D	1.27		mg/kg dry	1.91	67%	22 - 104		9041798	NSD0980-01	04/14/09 18:43
								·	·		
								~			
									:		

Page 16 of 18

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

			· · ·
Client	EEG - Env. Enterprise Group (2449)	Work Order:	NSD0949
	10179 Highway 78	 Project Name:	Laurel Bay Housing Project
	Ladson, SC 29456	Project Number:	[none]
Attn	Tom McElwee	Received:	04/10/09 08:10

#### CERTIFICATION SUMMARY

Te	stAmerica Nashville					· .	
	Method	Matrix	AIHA	Nelac	South Carolina		
	SW846 8260B SW846 8270D SW-846	Soil Soil Soil	N/A	x	X X	··· . · :	
•							
						· . · ·	
				:	: <sup>:</sup> .		
				·			
•		•					* . •
				· .			
		: • •				:	
. :							
:		· · ·					

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

Page 18 of 18

		:	· · · · · ·	
Client	EEG - Env. Enterprise Group (2449)	Work Order:	NSD0949	
	10179 Highway 78	Project Name:	Laurel Bay Housing Project	
	Ladson, SC 29456	Project Number:	[none]	
Attn	Tom McElwee	Received:	04/10/09 08:10	

#### **DATA QUALIFIERS AND DEFINITIONS**

H2	Initial analysis within holding time. Reanalysis for the required dilution or confirmation was past holding time.
R	The RPD exceeded the method control limit. The individual analyte QA/QC recoveries, however, were within acceptance limits.
ND	Not detected at the reporting limit (or method detection limit if shown)

#### METHOD MODIFICATION NOTES

ast≁	meric	- 29	shville Divis 60 Foster Cr sshville, TN 3	BUCKIE		l To	H Erad	s: 615- s: 600- x: 615-	765-0	980						То	NSD0949 04/24/09 23:59 o assist us in using the proper analytical withods, is this work being conducted for sgulatory purposes? Compliance Monitoring? Yes	No
A DE A DE IE IE	ent Name/Account #: EE Address: 11 City/State/Zip: L Project Manager: 1 Telephone Number: 1	EG # 2449 0179 Highway 78 adeon, SC 2945 fom McElwee en			Fax	No.:	84.	3-	87	9.	- C	-	01	TA P	Quote roject	)#: :#: ID: <u>Li</u>	0829	No
·	Sampler Name: (Prine) Sampler Signature:	- a	The				Preser	vative		Ţ		Vietrix	 	Ŧ			Analyze For:	
Sample ID/1 268 2555 01 255 01 279		2010 1/2/02 1/2/02 1/2/02 1/2/02 1/2/02	1345 1040 9 1445 9 1420	14 W NO OF CONTAINER SHIPPED	Composite Field Fittered	NNN N MIGHT	_	(lectra hother) Aller A. A. Aller A. Al	N N N None (Stack Lated)	Conditional Conditiona	Whatewarter	Diriking Week	1997 X 7 X		3	AV V PAH - 8270C	Laboratory Commenta: Temperature Upon Receipt: 7.5	O RUSH TAT (Pre-Sche
Specia	Instructions:		Date	Time 1900	Receiv	ed by:	hod of	i <u>Shipm</u> i	ent:				ate		Time		Temperature Upon Receipt. 7	Y
Relin	unhed by	4/	Date	Time		ved by To			×		- <u> </u>		ate 1C		Time G:{C	) . 		··

•

# 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 268Beech, 268 Beech St., 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 TANKSIZE (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.

4/20/09 (Date)

Appendix C Laboratory Analytical Report - Initial Groundwater



Client: AECOM - Resolu Description: BEALB268TW01 Date Sampled:03/06/2017 1415 Date Received: 03/08/2017	WG20170306							SC08036 Aqueous			
RunPrep Method15030B	Analytical Method 8260B		-	is Date Analyst 017 1041 PMV	Prep	Date	<b>Batch</b> 36622				
Parameter			CAS nber	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzene		71-	43-2	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Ethylbenzene		100-	41-4	8260B	5.0		1.0	0.80	0.40	ug/L	1
Naphthalene		91-	20-3	8260B	28		1.0	0.80	0.40	ug/L	1
Toluene		108-	88-3	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Xylenes (total)		1330-	20-7	8260B	15		1.0	0.80	0.40	ug/L	1
Surrogate	Q %	Run 1 Recovery	Acceptar Limi								
Bromofluorobenzene		108	85-11	4							
Dibromofluoromethane		104	80-11	9							
1,2-Dichloroethane-d4		98	81-11	8							
Toluene-d8		95	89-11	2							

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 failure

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

# Semivolatile Organic Compounds by GC/MS

Client: AECOM - Resolution Consultants

Description: BEALB268TW01WG20170306

Laboratory ID: SC08036-001

Date Sampled:03/06/2017 1415

Matrix: Aqueous

Date Received: 03/08/2017

RunPrep Method13520C	Analytical Method 8270D		<b>ysis Date Analyst</b> 5/2017 1821 RBH	•	<b>Date</b> 2017 1736	<b>Batch</b> 36656				
Parameter		CAS Number	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzo(a)anthracene		56-55-3	8270D	0.10	U	0.20	0.10	0.040	ug/L	1
Benzo(b)fluoranthene		205-99-2	8270D	0.10	U	0.20	0.10	0.040	ug/L	1
Benzo(k)fluoranthene		207-08-9	8270D	0.10	U	0.20	0.10	0.040	ug/L	1
Chrysene		218-01-9	8270D	0.10	U	0.20	0.10	0.040	ug/L	1
Dibenzo(a,h)anthracene		53-70-3	8270D	0.10	US	0.20	0.10	0.040	ug/L	1
Surrogate	Q %	Run 1 Accep Recovery Li	tance mits							
Nitrobenzene-d5		65 44-	120							
2-Fluorobiphenyl		64 44-	119							
Terphenyl-d14		77 50-	134							

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 DriveWest Columbia, SC 29172 (803) 791-9700Fax (803) 791-9111www.shealylab.com

Appendix D Laboratory Analytical Report – Permanent Well Groundwater



Client: AECOM - Resolution Consultants							Laboratory ID: TC21023-001							
Description: BEALB268MW01WG20180320							Matrix	x: Aqueous	6					
Date Sampled:03/20/2018 0915														
Date Received: 03/21/2018														
RunPrep Method15030B	Analytical Method 8260B	Dilution 1	•	<b>Date Analyst</b> 18 0053 BWS	Prep	Date	<b>Batch</b> 67937							
Parameter		( Num		Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run			
Benzene		71-4	13-2	8260B	0.80	U	1.0	0.80	0.40	ug/L	1			
Ethylbenzene		100-4	1-4	8260B	6.2		1.0	0.80	0.40	ug/L	1			
Naphthalene		91-2	20-3	8260B	19		1.0	0.80	0.40	ug/L	1			
Toluene		108-8	38-3	8260B	0.80	U	1.0	0.80	0.40	ug/L	1			
Xylenes (total)		1330-2	20-7	8260B	19		1.0	0.80	0.40	ug/L	1			
Run 1 Acceptance Surrogate Q % Recovery Limits														
Bromofluorobenzene		112	85-114											
Dibromofluoromethane		101	80-119											
1,2-Dichloroethane-d4		100	81-118											
Toluene-d8		104	89-112											

LOQ = Limit of QuantitationB = Detected in the method blankE = Quantitation of compound exceeded the calibration rangeDL = Detection LimitQ = Surrogate failureU = Not detected at or above the LOQN = Recovery is out of criteriaP = The RPD between two GC columns exceeds 40%J = Estimated result < LOQ and  $\geq$  DLL = LCS/LCSD failureH = Out of holding timeW = Reported on wet weight basisLOD = Limit of DetectionS = MS/MSD failure

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

Client: AECOM - Resolution Consultants

Description: BEALB268MW01WG20180320

Laboratory ID: TC21023-001 Matrix: Aqueous

Date Sampled:03/20/2018 0915

Date Received: 03/21/2018

Run	Prep Method	Analytical Method	Dilution	Analysis Date Analyst	Prep Date Batch
1	3520C	8270D	1	04/02/2018 1316 CMP2	03/22/2018 0945 67612
2	3520C	8270D	1	04/08/2018 1301 CMP2	04/03/2018 1550 68613

Parameter			CAS nber	Analyti Metho		Result	Q	LOQ	LOD	DL	Units	Run
Benzo(a)anthracene		56-	55-3	827	'0D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Benzo(b)fluoranthene		205-9	99-2	827	0D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Benzo(k)fluoranthene		207-08-9		827	0D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Chrysene		218-01-9		827	0D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Dibenzo(a,h)anthracene		53-	70-3	827	0D	0.10	UQ	0.20	0.10	0.040	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptand Limits	ce Q	Rur % Rec		ceptance Limits	!				
Nitrobenzene-d5		46	44-120	Н	6	4	44-120					
2-Fluorobiphenyl	N	37	44-119	н	5	0	44-119					
Terphenyl-d14		56	50-134	н	8	1	50-134					

LOQ = Limit of QuantitationB = Detected in the method blankE = Quantitation of compound exceeded the calibration rangeDL = Detection LimitQ = Surrogate failureU = Not detected at or above the LOQN = Recovery is out of criteriaP = The RPD between two GC columns exceeds 40%J = Estimated result < LOQ and  $\geq$  DLL = LCS/LCSD failureH = Out of holding timeW = Reported on wet weight basisLOD = Limit of DetectionS = MS/MSD failure

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

Appendix E Regulatory Correspondence





December 14, 2016

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 Tank Assessment Reports

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (the Department) received the Underground Storage Tanks (USTs) Assessment Reports for the addresses listed in the attachment. 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 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 these sites.

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,

YIRTS

Laurel Petrus, Environmental Engineer Associate RCRA Federal Facilities Section

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, December 14, 2016 Subject: IGWA, Laurel Bay Underground Tank Assessment Reports

# Draft Final Initial Groundwater Investigation Report for (41 addresses)

Monitoring Well Investigation R	ecommendation	
113 Birch	279 Birch	
274 Birch	268 Beech	



July 27, 2017

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

RE: Draft Final Initial Groundwater Investigation Report, February and March 2017

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (DHEC) received groundwater data from temporary monitoring well installations in the Draft Final Groundwater Investigation Report, Laurel Bay Military Housing Area for the fifty two (52) addresses shown in the attachment. 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 DHEC's request, groundwater samples were collected from the attached referenced addresses. DHEC 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 groundwater monitoring wells should be installed at the three (3) stated addresses. For the remaining forty nine (49) addresses, there is no indication of contamination on the property and therefore no further investigation is required at this time.

Please note that DHEC'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, DHEC 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,

Lalpt

Laurel Petrus, Environmental Engineer Associate Bureau of Land and Waste Management

Cc: Russell Berry, EQC Region 8 Shawn Dolan, Resolution Consultants Bryan Beck, NAVFAC MIDLANT Attachment to: Petrus to Drawdy

Draft Final Initial Groundwater Investigation Report for (52 addresses)

Permanent Well Installation recommedation (3 Addresses):

- 254 Beech Street (110 ug/L)
- o 268 Beech Street (28 ug/L)
- o 774 Althea Street (35 ug/L)

No Further Action recommendation (49 addresses):

113 Birch Drive 0 121 Banyan Drive 0 122 Banyan Drive 0 **159 Cypress Street** 0 221 Cypress Street 0 274 Birch Drive 0 279 Birch Drive 0 283 Birch Drive 0 328 Ash Street 0 346 Ash Street 0 359 Aspen Street 0 370 Aspen Street 0 377 Aspen Street 0 409 Elderberry Drive 0 465 Dogwood Drive 0 480 Laurel Bay Boulevard 0 486 Laurel Bay Boulevard 0 515 Laurel Bay Boulevard 0 542 Laurel Bay Boulevard 0 593 Aster Street 0 630 Dahlia Drive 0 641 Dahlia Drive 0 693 Camelia Drive 0 723 Bluebell Lane 0 860 Dolphin Street 0 873 Cobia Drive 0 883 Cobia Drive 0 905 Barracuda Drive 0 921 Barracuda Drive 0 935 Albacore Street 0 946 Albacore Street 0 1037 Iris Lane 0 1039 Iris Lane 0 1110 Iris Lane 0 1134 Iris Lane 0 1143 Iris Lane 0 1177 Bobwhite Drive 0 1202 Cardinal Lane 0 0 1212 Cardinal Lane 0 1222 Cardinal Lane 1224 Cardinal Lane 0 1226 Dove Lane 0 1236 Dove Lane 0 1245 Dove Lane 0 1247 Dove Lane 0 0 1274 Albatross Drive 1319 Albatross Drive 0 1337 Albatross Drive 0 1346 Cardinal Lane 0



October 25, 2018

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

RE: Approval Draft Final Groundwater Assessment Report March and April 2018 Approved NFA 268 Beech Street Laurel Bay Military Housing Area

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (DHEC) received the above report on September 18, 2018. 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).

DHEC has reviewed the groundwater assessment report. Based on this review, DHEC has not generated any comments. DHEC agrees with the recommendation of NFA for 268 Beech Street.

Please note that DHEC'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, DHEC 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,

KIRt

Laurel Petrus Department of Defense Corrective Action Section

Cc: EQC Region 8 Shawn Dolan, Resolution Consultants Bryan Beck, NAVFAC MIDLANT