SUMMARY REPORT

106 BEECH STREET (FORMERLY 261 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 SUMMARY REPORT
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9324 Virginia Avenue Norfolk, Virginia 23511-3095

Prepared by:



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**Contract Number: N62470-14-D-9016** 

CTO WE52

**JUNE 2021** 



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# **List of Acronyms**

bgs below ground surface

BTEX benzene, toluene, ethylbenzene, and xylenes

CTO 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 106 Beech Street (Formerly 261 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 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 106 Beech Street (Formerly 261 Beech Street). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 261 Beech Street* (MCAS Beaufort, 2013). 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 – May and June 2015* (Resolution Consultants, 2015). 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

In July 2012, three 280 gallon heating oil USTs were removed at 106 Beech Street (Formerly 261 Beech Street). Tank 1 was removed on July 23, 2012 from underneath the rear concrete patio. Tank 2 was removed on July 24, 2012 from the edge of the rear concrete patio and the rear grassed area. Tank 3 was removed on July 24, 2012 from the rear grassed area adjacent





to the rear patio. A storage shed partially covered the footprint of Tank 2 and Tank 3. The former UST locations are indicated in Figures 2 and 3 of the UST Assessment Report (Appendix B). The USTs were 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 depths to the bases of the USTs were 4'7" (Tank 1), 4'9" (Tank 2) and 3'10" (Tank 3) bgs and a single soil sample was collected for each at that depth. The samples were collected from the fill port side of the former USTs to represent a worst case scenario.

Following UST removal, a soil sample was collected from the base of each 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 locations (Tanks 1, 2, and 3) 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 106 Beech Street (Formerly 261 Beech Street) during the removal of Tank 2 were less than the SCDHEC RBSLs, which indicated the subsurface was not impacted by COPCs associated with the former UST at concentrations that presented a potential risk to human health and the environment. The soil results collected from 106 Beech Street (Formerly 261 Beech Street) during the removal of Tanks 1 and 3 were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated May 15, 2014, SCDHEC requested IGWAs be conducted at the former UST locations (Tanks 1 and 3) at 106 Beech Street (Formerly 261 Beech 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 May 27, 2015, two temporary monitoring wells were installed at 106 Beech Street (Formerly 261 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 wells were placed in the same general location as the former heating oil UST (Tank 3) and downgradient from Tank 1. The former UST locations are indicated in Figures 2 and 3 of the UST Assessment Report (Appendix B). Further details are provided in the *Initial Groundwater Investigation Report – May and June 2015* (Resolution Consultants, 2015).

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 – May and June 2015* (Resolution Consultants, 2015).

## 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 106 Beech Street (Formerly 261 Beech 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 106 Beech Street (Formerly 261 Beech Street). This NFA determination was obtained in a letter dated February 22, 2016. SCDHEC's NFA letter is provided in Appendix D.



#### 4.0 REFERENCES

- Marine Corps Air Station Beaufort, 2013. South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report 261

  Beech Street, Laurel Bay Military Housing Area, April 2013.
- Resolution Consultants, 2015. *Initial Groundwater Investigation Report May and June 2015*for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing

  Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina, October 2015.
- 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 106 Beech Street (Formerly 261 Beech Street) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort

Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Results Samples Collected 08/01/12			
	302.1.20.1.2020	261 Beech-1a	261 Beech-2a	261 Beech-3a	
Volatile Organic Compounds Analyzed	by EPA Method 8260B (mg/kg)	•	•	•	
Benzene	0.003	0.00104	ND	0.00178	
Ethylbenzene	1.15	0.0133	ND	0.0563	
Naphthalene	0.036	1.38	0.0222	0.315	
Toluene	0.627	0.00115	ND	ND	
Xylenes, Total	13.01	0.0201	0.00189	0.0261	
Semivolatile Organic Compounds Ana	yzed by EPA Method 8270D (mg/kg)				
Benzo(a)anthracene	0.66	ND	ND	ND	
Benzo(b)fluoranthene	0.66	ND	ND	ND	
Benzo(k)fluoranthene	0.66	ND	ND	ND	
Chrysene	0.66	ND	ND	ND	
Dibenz(a,h)anthracene	0.66	ND	ND	ND	

#### Notes:

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

<sup>(1)</sup> South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 2.0 (SCDHEC, April 2013).

# Table 2

#### Laboratory Analytical Results - Groundwater 106 Beech Street (Formerly 261 Beech Street) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Site-Specific Groundwater VISLs	Results Sample Collected 05/27/15		
Constituent	SCOREC RESES	(μg/L) <sup>(2)</sup>	261 Beech Street TW01	261 Beech Street TW03	
Volatile Organic Compounds Analyzed	l by EPA Method 8260B (µg	/L)			
Benzene	5	16.24	ND	ND	
Ethylbenzene	700	45.95	ND	ND	
Naphthalene	25	29.33	ND	5.8	
Toluene	1000	105,445	ND	ND	
Xylenes, Total	10,000	2,133	ND	ND	
Semivolatile Organic Compounds Ana	lyzed by EPA Method 8270	) (μg/L)			
Benzo(a)anthracene	10	NA	ND	ND	
Benzo(b)fluoranthene	10	NA	ND	ND	
Benzo(k)fluoranthene	10	NA	ND	ND	
Chrysene	10	NA	ND	ND	
Dibenz(a,h)anthracene	10	NA	ND	ND	

#### Notes:

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

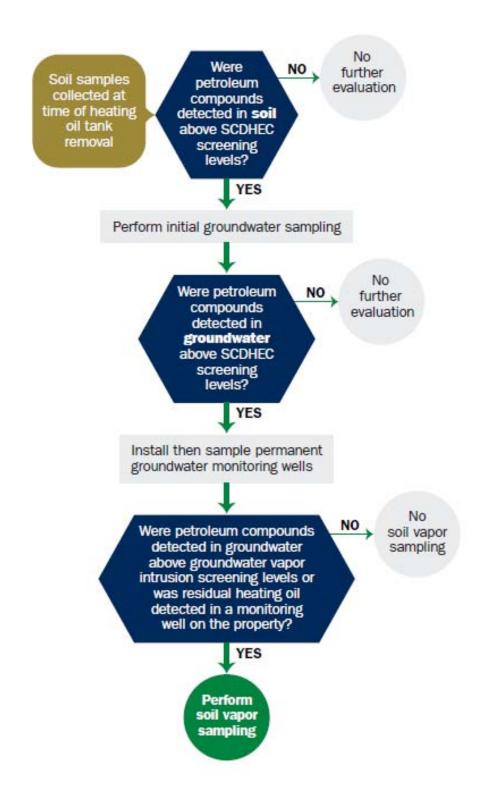
VISL - Vapor Intrusion Screening Level

<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>&</sup>lt;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.

# 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, Commanding Officer Attn: NREAO (Craig Ehde)								
Owner Name (Corporation, Individual, Public Agency, 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						
1								

# II. SITE IDENTIFICATION AND LOCATION

Permit I.D. #
Laurel Bay Military Housing Area, Marine Corps Air Station, Beaufort, SC
Facility Name or Company Site Identifier
261 Beech Street, Laurel Bay Military Housing Area Street Address or State Road (as applicable)
Beaufort, Beaufort
City County

Attachment 2

# III. INSURANCE INFORMATION

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.
I <b>DO</b> / DO <b>NOT</b> 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 [261   261   261						
		Beech-1	Beech-2	Beech-3			
A.	Product(ex. Gas, Kerosene)	Heating oil	Heating oil	Heating oil			
B.	Capacity(ex. 1k, 2k)	280 gal	280 gal	280 gal			
C.	Age	Late 1950s	Late 1950s	Late 1950s			
D.	Construction Material(ex. Steel, FRP)	Steel	Steel	Steel			
E·	Month/Year of Last Use	Mid 80s	Mid 80s	Mid 80s			
F.	Depth (ft.) To Base of Tank	4 ' 7 "	4 ' 9 "	3'10"			
G.	Spill Prevention Equipment Y/N	No	No	No			
Н∙	Overfill Prevention Equipment Y/N	No	No	No			
I.	Method of Closure Removed/Filled	Removed	Removed	Removed			
J <sub>.</sub>	Date Tanks Removed/Filled	7/23/2012	7/24/2012	7/24/2012			
K.	Visible Corrosion or Pitting Y/N	Yes	Yes	Yes			
L.	Visible Holes Y/N	Yes	Yes	Yes			
M.	Method of disposal for any USTs removed from the UST 261Beech-1 was removed from t	•	•	at a Subtitle			
	"D" landfill. USTs 261Beech-2 and ground, cleaned and recycled. Se			from the			
N.	Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests)  UST 261Beech-1 was previously filled with sand by others.  Contaminated water was pumped from 261Beech-2 and 261Beech-3 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 in all three tanks.						

# VII. PIPING INFORMATION

	261Beech-1	261Beech-2	261Beech-3
	Steel	Steel	Steel
Construction Material(ex. Steel, FRP)	& Copper	& Copper	& Copper
Distance from UST to Dispenser	N/A	N/A	N/A
Number of Dispensers	N/A	N/A	N/A
Type of System Pressure or Suction	Suction	Suction	Suction
Was Piping Removed from the Ground? Y/N	No	No	No
Visible Corrosion or Pitting Y/N	Yes	Yes	Yes
Visible Holes Y/N	No	No	No
Age	Late 1950s	Late 1950s	Late 1950s
If any corrosion, pitting, or holes were observed, de	escribe the location	and extent for ea	ich piping run.
Steel vent piping for all tanks w	vere corroded	and pitted.	All
copper supply and return piping w	were sound.		
VIII. BRIEF SITE DESCRI The USTs at the residences are con			steel
and formerly contained fuel oil for	· · · · · · · · · · · · · · · · · · ·		
installed in the late 1950s and la	ast used in t	he mid 1980s	5
	- Mandalana		
			The Contract of the Section

# IX. SITE CONDITIONS

	Yes	No	Unk
A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells?  If yes, indicate depth and location on the site map.		X	
B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells?  If yes, indicate location on site map and describe the odor (strong,		X	
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?  If yes, indicate location and thickness.		X	

# X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 84009

В.

	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA#
Beech-1a	Excav at fill end	Soil	Sandy-clay	4'7"	8/1/12 1500 hrs	P. Shaw	
Beech-2a		Soil	Sandy-clay	4'9"	II .	P. Shaw	
261 Beech-3a	Excav at fill end	Soil	Sandy-clay	3'10"	8/1/12 1530 hrs	P. Shaw	
	Note: Th	ese tanks v	vere resamp	led beca	use the or	iqinal s	amples'
	temperat	ure was ou	of tolera	nce wher	received	by the l	ab.
8	İ						
9							
10							
11							
12							
13	<u>-</u>						
14							
15							
16							
17							
18					-		
19							
20							

<sup>\* =</sup> 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.

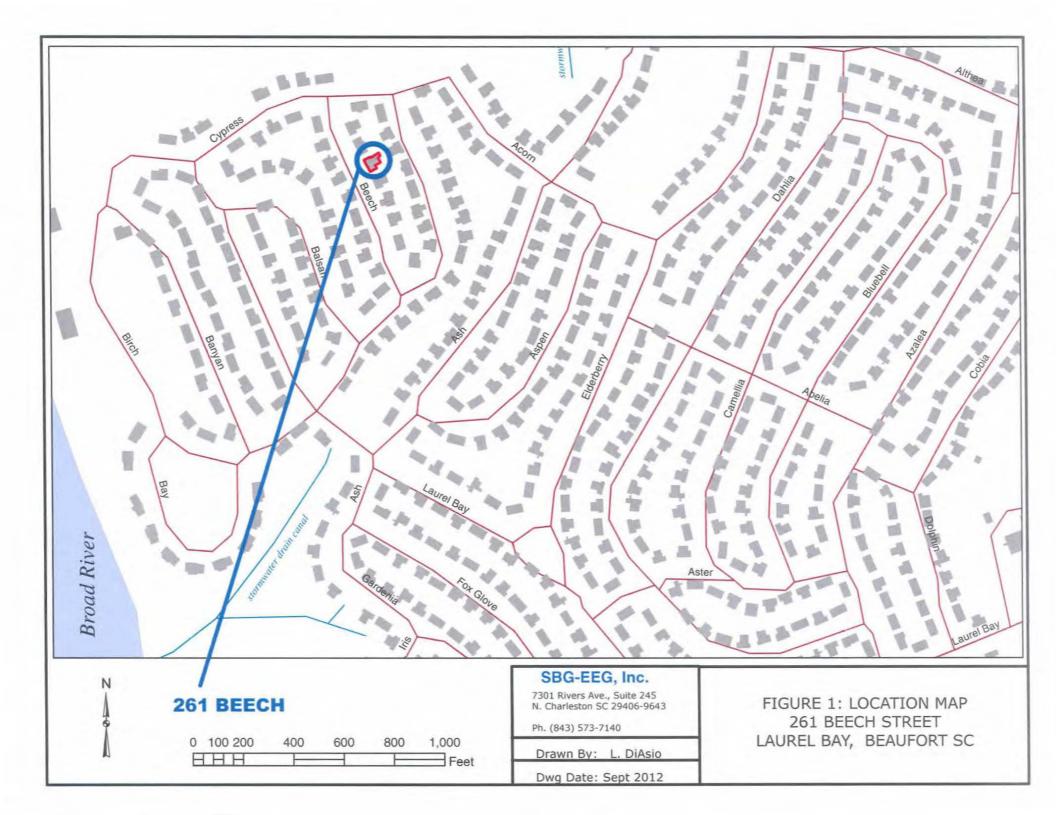
# XII. RECEPTORS

		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?  *Stormwater dra	*X	canal
	If yes, indicate type of receptor, distance, and direction on site map.	111494	0411011
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,	elect	ricity
	If yes, indicate the type of utility, distance, and direction on the site map.	opti	С
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?		X
	If yes, indicate the area of contaminated soil on the site map.		

# XIII. SITE MAP

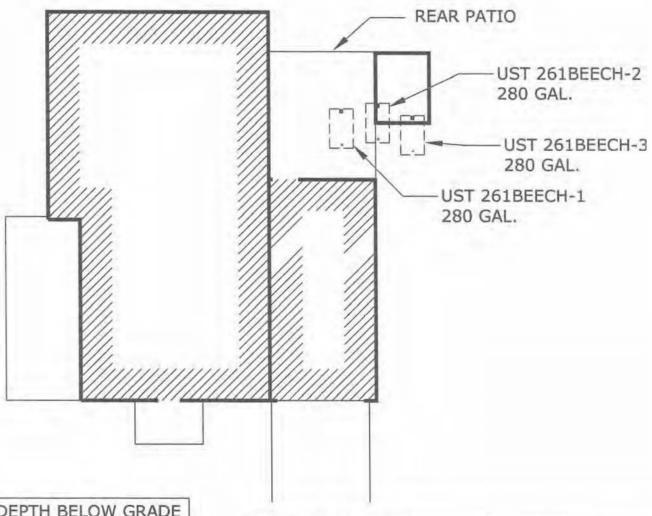
You must supply a <u>scaled</u> site map. It should include all buildings, road names, utilities, tank and dispenser island locations, labeled sample locations, extent of excavation, and any other pertinent information.

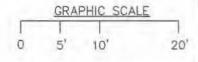
(Attach Site Map Here)





# STORMWATER DRAINAGE CANAL ≈ 750'





TANK DEPTH BELOW GRADE 261BEECH-1 = 19"

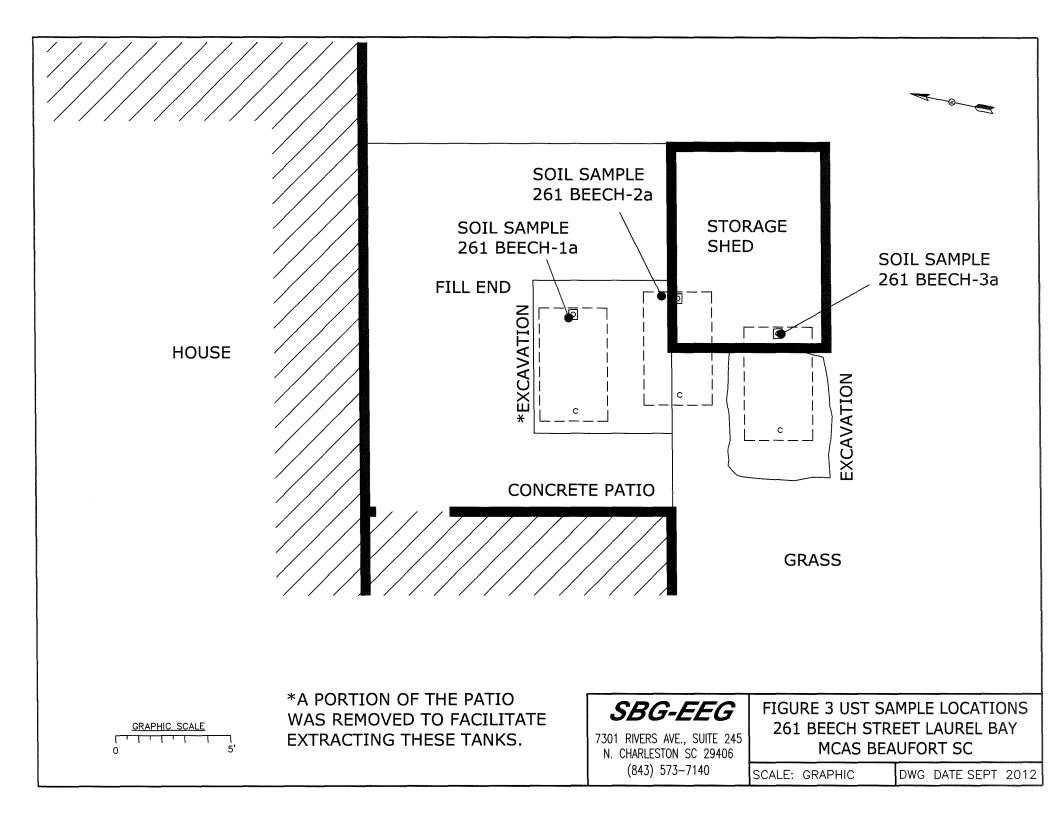
261BEECH-2 = 21" 261BEECH-3 = 10"

# SBG-EEG

7301 RIVERS AVE., SUITE 245 N. CHARLESTON SC 29406 (843) 573-7140 FIGURE 2 SITE MAP 261 BEECH STREET, LAUREL BAY MCAS BEAUFORT SC

SCALE: GRAPHIC

DWG DATE SEPT 2012





Picture 1: Location of the tanks at 261 Beech Street



Picture 2: UST 261Beech-1 excavation.



Picture 3: UST 261Beech-2 excavation.



Picture 4: UST 261Beech-3 excavation.

# 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	261Beech-1		261Bee	ech-2		261Beech-3		
Benzene	0.00104 mg/k	9		ND		0.00178 mg/kg		
Toluene	0.00115 mg/k	g 		ND		N		
Ethylbenzene	0.0133 mg/kg			ND		0.0563 mg/kg		
Xylenes	0.0201 mg/kg		0.0018	39 mg/k	g	0.0261 mg/kg		
Naphthalene	1.38 mg/kg		0.0222 mg/kg 0.		0.315 mg/kg			
Benzo (a) anthracene	ND			ND			ND	
Benzo (b) fluoranthene	ND			ND			ND	
Benzo (k) fluoranthene	ND			ND		NI		
Chrysene	ND			ND		NE		
Dibenz (a, h) anthracene	ND		ND		ND			
TPH (EPA 3550)								

	<del></del>	<del></del>	<del></del>	T	 T	·	
CoC							
Benzene							
Toluene							
Ethylbenzene							
Xylenes							
Naphthalene							
Benzo (a) anthracene							
Benzo (b) fluoranthene							
Benzo (k) fluoranthene							
Chrysene							
Dibenz (a, h) anthracene							
TPH (EPA 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.

is present, indicate the measured thickness to the nearest 0.01 feet.						
СоС	RBSL	W-1	W-2	W -3	W -4	
	(µg/l)					
Free Product	None					
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)	10					
anthracene						
EDB	.05					
1,2-DCA	5					
Lead	Site specific					
	Site					

## 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)



# <u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Nashville 2960 Foster Creighton Drive Nashville, TN 37204 Tel: (615)726-0177

TestAmerica Job ID: 490-3423-1

Client Project/Site: Laurel Bay Housing Project

For:

Environmental Enterprise Group 10179 Highway 78 Ladson, South Carolina 29456

Attn: Mr. Tom McElwee

Kuth Hay

Authorized for release by: 8/13/2012 4:23:06 PM

Ken Hayes Project Manager I

ken.hayes@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

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# **Sample Summary**

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-3423-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received		
490-3423-1	1262 Dove	Solid	07/30/12 16:15	08/04/12 08:30		
490-3423-2	1276 Albatross	Solid	08/01/12 10:45	08/04/12 08:30		
490-3423-3	261 Beech-1a	Solid	08/01/12 15:00	08/04/12 08:30		
490-3423-4	261 Beech-2a	Solid	08/01/12 15:15	08/04/12 08:30		
490-3423-5	261 Beech-3a	Solid	08/01/12 15:30	08/04/12 08:30		
490-3423-6	260 Beech-1a	Solid	08/01/12 16:00	08/04/12 08:30		
490-3423-7	260 Beech-2	Solid	08/02/12 10:45	08/04/12 08:30		

#### Case Narrative

TestAmerica Job ID: 490-3423-1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

Job ID: 490-3423-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-3423-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 8/4/2012 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.9° C.

#### GC/MS VOA

Method(s) 8260B: Internal standard responses were outside of acceptance limits for the following sample(s): (490-3429-1 MS), (490-3429-1 MSD). The sample(s) shows evidence of matrix interference.

Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 10484 were outside control limits due to failing internal standards. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8260B: The following sample(s) was diluted due to the nature of the sample matrix: 261 Beech-3a (490-3423-5). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: Napthalene reported with E flag due to lowest possible dilution being over dilute.

No other analytical or quality issues were noted.

#### GC/MS Semi VOA

Method(s) 8270D: The wrong sample was prepped and used for the MS/MSD; therefore, no MS/MSD results are reported for batch 11020.

No other analytical or quality issues were noted.

#### Organic Prep

No analytical or quality issues were noted.

#### **VOA Prep**

No analytical or quality issues were noted.

# Definitions/Glossary

TestAmerica Job ID: 490-3423-1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

#### Qualifiers

#### GC/MS VOA

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.

E Result exceeded calibration range.

#### GC/MS Semi VOA

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.

C Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CNF Contains no Free Liquid

DL, RA, RE, IN Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample

EDL Estimated Detection Limit

EPA United States Environmental Protection Agency

MDL Method Detection Limit
ML Minimum Level (Dioxin)

ND Not detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC Quality Control
RL Reporting Limit

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-3423-1

Lab Sample ID: 490-3423-1

Matrix: Solid Percent Solids: 97.0

# Client Sample ID: 1262 Dove

Date Collected: 07/30/12 16:15 Date Received: 08/04/12 08:30

Method: 8260B - Volatile Orga	anic Compounds	(GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00216	0.000723	mg/Kg	92	08/04/12 15:53	08/06/12 16:37	1
Ethylbenzene	ND		0.00216	0.000723	mg/Kg	12	08/04/12 15:53	08/06/12 16:37	1
Naphthalene	ND		0.00540	0.00183	mg/Kg	10	08/04/12 15:53	08/06/12 16:37	1
Toluene	ND		0.00216	0.000799	mg/Kg	47	08/04/12 15:53	08/06/12 16:37	1
Xylenes, Total	ND		0.00540	0.000723	mg/Kg	100	08/04/12 15:53	08/06/12 16:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130				08/04/12 15:53	08/06/12 16:37	1
4-Bromofluorobenzene (Surr)	99		70 - 130				08/04/12 15:53	08/06/12 16:37	1
Dibromofluoromethane (Surr)	97		70 - 130				08/04/12 15:53	08/06/12 16:37	1
Toluene-d8 (Surr)	92		70 - 130				08/04/12 15:53	08/06/12 16:37	1
Method: 8270D - Semivolatile	Organic Compou	inds (GC/Ms	3)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0669	0.00998	mg/Kg	43	08/08/12 12:38	08/08/12 20:43	1
Acenaphthylene	ND		0.0669	0.00898	mg/Kg	10	08/08/12 12:38	08/08/12 20:43	1
Anthracene	ND		0.0669	0.00898	mg/Kg	10	08/08/12 12:38	08/08/12 20:43	1
Benzo[a]anthracene	ND		0.0669	0.0150	mg/Kg	0	08/08/12 12:38	08/08/12 20:43	- 1
Benzo[a]pyrene	ND		0.0669	0.0120	mg/Kg	0	08/08/12 12:38	08/08/12 20:43	1
Benzo[b]fluoranthene	ND		0.0669	0.0120	mg/Kg	30	08/08/12 12:38	08/08/12 20:43	1
Benzo[g,h,i]perylene	ND		0.0669	0.00898	mg/Kg	0	08/08/12 12:38	08/08/12 20:43	1
Benzo[k]fluoranthene	ND		0.0669	0.0140	mg/Kg	3	08/08/12 12:38	08/08/12 20:43	1
Pyrene	ND		0.0669	0.0120	mg/Kg	-03	08/08/12 12:38	08/08/12 20:43	1
Phenanthrene	ND		0.0669	0.00898	mg/Kg	0	08/08/12 12:38	08/08/12 20:43	1
Chrysene	ND		0.0669	0.00898	mg/Kg	0	08/08/12 12:38	08/08/12 20:43	1
Dibenz(a,h)anthracene	ND		0.0669	0.00699	mg/Kg		08/08/12 12:38	08/08/12 20:43	1
Fluoranthene	ND		0.0669	0.00898	mg/Kg		08/08/12 12:38	08/08/12 20:43	1
Fluorene	ND		0.0669	0.0120	mg/Kg	10	08/08/12 12:38	08/08/12 20:43	1
ndeno[1,2,3-cd]pyrene	ND		0.0669	0.00998	mg/Kg	4	08/08/12 12:38	08/08/12 20:43	1
Naphthalene	ND		0.0669	0.00898	mg/Kg	43-	08/08/12 12:38	08/08/12 20:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	40		29 - 120				08/08/12 12:38	08/08/12 20:43	7
Ferphenyl-d14 (Surr)	64		13 - 120				08/08/12 12:38	08/08/12 20:43	7
litrobenzene-d5 (Surr)	38		27 - 120				08/08/12 12:38	08/08/12 20:43	1
Seneral Chemistry									
analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.0		0.10	0.10	%			08/04/12 13:58	1
Percent Solids	97		0.10	0.10	%			08/04/12 13:58	- 1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-3423-1

### Client Sample ID: 1276 Albatross

Date Collected: 08/01/12 10:45 Date Received: 08/04/12 08:30 Lab Sample ID: 490-3423-2

Matrix: Solid Percent Solids: 77.0

Dil Fac  1 1 1 1 Dil Fac 1 1 1 Dil Fac 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Dil Fac
Dil Fac  Dil Fac  1  1  1  1  Dil Fac
Dil Fac
Dil Fac  Dil Fac
Dil Fac Dil Fac
1 1 1 1 Dil Fac 1 1
Dil Fac
Dil Fac
Dil Fac
Dil Fac
1
1
1
1
1
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1
1
1
1
1
1
1
1
1
1
1
Dil Fac
1
1
1
Dil Fac
1
1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-3423-1

Lab Sample ID: 490-3423-3

Matrix: Solid

Percent Solids: 74.4

### Client Sample ID: 261 Beech-1a

Date Collected: 08/01/12 15:00 Date Received: 08/04/12 08:30

Percent Solids

								r crount our	103, 17,7
Method: 8260B - Volatile Orga	anic Compounds	(GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00104	J	0.00210	0.000704	mg/Kg	5	08/04/12 15:53	08/06/12 17:35	1
Ethylbenzene	0.0133		0.00210	0.000704	mg/Kg	9	08/04/12 15:53	08/06/12 17:35	1
Naphthalene	1.38		1.19	0.406	mg/Kg		08/04/12 15:59	08/08/12 16:28	1
Toluene	0.00115	J	0.00210	0.000778	mg/Kg	9	08/04/12 15:53	08/06/12 17:35	1
Xylenes, Total	0.0201		0.00525	0.000704	mg/Kg	0	08/04/12 15:53	08/06/12 17:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 130				08/04/12 15:53	08/06/12 17:35	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130				08/04/12 15:59	08/08/12 16:28	1
4-Bromofluorobenzene (Surr)	117		70 - 130				08/04/12 15:53	08/06/12 17:35	7
4-Bromofluorobenzene (Surr)	102		70 - 130				08/04/12 15:59	08/08/12 16:28	1
Dibromofluoromethane (Surr)	98		70 - 130				08/04/12 15:53	08/06/12 17:35	ij
Dibromofluoromethane (Surr)	89		70 - 130				08/04/12 15:59	08/08/12 16:28	1
Toluene-d8 (Surr)	100		70 - 130				08/04/12 15:53	08/06/12 17:35	1
Toluene-d8 (Surr)	101		70 - 130				08/04/12 15:59	08/08/12 16:28	1
Method: 8270D - Semivolatile	Organic Compou	nds (GC/M	S)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.169		0.0662	0.00989	mg/Kg	0	08/08/12 12:38	08/08/12 21:24	1
Acenaphthylene	0.0500	J	0.0662	0.00890	mg/Kg	0	08/08/12 12:38	08/08/12 21:24	1
Anthracene	0.104		0.0662	0.00890	mg/Kg	0	08/08/12 12:38	08/08/12 21:24	1
Benzo[a]anthracene	ND		0.0662	0.0148	mg/Kg	0	08/08/12 12:38	08/08/12 21:24	1
Benzo[a]pyrene	ND		0.0662	0.0119	mg/Kg	0	08/08/12 12:38	08/08/12 21:24	1
Benzo[b]fluoranthene	ND		0.0662	0.0119	mg/Kg	0	08/08/12 12:38	08/08/12 21:24	1
Benzo[g,h,i]perylene	ND		0.0662	0.00890	mg/Kg	- 0	08/08/12 12:38	08/08/12 21:24	1
Benzo[k]fluoranthene	ND		0.0662	0.0138	mg/Kg		08/08/12 12:38	08/08/12 21:24	1
Pyrene	0.202		0.0662	0.0119	mg/Kg	100	08/08/12 12:38	08/08/12 21:24	1
Phenanthrene	0.819		0.0662	0.00890	mg/Kg	- 0	08/08/12 12:38	08/08/12 21:24	1
Chrysene	ND		0.0662	0.00890	mg/Kg	4	08/08/12 12:38	08/08/12 21:24	1
Dibenz(a,h)anthracene	ND		0.0662	0.00692	mg/Kg	- 6	08/08/12 12:38	08/08/12 21:24	1
Fluoranthene	0.229		0.0662	0.00890	mg/Kg	-0	08/08/12 12:38	08/08/12 21:24	1
Fluorene	0.272		0.0662	0.0119	mg/Kg	D	08/08/12 12:38	08/08/12 21:24	1
Indeno[1,2,3-cd]pyrene	ND		0.0662	0.00989	mg/Kg	0	08/08/12 12:38	08/08/12 21:24	1
Naphthalene	0.242		0.0662	0.00890	mg/Kg	· ŏ	08/08/12 12:38	08/08/12 21:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	48		29 - 120				08/08/12 12:38	08/08/12 21:24	1
Terphenyl-d14 (Surr)	67		13 - 120				08/08/12 12:38	08/08/12 21:24	1
Nitrobenzene-d5 (Surr)	50		27 - 120				08/08/12 12:38	08/08/12 21:24	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26		0.10	0.10	%			08/04/12 13:58	1

08/04/12 13:58

0.10

0.10 %

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-3423-1

Client Sample ID: 261 Beech-2a

Date Collected: 08/01/12 15:15 Date Received: 08/04/12 08:30 Lab Sample ID: 490-3423-4

Matrix: Solid Percent Solids: 73.9

Method: 8260B - Volatile Orga	anic Compounds	(GC/MS)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0,00189	0.000634	mg/Kg	9	08/04/12 15:53	08/07/12 13:34	1
Ethylbenzene	ND		0.00189	0.000634	mg/Kg	1)	08/04/12 15:53	08/07/12 13:34	1
Naphthalene	0.0222		0.00473	0.00161	mg/Kg	0	08/04/12 15:53	08/07/12 13:34	-1
Toluene	ND		0.00189	0.000701	mg/Kg	-0	08/04/12 15:53	08/07/12 13:34	1
Xylenes, Total	0.00189	J	0.00473	0.000634	mg/Kg	0	08/04/12 15:53	08/07/12 13:34	ì
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 130				08/04/12 15:53	08/07/12 13:34	1
4-Bromofluorobenzene (Surr)	102		70 - 130				08/04/12 15:53	08/07/12 13:34	7
Dibromofluoromethane (Surr)	94		70 - 130				08/04/12 15:53	08/07/12 13:34	7
Toluene-d8 (Surr)	105		70 - 130				08/04/12 15:53	08/07/12 13:34	1
Method: 8270D - Semivolatile	Organic Compou	inds (GC/MS	S)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0665	0.00992	mg/Kg	¢	08/08/12 12:38	08/08/12 21:45	1
Acenaphthylene	ND		0.0665	0.00893	mg/Kg	.0	08/08/12 12:38	08/08/12 21:45	1
Anthracene	ND		0.0665	0.00893	mg/Kg	0	08/08/12 12:38	08/08/12 21:45	1
Benzo[a]anthracene	ND		0.0665	0.0149	mg/Kg	0	08/08/12 12:38	08/08/12 21:45	1
Benzo[a]pyrene	ND		0.0665	0.0119	mg/Kg	0	08/08/12 12:38	08/08/12 21:45	1
Benzo[b]fluoranthene	ND		0.0665	0.0119	mg/Kg	O	08/08/12 12:38	08/08/12 21:45	1
Benzo[g,h,i]perylene	ND		0.0665	0.00893	mg/Kg	0	08/08/12 12:38	08/08/12 21:45	1
Benzo[k]fluoranthene	ND		0.0665	0.0139	mg/Kg	0	08/08/12 12:38	08/08/12 21:45	1
Pyrene	ND		0.0665	0.0119	mg/Kg	0	08/08/12 12:38	08/08/12 21:45	1
Phenanthrene	0.0706		0.0665	0.00893	mg/Kg	0	08/08/12 12:38	08/08/12 21:45	1
Chrysene	ND		0.0665	0.00893	mg/Kg	O.	08/08/12 12:38	08/08/12 21:45	1
Dibenz(a,h)anthracene	ND		0.0665	0.00694	mg/Kg	0	08/08/12 12:38	08/08/12 21:45	1
Fluoranthene	ND		0.0665	0.00893	mg/Kg	4	08/08/12 12:38	08/08/12 21:45	1
Fluorene	ND		0.0665	0.0119	mg/Kg	0	08/08/12 12:38	08/08/12 21:45	1
Indeno[1,2,3-cd]pyrene	ND		0.0665	0.00992	mg/Kg	0	08/08/12 12:38	08/08/12 21:45	1
Naphthalene	ND		0,0665	0.00893	mg/Kg	0	08/08/12 12:38	08/08/12 21:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	45		29 - 120				08/08/12 12:38	08/08/12 21:45	1
Terphenyl-d14 (Surr)	80		13 - 120				08/08/12 12:38	08/08/12 21:45	1
Nitrobenzene-d5 (Surr)	40		27 - 120				08/08/12 12:38	08/08/12 21:45	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26		0.10	0.10	%			08/04/12 13:58	1
Percent Solids	74		0.10	0.10	%			08/04/12 13:58	1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-3423-1

Client Sample ID: 261 Beech-3a

Date Collected: 08/01/12 15:30 Date Received: 08/04/12 08:30 Lab Sample ID: 490-3423-5

Matrix; Solid Percent Solids: 79.2

Method: 8260B - Volatile Orga	anic Compounds	(GC/MS)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzène	0.00178	J	0.00214	0.000717	mg/Kg	ū	08/04/12 15:53	08/06/12 18:34	1
Ethylbenzene	0.0563		0.00214	0.000717	mg/Kg	*	08/04/12 15:53	08/06/12 18:34	1
Naphthalene	0.315	E	0.00535	0.00182	mg/Kg	6	08/04/12 15:53	08/06/12 18:34	1
Toluene	ND		0.00214	0.000791	mg/Kg	- 2	08/04/12 15:53	08/06/12 18:34	1
Xylenes, Total	0.0261		0.00535	0.000717	mg/Kg	10	08/04/12 15:53	08/06/12 18:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 130				08/04/12 15:53	08/06/12 18:34	1
4-Bromofluorobenzene (Surr)	124		70 - 130				08/04/12 15:53	08/06/12 18:34	1
Dibromofluoromethane (Surr)	98		70 - 130				08/04/12 15:53	08/06/12 18:34	1
Toluene-d8 (Surr)	99		70 - 130				08/04/12 15:53	08/06/12 18:34	1
Method: 8270D - Semivolatile	Organic Compou	nds (GC/M	S)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0662	0.00988	mg/Kg	0	08/08/12 12:38	08/08/12 22:06	1
Acenaphthylene	ND		0.0662	0.00889	mg/Kg	(2.	08/08/12 12:38	08/08/12 22:06	1
Anthracene	ND		0.0662	0.00889	mg/Kg	12	08/08/12 12:38	08/08/12 22:06	1
Benzo[a]anthracene	ND		0.0662	0.0148	mg/Kg	0	08/08/12 12:38	08/08/12 22:06	1
Benzo[a]pyrene	ND		0.0662	0.0119	mg/Kg	4	08/08/12 12:38	08/08/12 22:06	1
Benzo[b]fluoranthene	ND		0.0662	0.0119	mg/Kg		08/08/12 12:38	08/08/12 22:06	1
Benzo[g,h,i]perylene	ND		0.0662	0.00889	mg/Kg	Ö	08/08/12 12:38	08/08/12 22:06	1
Benzo[k]fluoranthene	ND		0.0662	0.0138	mg/Kg	-0	08/08/12 12:38	08/08/12 22:06	1
Pyrene	ND		0.0662	0.0119	mg/Kg	0	08/08/12 12:38	08/08/12 22:06	1
Phenanthrene	ND		0.0662	0.00889	mg/Kg	-31	08/08/12 12:38	08/08/12 22:06	1
Chrysene	ND		0.0662	0.00889	mg/Kg	-01	08/08/12 12:38	08/08/12 22:06	1
Dibenz(a,h)anthracene	ND		0.0662	0.00691	mg/Kg	0	08/08/12 12:38	08/08/12 22:06	1
Fluoranthene	ND		0.0662	0.00889	mg/Kg	d	08/08/12 12:38	08/08/12 22:06	1
Fluorene	ND		0.0662	0.0119	mg/Kg	10"	08/08/12 12:38	08/08/12 22:06	1
ndeno[1,2,3-cd]pyrene	ND		0.0662	0.00988	mg/Kg	0	08/08/12 12:38	08/08/12 22:06	1
Naphthalene	ND		0.0662	0.00889	mg/Kg	0	08/08/12 12:38	08/08/12 22:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	38		29 - 120				08/08/12 12:38	08/08/12 22:06	1
Terphenyl-d14 (Surr)	65		13 - 120				08/08/12 12:38	08/08/12 22:06	1
Nitrobenzene-d5 (Surr)	32		27 - 120				08/08/12 12:38	08/08/12 22:06	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		0.10	0.10	%		W. Caroliani	08/04/12 13:58	1
Percent Solids	79		0.10	0.10	%			08/04/12 13:58	1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-3423-1

Client Sample ID: 260 Beech-1a

Date Collected: 08/01/12 16:00 Date Received: 08/04/12 08:30 Lab Sample ID: 490-3423-6

Matrix: Solid Percent Solids: 71.8

								refeeth Joi	143. 11.0
Method: 8260B - Volatile Org	anic Compounds	(GC/MS)							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00210	0.000703	mg/Kg	ō	08/04/12 15:53	08/07/12 14:03	1
Ethylbenzene	ND		0.00210	0.000703	mg/Kg	8	08/04/12 15:53	08/07/12 14:03	1
Naphthalene	ND		0.00524	0.00178	mg/Kg	9	08/04/12 15:53	08/07/12 14:03	1
Toluene	ND		0.00210	0.000776	mg/Kg	0	08/04/12 15:53	08/07/12 14:03	1
Xylenes, Total	ND		0.00524	0.000703	mg/Kg	0	08/04/12 15:53	08/07/12 14:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130				08/04/12 15:53	08/07/12 14:03	1
4-Bromofluorobenzene (Surr)	115		70 - 130				08/04/12 15:53	08/07/12 14:03	1
Dibromofluoromethane (Surr)	95		70 - 130				08/04/12 15:53	08/07/12 14:03	1
Toluene-d8 (Surr)	106		70 - 130				08/04/12 15:53	08/07/12 14:03	7
Method: 8270D - Semivolatile	Organic Compou	inds (GC/M	S)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0660	0.00985	mg/Kg	12	08/08/12 12:38	08/08/12 22:26	1
Acenaphthylene	ND		0.0660	0.00886	mg/Kg	-01	08/08/12 12:38	08/08/12 22:26	- 1
Anthracene	ND		0.0660	0.00886	mg/Kg	-0	08/08/12 12:38	08/08/12 22:26	1
Benzo[a]anthracene	ND		0.0660	0.0148	mg/Kg	0	08/08/12 12:38	08/08/12 22:26	1
Benzo[a]pyrene	ND		0.0660	0.0118	mg/Kg	0	08/08/12 12:38	08/08/12 22:26	7
Benzo[b]fluoranthene	ND		0.0660	0.0118	mg/Kg	0	08/08/12 12:38	08/08/12 22:26	1
Benzo[g,h,i]perylene	ND		0.0660	0.00886	mg/Kg	0	08/08/12 12:38	08/08/12 22:26	1
Benzo[k]fluoranthene	ND		0.0660	0.0138	mg/Kg	0	08/08/12 12:38	08/08/12 22:26	1
Pyrene	ND		0.0660	0.0118	mg/Kg	0	08/08/12 12:38	08/08/12 22:26	1
Phenanthrene	0.111		0.0660	0.00886	mg/Kg	45-	08/08/12 12:38	08/08/12 22:26	1
Chrysene	ND		0.0660	0.00886	mg/Kg	Œ	08/08/12 12:38	08/08/12 22:26	1
Dibenz(a,h)anthracene	ND		0.0660	0.00689	mg/Kg	- 0	08/08/12 12:38	08/08/12 22:26	1
Fluoranthene	ND		0.0660	0.00886	mg/Kg	4	08/08/12 12:38	08/08/12 22:26	1
Fluorene	0.0747		0.0660	0.0118	mg/Kg	*	08/08/12 12:38	08/08/12 22:26	1
Indeno[1,2,3-cd]pyrene	ND		0.0660	0.00985	mg/Kg	Ö	08/08/12 12:38	08/08/12 22:26	1
Naphthalene	0.0823		0.0660	0.00886	mg/Kg	D	08/08/12 12:38	08/08/12 22:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	55		29 - 120				08/08/12 12:38	08/08/12 22:26	1
Terphenyl-d14 (Surr)	73		13 - 120				08/08/12 12:38	08/08/12 22:26	1
Nitrobenzene-d5 (Surr)	51		27 - 120				08/08/12 12:38	08/08/12 22:26	7
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		0.10	0.10	%			08/04/12 13:58	1
Percent Solids	72		0,10	0.10	%			08/04/12 13:58	1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-3423-1

Client Sample ID: 260 Beech-2

Date Collected: 08/02/12 10:45 Date Received: 08/04/12 08:30 Lab Sample ID: 490-3423-7

Matrix: Solid Percent Solids: 95.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00198	0.000665	mg/Kg	9	08/04/12 15:53	08/06/12 19:32	1
Ethylbenzene	ND		0.00198	0.000665	mg/Kg	0	08/04/12 15:53	08/06/12 19:32	1
Naphthalene	ND		0.00496	0.00169	mg/Kg	4/4	08/04/12 15:53	08/06/12 19:32	1
Toluene	ND		0.00198	0.000734	mg/Kg	O	08/04/12 15:53	08/06/12 19:32	1
Xylenes, Total	ND		0.00496	0.000665	mg/Kg	B	08/04/12 15:53	08/06/12 19:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130				08/04/12 15:53	08/06/12 19:32	1
4-Bromofluorobenzene (Surr)	98		70 - 130				08/04/12 15:53	08/06/12 19:32	1
Dibromofluoromethane (Surr)	98		70 - 130				08/04/12 15:53	08/06/12 19:32	1
Toluene-d8 (Surr)	93		70 - 130				08/04/12 15:53	08/06/12 19:32	1
Method: 8270D - Semivolatile	Organic Compou	nds (GC/MS	5)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0666	0.00993	mg/Kg	12	08/08/12 12:38	08/08/12 22:47	1
Acenaphthylene	ND		0.0666	0.00894	mg/Kg	IG.	08/08/12 12:38	08/08/12 22:47	1
Anthracene	ND		0.0666	0.00894	mg/Kg	(/8	08/08/12 12:38	08/08/12 22:47	1
Benzo[a]anthracene	0.0162	J	0.0666	0.0149	mg/Kg	9	08/08/12 12:38	08/08/12 22:47	1
Benzo[a]pyrene	0.0335	J	0.0666	0.0119	mg/Kg	57	08/08/12 12:38	08/08/12 22:47	1
Benzo[b]fluoranthene	0.0872		0.0666	0.0119	mg/Kg	25	08/08/12 12:38	08/08/12 22:47	1
Benzo[g,h,i]perylene	0.0668		0.0666	0.00894	mg/Kg	0	08/08/12 12:38	08/08/12 22:47	1
Benzo[k]fluoranthene	0.0425	J	0.0666	0.0139	mg/Kg	0	08/08/12 12:38	08/08/12 22:47	1
Pyrene	ND		0.0666	0.0119	mg/Kg	9	08/08/12 12:38	08/08/12 22:47	1
Phenanthrene	ND		0.0666	0.00894	mg/Kg	Q	08/08/12 12:38	08/08/12 22:47	1
Chrysene	0.0413	J	0.0666	0.00894	mg/Kg	-0	08/08/12 12:38	08/08/12 22:47	1
Dibenz(a,h)anthracene	ND		0.0666	0.00695	mg/Kg	0	08/08/12 12:38	08/08/12 22:47	1
Fluoranthene	ND		0.0666	0.00894	mg/Kg	0	08/08/12 12:38	08/08/12 22:47	1
Fluorene	ND		0.0666	0.0119	mg/Kg	0	08/08/12 12:38	08/08/12 22:47	1
Indeno[1,2,3-cd]pyrene	0.0639	J	0.0666	0.00993	mg/Kg	0	08/08/12 12:38	08/08/12 22:47	1
Naphthalene	ND		0.0666	0.00894	mg/Kg	-2	08/08/12 12:38	08/08/12 22:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	50		29 - 120				08/08/12 12:38	08/08/12 22:47	1
Terphenyl-d14 (Surr)	75		13 - 120				08/08/12 12:38	08/08/12 22:47	1
Nitrobenzene-d5 (Surr)	44		27 - 120				08/08/12 12:38	08/08/12 22:47	†
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.6		0.10	0.10	%			08/04/12 13:58	1
Percent Solids	95		0.10	0.10	%			08/04/12 13:58	1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-10484/10

Matrix: Solid

Analysis Batch: 10484

Client Sample ID: Method Blank Prep Type: Total/NA

	MB MB							
Analyte	Result Qua	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	0.00200	0.000670	mg/Kg			08/06/12 13:41	1
Ethylbenzene	ND	0.00200	0.000670	mg/Kg			08/06/12 13:41	1
Naphthalene	ND	0.00500	0.00170	mg/Kg			08/06/12 13:41	1
Toluene	ND	0.00200	0.000740	mg/Kg			08/06/12 13:41	1
Xylenes, Total	ND	0,00500	0.000670	mg/Kg			08/06/12 13:41	1
	MB MB							

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 95 70 - 130 08/06/12 13:41 4-Bromofluorobenzene (Surr) 100 70 - 130 08/06/12 13:41 Dibromofluoromethane (Surr) 97 70 - 130 08/06/12 13:41 Toluene-d8 (Surr) 92 70 - 130 08/06/12 13:41

Lab Sample ID: LCS 490-10484/7

Matrix: Solid

Analysis Batch: 10484

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	<b>Spike</b>	LCS LCS				%Rec.
Analyte	Added Re	sult Qualifier	Unit	D	%Rec	Limits
Benzene	0.0500 0.05	603	mg/Kg		112	75 - 127
Ethylbenzene	0.0500 0.04	974	mg/Kg		99	80 - 134
Naphthalene	0.0500 0.04	750	mg/Kg		95	69 - 150
Toluene	0.0500 0.04	969	mg/Kg		99	80 - 132
Xylenes, Total	0.150 0.1	485	mg/Kg		99	80 - 137

LCS LCS Surrogate %Recovery Qualifier Limits 1.2-Dichloroethane-d4 (Surr) 94 70 - 130 4-Bromofluorobenzene (Surr) 99 70 - 130 Dibromofluoromethane (Surr) 98 70 - 130 Toluene-d8 (Surr) 93 70 - 130

Lab Sample ID: LCSD 490-10484/8

Matrix: Solid

Analysis Batch: 10484

Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0500	0.05476		mg/Kg		110	75 - 127	2	50
Ethylbenzene	0.0500	0.04897		mg/Kg		98	80 - 134	2	50
Naphthalene	0.0500	0.04680		mg/Kg		94	69 - 150	1	50
Toluene	0.0500	0.04908		mg/Kg		98	80 - 132	1	50
Xylenes, Total	0.150	0.1446		mg/Kg		96	80 - 137	3	50

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	97		70 - 130
Toluene-d8 (Surr)	93		70 - 130

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-10688/6

Matrix: Solid

Analysis Batch: 10688

Client Sample ID: Method Blank Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			08/07/12 12:36	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			08/07/12 12:36	1
Naphthalene	ND		0.00500	0.00170	mg/Kg			08/07/12 12:36	1
Toluene	ND		0.00200	0.000740	mg/Kg			08/07/12 12:36	1
Xylenes, Total	ND		0.00500	0.000670	mg/Kg			08/07/12 12:36	1
		100							

MB MB

	A STATE OF THE STA			
Surrogate	%Recovery Qualifier	Limits	Prepared Analy	yzed Dil Fac
1,2-Dichloroethane-d4 (Surr)	96	70 - 130	08/07/12	2 12:36 1
4-Bromofluorobenzene (Surr)	102	70 - 130	08/07/12	2 12:36 1
Dibromofluoromethane (Surr)	93	70 - 130	08/07/12	2 12:36 1
Toluene-d8 (Surr)	104	70 - 130	08/07/12	2 12:36 1

Lab Sample ID: LCS 490-10688/3

Matrix: Solid

Analysis Batch: 10688

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	<b>Эріке</b>	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.0500	0.04881		mg/Kg		98	75 - 127
Ethylbenzene	0.0500	0.05110		mg/Kg		102	80 - 134
Naphthalene	0.0500	0.05052		mg/Kg		101	69 - 150
Toluene	0.0500	0.05146		mg/Kg		103	80 - 132
Xylenes, Total	0.150	0.1515		mg/Kg		101	80 - 137

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	102		70 - 130
Dibromofluoromethane (Surr)	93		70 - 130
Toluene-d8 (Surr)	105		70 - 130

Lab Sample ID: LCSD 490-10688/4

Matrix: Solid

Analysis Batch: 10688

Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

	Spike	LCSD LCSD				%Rec.		RPD
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0500	0.04401	mg/Kg		88	75 - 127	10	50
Ethylbenzene	0.0500	0.04630	mg/Kg		93	80 - 134	10	50
Naphthalene	0.0500	0.05080	mg/Kg		102	69 - 150	1	50
Toluene	0.0500	0.04665	mg/Kg		93	80 - 132	10	50
Xylenes, Total	0.150	0.1379	mg/Kg		92	80 - 137	9	50

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
4-Bromofluorobenzene (Surr)	103		70 - 130
Dibromofluoromethane (Surr)	95		70 - 130
Toluene-d8 (Surr)	104		70 - 130

TestAmerica Job ID: 490-3423-1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-3358-B-17-D MS

Matrix: Solid

Analysis Batch: 10688

Client Sample ID: Matrix Spike Prep Type: Total/NA Prep Batch: 10705

	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	ND		0.0468	0.04424		mg/Kg		95	31 - 143
Ethylbenzene	ND		0.0468	0.04567		mg/Kg		98	23 - 161
Naphthalene	ND		0.0468	0.04682		mg/Kg		100	10 - 176
Toluene	ND		0.0468	0.04596		mg/Kg		98	30 - 155
Xylenes, Total	ND		0.140	0.1354		mg/Kg		96	25 - 162

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		70 - 130
4-Bromofluorobenzene (Surr)	103		70 - 130
Dibromofluoromethane (Surr)	94		70 - 130
Toluene-d8 (Surr)	104		70 - 130

Lab Sample ID: 490-3358-B-17-E MSD

Matrix: Solid

Analysis Batch: 10688

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA Prep Batch: 10705

Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
ND		0.0620	0.06174		mg/Kg		100	31 - 143	33	50
ND		0.0620	0.06409		mg/Kg		103	23 - 161	34	50
ND		0.0620	0.06538		mg/Kg		105	10 - 176	33	50
ND		0.0620	0.06413		mg/Kg		103	30 - 155	33	50
ND		0.186	0.1905		mg/Kg		102	25 - 162	34	50
	Result ND ND ND ND	ND ND ND	Result         Qualifier         Added           ND         0.0620           ND         0.0620           ND         0.0620           ND         0.0620           ND         0.0620	Result         Qualifier         Added         Result           ND         0.0620         0.06174           ND         0.0620         0.06409           ND         0.0620         0.06538           ND         0.0620         0.06413	Result         Qualifier         Added         Result         Qualifier           ND         0.0620         0.06174           ND         0.0620         0.06409           ND         0.0620         0.06538           ND         0.0620         0.06413	Result         Qualifier         Added         Result         Qualifier         Unit           ND         0.0620         0.06174         mg/Kg           ND         0.0620         0.06409         mg/Kg           ND         0.0620         0.06538         mg/Kg           ND         0.0620         0.06413         mg/Kg	Result Qualifier         Added Nesult Qualifier         Qualifier Unit D         D           ND         0.0620         0.06174         mg/Kg           ND         0.0620         0.06409         mg/Kg           ND         0.0620         0.06538         mg/Kg           ND         0.0620         0.06413         mg/Kg	Result Qualifier         Added         Result Qualifier         Unit         D         %Rec           ND         0.0620         0.06174         mg/Kg         100           ND         0.0620         0.06409         mg/Kg         103           ND         0.0620         0.06538         mg/Kg         105           ND         0.0620         0.06413         mg/Kg         103	Result Qualifier         Added         Result Qualifier         Unit         D         %Rec         Limits           ND         0.0620         0.06174         mg/Kg         100         31 - 143           ND         0.0620         0.06409         mg/Kg         103         23 - 161           ND         0.0620         0.06538         mg/Kg         105         10 - 176           ND         0.0620         0.06413         mg/Kg         103         30 - 155	Result Qualifier         Added         Result Qualifier         Unit         D         %Rec         Limits         RPD           ND         0.0620         0.06174         mg/Kg         100         31 - 143         33           ND         0.0620         0.06409         mg/Kg         103         23 - 161         34           ND         0.0620         0.06538         mg/Kg         105         10 - 176         33           ND         0.0620         0.06413         mg/Kg         103         30 - 155         33

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
4-Bromofluorobenzene (Surr)	102		70 - 130
Dibromofluoromethane (Surr)	98		70 - 130
Toluene-d8 (Surr)	104		70 - 130

Lab Sample ID: 490-3358-B-26-C MS

Matrix: Solid

Analysis Batch: 10914

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 10705

	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	ND		0.0492	0.04448		mg/Kg		90	31 - 143
Ethylbenzene	ND		0.0492	0.04614		mg/Kg		94	23 - 161
Naphthalene	ND		0.0492	0.04704		mg/Kg		96	10 - 176
Toluene	ND		0.0492	0.04642		mg/Kg		94	30 - 155
Xylenes, Total	ND		0.148	0.1400		mg/Kg		95	25 - 162

MS MS

Surrogate	%Recovery Qualific	er Limits
1,2-Dichloroethane-d4 (Surr)	102	70 - 130
4-Bromofluorobenzene (Surr)	102	70 - 130
Dibromofluoromethane (Surr)	97	70 - 130
Toluene-d8 (Surr)	103	70 - 130

TestAmerica Nashville 8/13/2012

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

#### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 49	-3358-B-26-D	MSD
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Matrix: Solid

Analysis Batch: 10914

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 10705

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	ND		0.0494	0.04597		mg/Kg		93	31 - 143	3	50
Ethylbenzene	ND		0.0494	0.04755		mg/Kg		96	23 - 161	3	50
Naphthalene	ND		0.0494	0.04453		mg/Kg		90	10 - 176	5	50
Toluene	ND		0.0494	0.04717		mg/Kg		95	30 - 155	2	50
Xylenes, Total	ND		0.148	0.1405		mg/Kg		95	25 - 162	0	50

MSD MSD

Surrogate	%Recovery Qui	alifier Limits
1,2-Dichloroethane-d4 (Surr)	101	70 - 130
4-Bromofluorobenzene (Surr)	103	70 - 130
Dibromofluoromethane (Surr)	96	70 - 130
Toluene-d8 (Surr)	102	70 - 130

Client Sample ID: Method Blank

Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 10914

Lab Sample ID: MB 490-10914/10

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	0.00200	0.000680	mg/Kg			08/08/12 14:31	1
Ethylbenzene	ND	0.00200	0.000680	mg/Kg			08/08/12 14:31	1
Naphthalene	ND	0.00500	0.00170	mg/Kg			08/08/12 14:31	1
Toluene	ND	0.00200	0.000740	mg/Kg			08/08/12 14:31	1
Xylenes, Total	ND	0.00500	0.000680	mg/Kg			08/08/12 14:31	1

MB MB

MB MB

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97	70 - 130		08/08/12 14:31	1
4-Bromofluorobenzene (Surr)	103	70 - 130		08/08/12 14:31	1
Dibromofluoromethane (Surr)	94	70 - 130		08/08/12 14:31	1
Toluene-d8 (Surr)	101	70 - 130		08/08/12 14:31	1

Lab Sample ID: MB 490-10914/11

Matrix: Solid

Analysis Batch: 10914

Client	Sample	ID:	Method	Blank	
	D.	on T	Who! To	tal/NIA	

MB MB Result Qualifier RL MDL Unit Analyte Prepared Analyzed Dil Fac ND 0.100 0.0340 mg/Kg 08/08/12 15:00 Benzene Ethylbenzene ND 0.100 0.0340 mg/Kg 08/08/12 15:00 0.0850 mg/Kg Naphthalene ND 0.250 08/08/12 15:00 ND 0.0370 mg/Kg Toluene 0.100 08/08/12 15:00 ND 0.250 0.0340 mg/Kg 08/08/12 15:00 Xylenes, Total 1

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91	70 - 130		08/08/12 15:00	7
4-Bromofluorobenzene (Surr)	101	70 - 130		08/08/12 15:00	1
Dibromofluoromethane (Surr)	93	70 - 130		08/08/12 15:00	1
Toluene-d8 (Surr)	104	70 - 130		08/08/12 15:00	1

TestAmerica Job ID: 490-3423-1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-10914/7

Matrix: Solid

Analysis Batch: 10914

Client Sample ID: Lab Control Sample Prep Type: Total/NA

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.0500	0.04607		mg/Kg		92	75 - 127
Ethylbenzene	0.0500	0.04925		mg/Kg		99	80 - 134
Naphthalene	0.0500	0.05430		mg/Kg		109	69 - 150
Toluene	0.0500	0.04911		mg/Kg		98	80 - 132
Xylenes, Total	0.150	0.1468		mg/Kg		98	80 - 137

LCS LCS Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 100 70 - 130 4-Bromofluorobenzene (Surr) 101 70 - 130 Dibromofluoromethane (Surr) 95 70 - 130 Toluene-d8 (Surr) 103 70 - 130

Lab Sample ID: LCSD 490-10914/8

Matrix: Solid

Analysis Batch: 10914

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0500	0.04675		mg/Kg		93	75 - 127	1	50
Ethylbenzene	0.0500	0.04908		mg/Kg		98	80 - 134	0	50
Naphthalene	0.0500	0.05168		mg/Kg		103	69 - 150	5	50
Toluene	0.0500	0.04888		mg/Kg		98	80 - 132	0	50
Xylenes, Total	0.150	0.1454		mg/Kg		97	80 - 137	1	50

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	101		70 - 130
Dibromofluoromethane (Surr)	97		70 - 130
Toluene-d8 (Surr)	103		70 - 130

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-11020/1-A

Matrix: Solid

Analysis Batch: 10956

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 11020

Control of the Contro	MB N	ИB						Frep batci	1. 11020
Analyte	Result Q	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0670	0.0100	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Acenaphthylene	ND		0.0670	0.00900	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Anthracene	ND		0.0670	0.00900	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Benzo[a]anthracene	ND		0.0670	0.0150	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Benzo[a]pyrene	ND		0.0670	0.0120	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Benzo[b]fluoranthene	ND		0.0670	0.0120	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Benzo[g,h,i]perylene	ND		0.0670	0.00900	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Benzo[k]fluoranthene	ND		0.0670	0.0140	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Pyrene	ND		0.0670	0.0120	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Phenanthrene	ND		0.0670	0.00900	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Chrysene	ND		0.0670	0.00900	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Dibenz(a,h)anthracene	ND		0.0670	0.00700	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Fluoranthene	ND		0.0670	0.00900	mg/Kg		08/08/12 12:38	08/08/12 17:13	1

TestAmerica Nashville 8/13/2012

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-11020/1-A

Matrix: Solid

Analysis Batch: 10956

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11020

	INID INID							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND	0.0670	0.0120	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Indeno[1,2,3-cd]pyrene	ND	0.0670	0.0100	mg/Kg		08/08/12 12:38	08/08/12 17:13	1
Naphthalene	ND	0.0670	0.00900	mg/Kg		08/08/12 12:38	08/08/12 17:13	1

MB MB Surrogate %Recovery Qualifier Limits Prepared Dil Fac Analyzed 2-Fluorobiphenyl (Surr) 29 - 120 08/08/12 12:38 08/08/12 17:13 Terphenyl-d14 (Surr) 77 13 - 120 08/08/12 12:38 08/08/12 17:13 Nitrobenzene-d5 (Surr) 51 27 - 120 08/08/12 12:38 08/08/12 17:13

Lab Sample ID: LCS 490-11020/2-A

Matrix: Solid

Analysis Batch: 10956

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 11020

	<b>Spike</b>	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Acenaphthylene	1.67	1.224		mg/Kg		73	38 - 120
Anthracene	1.67	1.243		mg/Kg		75	46 - 124
Benzo[a]anthracene	1.67	1.259		mg/Kg		76	45 - 120
Benzo[a]pyrene	1.67	1.343		mg/Kg		81	45 - 120
Benzo[b]fluoranthene	1.67	1.338		mg/Kg		80	42 - 120
Benzo[g,h,i]perylene	1.67	1.240		mg/Kg		74	38 - 120
Benzo[k]fluoranthene	1.67	1.207		mg/Kg		72	42 - 120
Pyrene	1.67	1.279		mg/Kg		77	43 - 120
Phenanthrene	1.67	1.237		mg/Kg		74	45 - 120
Chrysene	1.67	1.226		mg/Kg		74	43 - 120
Dibenz(a,h)anthracene	1.67	1.228		mg/Kg		74	32 - 128
Fluoranthene	1.67	1.282		mg/Kg		77	46 - 120
Fluorene	1.67	1.215		mg/Kg		73	42 - 120
Indeno[1,2,3-cd]pyrene	1,67	1.239		mg/Kg		74	41 - 121
Naphthalene	1.67	1.126		mg/Kg		68	32 - 120

 Surrogate
 %Recovery
 Qualifier
 Limits

 2-Fluorobiphenyl (Surr)
 48
 29 - 120

 Terphenyl-d14 (Surr)
 66
 13 - 120

 Nitrobenzene-d5 (Surr)
 43
 27 - 120

#### Method: Moisture - Percent Moisture

Lab Sample ID: 490-3417-F-1 DU

Matrix: Solid

Analysis Batch: 10413

Client Sample ID: Duplicate Prep Type: Total/NA

	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Moisture	4.7		4.7		%		0.2	20
Percent Solids	95		95		%		0.01	20

# QC Association Summary

TestAmerica Job ID: 490-3423-1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

#### GC/MS VOA

Prep	Batch:	10429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-3423-1	1262 Dove	Total/NA	Solid	5035	
490-3423-2	1276 Albatross	Total/NA	Solid	5035	
490-3423-3	261 Beech-1a	Total/NA	Solid	5035	
490-3423-4	261 Beech-2a	Total/NA	Solid	5035	
490-3423-5	261 Beech-3a	Total/NA	Solid	5035	
490-3423-6	260 Beech-1a	Total/NA	Solid	5035	
490-3423-7	260 Beech-2	Total/NA	Solid	5035	

#### Prep Batch: 10430

Lab Sample ID	Client Sample ID	Prep Type	Watrix	Method	Prep Batch
490-3423-3	261 Beech-1a	Total/NA	Solid	5035	
Analysis Batch: 104	84				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	
490-3423-1	1262 Dove	Total/NA	Solid	8260B	
490-3423-2	1276 Albatross	Total/NA	Solid	8260B	
490-3423-3	261 Beech-1a	Total/NA	Solid	8260B	
490-3423-5	261 Beech-3a	Total/NA	Solid	8260B	
490-3423-7	260 Beech-2	Total/NA	Solid	8260B	
LCS 490-10484/7	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-10484/8	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-10484/10	Method Blank	Total/NA	Solid	8260B	

#### Analysis Batch: 10688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-3358-B-17-D MS	Matrix Spike	Total/NA	Solid	8260B	10705
490-3358-B-17-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B	10705
490-3423-4	261 Beech-2a	Total/NA	Solid	8260B	10429
490-3423-6	260 Beech-1a	Total/NA	Solid	8260B	10429
LCS 490-10688/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-10688/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-10688/6	Method Blank	Total/NA	Solid	8260B	

#### Prep Batch: 10705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-3358-B-17-D MS	Matrix Spike	Total/NA	Solid	5035	
490-3358-B-17-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
490-3358-B-26-C MS	Matrix Spike	Total/NA	Solid	5035	
490-3358-B-26-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 10914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-3358-B-26-C MS	Matrix Spike	Total/NA	Solid	8260B	10705
490-3358-B-26-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B	10705
490-3423-3	261 Beech-1a	Total/NA	Solid	8260B	10430
LCS 490-10914/7	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-10914/8	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-10914/10	Method Blank	Total/NA	Solid	8260B	
MB 490-10914/11	Method Blank	Total/NA	Solid	8260B	

# QC Association Summary

TestAmerica Job ID: 490-3423-1

Prep Batch

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

#### GC/MS Semi VOA

#### Analysis Batch: 10956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-3423-1	1262 Dove	Total/NA	Solid	8270D	11020
490-3423-2	1276 Albatross	Total/NA	Solid	8270D	11020
490-3423-3	261 Beech-1a	Total/NA	Solid	8270D	11020
490-3423-4	261 Beech-2a	Total/NA	Solid	8270D	11020
490-3423-5	261 Beech-3a	Total/NA	Solid	8270D	11020
490-3423-6	260 Beech-1a	Total/NA	Solid	8270D	11020
490-3423-7	260 Beech-2	Total/NA	Solid	8270D	11020
LCS 490-11020/2-A	Lab Control Sample	Total/NA	Solid	8270D	11020
MB 490-11020/1-A	Method Blank	Total/NA	Solid	8270D	11020

#### Prep Batch: 11020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method
490-3423-1	1262 Dove	Total/NA	Solid	3550C
490-3423-2	1276 Albatross	Total/NA	Solid	3550C
490-3423-3	261 Beech-1a	Total/NA	Solid	3550C
490-3423-4	261 Beech-2a	Total/NA	Solid	3550C
490-3423-5	261 Beech-3a	Total/NA	Solid	3550C
490-3423-6	260 Beech-1a	Total/NA	Solid	3550C
490-3423-7	260 Beech-2	Total/NA	Solid	3550C
LCS 490-11020/2-A	Lab Control Sample	Total/NA	Solid	3550C
MB 490-11020/1-A	Method Blank	Total/NA	Solid	3550C

### **General Chemistry**

### Analysis Batch: 10413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-3417-F-1 DU	Duplicate	Total/NA	Solid	Moisture	
490-3423-1	1262 Dove	Total/NA	Solid	Moisture	
490-3423-2	1276 Albatross	Total/NA	Solid	Moisture	
490-3423-3	261 Beech-1a	Total/NA	Solid	Moisture	
490-3423-4	261 Beech-2a	Total/NA	Solid	Moisture	
490-3423-5	261 Beech-3a	Total/NA	Solid	Moisture	
490-3423-6	260 Beech-1a	Total/NA	Solid	Moisture	
490-3423-7	260 Beech-2	Total/NA	Solid	Moisture	

TestAmerica Job ID: 490-3423-1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

Client Sample ID: 1262 Dove

Date Collected: 07/30/12 16:15 Date Received: 08/04/12 08:30

Lab Sample ID: 490-3423-1

Matrix: Solid

Percent Solids: 97.0

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10429	08/04/12 15:53	MH	TAL NSH
Total/NA	Analysis	8260B		1	10484	08/06/12 16:37	KK	TAL NSH
Total/NA	Prep	3550C			11020	08/08/12 12:38	DB	TAL NSH
Total/NA	Analysis	8270D		1	10956	08/08/12 20:43	WS	TAL NSH
Total/NA	Analysis	Moisture		1	10413	08/04/12 13:58	ML	TAL NSH

Client Sample ID: 1276 Albatross

Date Collected: 08/01/12 10:45 Date Received: 08/04/12 08:30

Lab Sample ID: 490-3423-2

Matrix: Solid Percent Solids: 77.0

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10429	08/04/12 15:53	MH	TAL NSH
Total/NA	Analysis	8260B		1	10484	08/06/12 17:06	KK	TAL NSH
Total/NA	Prep	3550C			11020	08/08/12 12:38	DB	TAL NSH
Total/NA	Analysis	8270D		1	10956	08/08/12 21:04	WS	TAL NSH
Total/NA	Analysis	Moisture		1	10413	08/04/12 13:58	ML	TAL NSH

Client Sample ID: 261 Beech-1a

Date Collected: 08/01/12 15:00 Date Received: 08/04/12 08:30 Lab Sample ID: 490-3423-3

Matrix: Solid

Percent Solids: 74.4

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10429	08/04/12 15:53	MH	TAL NSH
Total/NA	Analysis	8260B		1	10484	08/06/12 17:35	KK	TAL NSH
Total/NA	Prep	5035			10430	08/04/12 15:59	МН	TAL NSH
Total/NA	Analysis	8260B		1	10914	08/08/12 16:28	KK	TAL NSH
Total/NA	Prep	3550C			11020	08/08/12 12:38	DB	TAL NSH
Total/NA	Analysis	8270D		1	10956	08/08/12 21:24	WS	TAL NSH
Total/NA	Analysis	Moisture		1	10413	08/04/12 13:58	ML	TAL NSH

Client Sample ID: 261 Beech-2a

Date Collected: 08/01/12 15:15 Date Received: 08/04/12 08:30

Lab Sample ID: 490-3423-4

Matrix: Solid

Percent Solids: 73.9

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10429	08/04/12 15:53	MH	TAL NSH
Total/NA	Analysis	8260B		1	10688	08/07/12 13:34	KK	TAL NSH
Total/NA	Prep	3550C			11020	08/08/12 12:38	DB	TAL NSH
Total/NA	Analysis	8270D		4	10956	08/08/12 21:45	WS	TAL NSH
Total/NA	Analysis	Moisture		1	10413	08/04/12 13:58	ML	TAL NSH

#### Lab Chronicle

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-3423-1

Client Sample ID: 261 Beech-3a

Date Collected: 08/01/12 15:30 Date Received: 08/04/12 08:30 Lab Sample ID: 490-3423-5

Matrix: Solid

Percent Solids: 79.2

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10429	08/04/12 15:53	MH	TAL NSH
Total/NA	Analysis	8260B		1	10484	08/06/12 18:34	KK	TAL NSH
Total/NA	Prep	3550C			11020	08/08/12 12:38	DB	TAL NSH
Total/NA	Analysis	8270D		-1	10956	08/08/12 22:06	WS	TAL NSH
Total/NA	Analysis	Moisture		1	10413	08/04/12 13:58	ML	TAL NSH

Client Sample ID: 260 Beech-1a

Date Collected: 08/01/12 16:00 Date Received: 08/04/12 08:30 Lab Sample ID: 490-3423-6

Matrix: Solid Percent Solids: 71.8

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10429	08/04/12 15:53	MH	TAL NSH
Total/NA	Analysis	8260B		1	10688	08/07/12 14:03	KK	TAL NSH
Total/NA	Prep	3550C			11020	08/08/12 12:38	DB	TAL NSH
Total/NA	Analysis	8270D		1	10956	08/08/12 22:26	WS	TAL NSH
Total/NA	Analysis	Moisture		1	10413	08/04/12 13:58	ML	TAL NSH

Client Sample ID: 260 Beech-2

Date Collected: 08/02/12 10:45 Date Received: 08/04/12 08:30 Lab Sample ID: 490-3423-7

Matrix: Solid Percent Solids: 95.4

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10429	08/04/12 15:53	MH	TAL NSH
Total/NA	Analysis	8260B		1	10484	08/06/12 19:32	KK	TAL NSH
Total/NA	Prep	3550C			11020	08/08/12 12:38	DB	TAL NSH
Total/NA	Analysis	8270D		1	10956	08/08/12 22:47	WS	TAL NSH
Total/NA	Analysis	Moisture		1	10413	08/04/12 13:58	ML	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

### **Method Summary**

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-3423-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL NSH

#### Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TestAmerica Job ID: 490-3423-1

Client: Environmental Enterprise Group Project/Site: Laurel Bay Housing Project

#### Laboratory: TestAmerica Nashville

All certifications held try this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Dat
Part I	ACIL		393	10-30-12
A2LA	ISO/IEC 17025		0453.07	12-31-13
Alabama	State Program	4	41150	05-31-13
Alaska (UST)	State Program	10	UST-087	07-24-13
Arizona	State Program	9	AZ0473	05-05-13
Arkansas DEQ	State Program	6	88-0737	04-25-13
California	NELAC	9	1168CA	10-31-12
Canadian Assoc Lab Accred (CALA)	Canada		3744	03-08-14
Colorado	State Program	8	N/A	02-28-13
Connecticut	State Program	1	PH-0220	12-31-13
Florida	NELAC	4	E87358	06-30-13
Illinois	NELAC	5	200010	12-09-12
lowa	State Program	7	131	05-01-14
Kansas	NELAC	7	E-10229	10-31-12
Kentucky	State Program	4	90038	12-31-12
Kentucky (UST)	State Program	4	19	09-15-13
Louisiana	NELAC	6	LA110014	12-31-12
Louisiana	NELAC	6	30613	06-30-13
Waryland	State Program	3	316	03-31-13
Massachusetts	State Program	1	M-TN032	06-30-13
Minnesota	NELAC	5	047-999-345	12-31-12
Mississippi	State Program	4	N/A	06-30-13
Montana (UST)	State Program	8	NA	01-01-15
Nevada	State Program	9	TN00032	09-30-12
New Hampshire	NELAC	1	2963	10-09-12
New Jersey	NELAC	2	TN965	06-30-13
New York	NELAC	2	11342	04-01-13
North Carolina DENR	State Program	4	387	12-31-12
North Dakota	State Program	8	R-146	06-30-13
Ohio VAP	State Program	5	CL0033	01-19-14
Oklahoma	State Program	6	9412	08-31-12
Dregon	NELAC	10	TN200001	04-30-13
Pennsylvania	NELAC	3	68-00585	06-30-13
Rhode Island	State Program	4	LAO00268	12-30-12
South Carolina	State Program	4	84009 (001)	02-28-13
South Carolina	State Program	4	84009 (002)	02-23-14
ennessee	State Program	4	2008	02-23-14
exas	NELAC	6	T104704077-09-TX	08-31-12
ISDA	Federal		S-48469	11-02-13
Itah	NELAC	8	TAN	06-30-13
/irginia	NELAC	3	460152	06-14-13
Vashington	State Program	10	C789	07-19-13
Vest Virginia DEP	State Program	3	219	02-28-13
	State Program State Program			02-28-13
Visconsin Vyoming (UST)	A2LA	5 8	998020430 453.07	12-31-13



#### **COOLER RECEIPT FORM**



Cooler Received/Opened On <u>8/4/2012 @ 08:30</u>	)-3423 Chain of			
1. Tracking #(last 4 digits, FedEx)				
Courier: FEDEX IR Gun ID 97310166				
2. Temperature of rep. sample or temp blank when opened: 5. Degrees Cels	ius			
3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen?	YESNO. (NA)			
4. Were custody seals on outside of cooler?	YES NONA			
If yes, how many and where:				
5. Were the seals intact, signed, and dated correctly?	res)nona			
6. Were custody papers inside cooler?	(ES)NONA			
I certify that I opened the cooler and answered questions 1-6 (intial)				
7. Were custody seals on containers: YES NO and Intact	YESNO(NA)			
Were these signed and dated correctly?	YESNONA			
8. Packing mat'l used? Bubblewrapy Plastic bag Peanuts Vermiculite Foam Insert Pape	er Other None			
9. Cooling process: (ce   Ice-pack   Ice (direct contact)   Dry ice	e Other None			
10. Did all containers arrive in good condition (unbroken)?	FESNONA			
11. Were all container labels complete (#, date, signed, pres., etc)?	(YESNONA			
12. Did all container labels and tags agree with custody papers?	YESNONA			
13a. Were VOA vials received?	YESNONA			
b. Was there any observable headspace present in any VOA vial?	YESNONA			
14. Was there a Trip Blank in this cooler? YES.(.NONA If multiple coolers, sequ	uence #			
I certify that I unloaded the cooler and answered questions 7-14 (intial)				
15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level?	YESNONA			
b. Did the bottle labels indicate that the correct preservatives were used	YESNONA			
16. Was residual chlorine present?	YESNO. (NA			
I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)	1/3			
17. Were custody papers properly filled out (ink, signed, etc)?	YESNONA			
18. Did you sign the custody papers in the appropriate place?	YESNONA			
19. Were correct containers used for the analysis requested?	YESNONA			
20. Was sufficient amount of sample sent in each container?	YESNONA			
certify that I entered this project into LIMS and answered questions 17-20 (intial)				
certify that Lattached a label with the unique LIMS number to each container (initial)				

21. Were there Non-Conformance issues at login? YES. NO Was a PIPE generated? YES... YO...#

3423 Loc: 490 Yes Yes Compliance Monitoring? Enforcement Action? methods, is this work being conducted for regulatory purposes? To assist us in using the proper analytical Temperature Upon Receipt: VOCs Free of Headspace? Project ID: Laurel Bay Housing Project Laboratory Comments: Site State: SC ヤスシタ TENTE AND TO SAMPLES KET EDEX OF Project #: **00728 - HA**9 TA Quote #:  $Q_{0}$ ime BTEX + Napth - 8260E Ofpet (specify): los Fax No.: 843-879-040, e6pn|S Date Matrix Drinking Water Toll Free: 800-765-0980 Fax: 615-726-3404 Phone: 615-726-0177 Йоле (Black Label) HJSO, Plastic (Yellow Label) Thuy Eres Received by TestAmerica: なる Field Filtered Composite Project Manager: Tom McElwee email: mcelwee@eeginc.net 2960 Foster Creighton Grab Nashville, TN 37204 Nashville Division No. of Containers Shipped W ħ 16-00 1515 12/101/51 12/600 Sample mo アクグ Time Sampled Client Name/Account #: EEG - SBG # 2449 Address: 10179 Highway 78 City/State/Zip: Ladson, SC 29456 Date THE LEADER IN ENVIRONMENTAL TESTING Telephone Number: 843.412.2097 estAmerico 30 8/2/ Date Sampled 00 Sampler Name: (Print) Sampler Signature: ક BEECh-12 BRECh-3a ) Note 300 BEECH BEECL BRECH Sample ID / Description Special Instructions: Relinquished by: 8/13/2012

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# Login Sample Receipt Checklist

Client: Environmental Enterprise Group

Job Number: 490-3423-1

List Source: TestAmerica Nashville

Login Number: 3423 List Number: 1

Creator: Brothers, James

Creator: Brothers, James		
Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

N/A



Residual Chlorine Checked.

### 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 261Beech-2, 261 Beech Drive, 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.

1 10/10/12 (Name) (Date)

# **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 261Beech-3, 261 Beech Drive, 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: BEALB261TW03WG20150527

Laboratory ID: QE28007-002

Matrix: Aqueous

Date Sampled: 05/27/2015 1055 Date Received: 05/28/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	06/02/2015 0012	PMM2		76280

	CAS	Analytical					
Parameter	Number	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	0.51	U	5.0	0.51	0.17 ug/L 1
Naphthalene	91-20-3	8260B	5.8		5.0	0.96	0.32 ug/L 1
Toluene	108-88-3	8260B	0.48	U	5.0	0.48	0.16 ug/L 1
Xylenes (total)	1330-20-7	8260B	0.57	U	5.0	0.57	0.19 ug/L 1

Surrogate	Run 1 A	Acceptance Limits
Bromofluorobenzene	96	75-120
1,2-Dichloroethane-d4	92	70-120
Toluene-d8	101	85-120
Dibromofluoromethane	98	85-115

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 L = LCS/LCSD failure

ND = Not detected at or above the MDL Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

S = 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)

Client: AECOM - Resolution Consultants

Laboratory ID: QE28007-002

Description: BEALB261TW03WG20150527

Matrix: Aqueous

Date Sampled: 05/27/2015 1055 Date Received: 05/28/2015

Run Prep Method Analytical Method Dilution Analysis Date Analyst **Prep Date** Batch 1 3520C 8270D (SIM) 06/02/2015 1325 RBH 06/01/2015 1430 76221

	CAS	Analytical					
Parameter	Number	Method	Result	Q	LOQ	LOD	DL Units Run
Benzo(a)anthracene	56-55-3	8270D (SIM)	0.040	U	0.20	0.040	0.019 ug/L 1
Benzo(b)fluoranthene	205-99-2	8270D (SIM)	0.040	U	0.20	0.040	0.019 ug/L 1
Benzo(k)fluoranthene	207-08-9	8270D (SIM)	0.040	U	0.20	0.040	0.024 ug/L 1
Chrysene	218-01-9	8270D (SIM)	0.040	U	0.20	0.040	0.021 ug/L 1
Dibenzo(a,h)anthracene	53-70-3	8270D (SIM)	0.080	U	0.20	0.080	0.040 ug/L 1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Methylnaphthalene-d10		81	15-139
Fluoranthene-d10		83	23-154

PQL = Practical quantitation limit ND = Not detected at or above the MDL B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

Q = Surrogate failure L = LCS/LCSD failure

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

 $J = Estimated result < PQL and <math>\geq MDL$ 

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

S = 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

### **Volatile Organic Compounds by GC/MS**

Client: AECOM - Resolution Consultants

Description: BEALB261TW01WG20150527

Laboratory ID: QE28007-003

Matrix: Aqueous

Date Sampled: 05/27/2015 1155 Date Received: 05/28/2015

1

Run Prep Method Analytical Method Dilution Analysis Date Analyst **Prep Date** Batch 5030B 8260B 06/02/2015 0037 PMM2 76280

	CAS	Analytical					
Parameter	Number	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	0.51	U	5.0	0.51	0.17 ug/L 1
Naphthalene	91-20-3	8260B	0.96	U	5.0	0.96	0.32 ug/L 1
Toluene	108-88-3	8260B	0.48	U	5.0	0.48	0.16 ug/L 1
Xylenes (total)	1330-20-7	8260B	0.57	U	5.0	0.57	0.19 ug/L 1

Surrogate	Run 1 Ac Q % Recovery	ceptance Limits		
Bromofluorobenzene	94	75-120		
1,2-Dichloroethane-d4	91	70-120		
Toluene-d8	99	85-120		
Dibromofluoromethane	96	85-115		

PQL = Practical quantitation limit ND = Not detected at or above the MDL B = Detected in the method blank  $J = Estimated result < PQL and <math>\geq MDL$  E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40%

H = Out of holding time N = Recovery is out of criteria

Q = Surrogate failure 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

# Semivolatile Organic Compounds by GC/MS (SIM)

Client: AECOM - Resolution Consultants

Description: BEALB261TW01WG20150527

Laboratory ID: QE28007-003

Matrix: Aqueous

Date Sampled: 05/27/2015 1155 Date Received: 05/28/2015

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D (SIM)	1	06/02/2015 1355	RBH	06/01/2015 1430	76221

	CAS	Analytical					
Parameter	Number	Method	Result	Q	LOQ	LOD	DL Units Run
Benzo(a)anthracene	56-55-3	8270D (SIM)	0.040	U	0.20	0.040	0.019 ug/L 1
Benzo(b)fluoranthene	205-99-2	8270D (SIM)	0.040	U	0.20	0.040	0.019 ug/L 1
Benzo(k)fluoranthene	207-08-9	8270D (SIM)	0.040	U	0.20	0.040	0.024 ug/L 1
Chrysene	218-01-9	8270D (SIM)	0.040	U	0.20	0.040	0.021 ug/L 1
Dibenzo(a,h)anthracene	53-70-3	8270D (SIM)	0.080	U	0.20	0.080	0.040 ug/L 1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Methylnaphthalene-d10		81	15-139
Fluoranthene-d10		83	23-154

PQL = Practical quantitation limit ND = Not detected at or above the MDL B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

Q = Surrogate failure L = LCS/LCSD failure

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery is out of criteria

S = 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

# Appendix D Regulatory Correspondence





May 15, 2014

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 above 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 et seq., 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,

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)

,



PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director

Attachment to:

Krieg to Drawdy Subject: IGWA

Dated 5/15/2014

Laurel Bay Underground Storage Tank Assessment Reports for: (121 addresses/139 tanks)

137 Laurel Bay Tank 2	387 Acorn
139 Laurel Bay	392 Acorn Tank 2
229 Cypress Tank 2	396 Acorn Tank 1
261 Beech Tank 1 •	396 Acorn Tank 2
261 Beech Tank 3	430 Elderberry
273 Birch Tank 1	433 Elderberry
273 Birch Tank 2	439 Elderberry
273 Birch Tank 3	440 Elderberry
276 Birch Tank 2	442 Elderberry
278 Birch Tank 2	443 Elderberry
291 Birch Tank 2	444 Elderberry Tank 1
300 Ash	445 Elderberry
304 Ash *	446 Elderberry
314 Ash Tank 1	448 Elderberry
314 Ash Tank 2	449 Elderberry
322 Ash Tank 2 *	451 Elderberry
323 Ash	453 Elderberry
324 Ash *	456 Elderberry Tank 1
325 Ash Tank 1 •	456 Elderberry Tank 2
325 Ash Tank 2	458 Elderberry Tank 1
326 Ash •	458 Elderberry Tank 3
336 Ash	464 Dogwood
339 Ash	466 Dogwood
343 Ash Tank 1 *	467 Dogwood
344 Ash Tank 1	468 Dogwood
348 Ash *	469 Dogwood
349 Ash Tank 1	471 Dogwood Tank 2
353 Ash Tank 1 *	471 Dogwood Tank 3
362 Aspen *	475 Dogwood Tank 1
376 Aspen	475 Dogwood Tank 2
380 Aspen *	516 Laurel Bay Tank 1 (UST#03747)
383 Aspen Tank 2 <sup>4</sup>	518 Laurel Bay

# Laurel Bay Underground Storage Tank Assessment Reports for: (121 addresses/139 tanks) cont.

531 Laurel Bay	1219 Cardinal	
532 Laurel Bay	1272 Albatross	
635 Dahlia Tank 2	1305 Eagle	
638 Dahlia	1353 Cardinal	
640 Dahlia Tank 1	1356 Cardinal	
640 Dahlia Tank 2	1357 Cardinal	
645 Dahlia	1359 Cardinal	
647 Dahlia	1360 Cardinal	
648 Dahlia Tank 2	1361 Cardinal	
650 Dahlia Tank 1	1368 Cardinal	
650 Dahlia Tank 2	1370 Cardinal Tank 1	
652 Dahlia Tank 1	1377 Dove	
652 Dahlia Tank 2	1381 Dove	
760 Althea	1382 Dove	
763 Althea	1384 Dove	
771 Althea	1385 Dove	
927 Albacore	1389 Dove	
1015 Foxglove	1391 Dove	
1046 Gardenia	1392 Dove	
1062 Gardenia Tank 2	1393 Dove Tank 1	
1070 Heather	1393 Dove Tank 2	
1072 Heather	1406 Eagle	
1102 Iris Tank 1	1407 Eagle Tank 1	
1107 Iris	1411 Eagle Tank 1	
1126 Iris	1411 Eagle Tank 2	
1129 Iris	1412 Eagle	
1132 Iris	1413 Albatross	
1133 Iris Tank 1	1414 Albatross	
1138 Iris	1422 Albatross	
1144 Iris Tank 1	1425 Albatross	
1144 Iris Tank 2	1426 Albatross	
1148 Iris Tank 1	1432 Dove	
1148 Iris Tank 2	1434 Dove	
1161 Jasmine	1436 Dove	
1167 Jasmine	1438 Dove Tank 1	
1170 Jasmine	1440 Dove	
1190 Bobwhite	1442 Dove Tank 1	
1192 Bobwhite		



#### 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

February 22, 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-May and June 2015

Laurel Bay Military Housing Area Multiple Properties

Dated October 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 addresses attached. 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 52 stated addresses. For the remaining 91 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,

Laurel Petrus

LIRA

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-May and June 2015

Specific Property Recommendations

Dated February 22, 2016

### Draft Final Initial Groundwater Investigation Report for (143 addresses)

273 Birch Drive	1192 Bobwhite Drive
325 Ash Street	1194 Bobwhite Drive
326 Ash Street	1272 Albatross Drive
336 Ash Street	1352 Cardinal Lane
343 Ash Street	1356 Cardinal Lane
353 Ash Street	1359 Cardinal Lane
430 Elderberry Drive	1360 Cardinal Lane
440 Elderberry Drive	1362 Cardinal Lane
456 Elderberry Drive	1370 Cardinal Lane
458 Elderberry Drive	1382 Dove Lane
468 Dogwood Drive	1384 Dove lane
518 Laurel Bay Blvd	1385 Dove Lane
635 Dahlia Drive	1389 Dove Lane
638 Dahlia Drive	1392 Dove Lane
640 Dahlia Drive	1393 Dove Lane
647 Dahlia Drive	1407 Eagle Lane
648 Dahlia Drive	1411 Eagle Lane
650 Dahlia Drive	1418 Albatross Drive
652 Dahlia Drive	1420 Albatross Drive
760 Althea Street	1426 Albatross Drive
1102 Iris Lane	1429 Albatross Drive
1132 Iris Lane	1434 Dove Lane
1133 Iris Lane	1436 Dove Lane
1144 Iris Lane	1440 Dove Lane
1148 Iris Lane	1442 Dove Lane
1186 Bobwhite Drive	1444 Dove Lane
No Fur	ther Action recommendation (91 addresses):
137 Laurel Bay Blvd	771 Althea Street
139 Laurel Bay Blvd	927 Albacore Street
229 Cypress Street	1015 Foxglove Street
261 Beech Street	1046 Gardenia Drive
276 Birch Drive	1062 Gardenia Drive
278 Birch Drive	1070 Heather Street
291 Birch Drive	1072 Heather Street

300 Ash Street	1107 Iris Lane	
304 Ash Street	1126 Iris Lane	
314 Ash Street	1129 Iris Lane	
322 Ash Street	1138 Iris Lane	
323 Ash Street	1161 Jasmine Street	
324 Ash Street	1167 Jasmine Street	
339 Ash Street	1170 Jasmine Street	
344 Ash Street	1190 Bobwhite Drive	
348 Ash Street	1219 Cardinal Lane	
349 Ash Street	1305 Eagle Lane	
362 Aspen Street	1353 Cardinal Lane	
376 Aspen Street	1354 Cardinal Lane	
380 Aspen Street	1357 Cardinal Lane	
383 Aspen Street	1361 Cardinal Lane	
387 Acorn Drive	1364 Cardinal Lane	
392 Acorn Drive	1368 Cardinal Lane	
396 Acorn Drive	1377 Dove Lane	
433 Elderberry Drive	1381 Dove Lane	
439 Elderberry Drive	1391 Dove Lane	
442 Elderberry Drive	1403 Eagle Lane	
443 Elderberry Drive	1404 Eagle Lane	
444 Elderberry Drive	1405 Eagle Lane	
445 Elderberry Drive	1406 Eagle Lane	
446 Elderberry Drive	1408 Eagle Lane	
448 Elderberry Drive	1410 Eagle Lane	
449 Elderberry Drive	1412 Eagle Lane	
451 Elderberry Drive	1413 Albatross Drive	770-
453 Elderberry Drive	1414 Albatross Drive	
464 Dogwood Drive	1417 Albatross Drive	
466 Dogwood Drive	1421 Albatross Drive	
467 Dogwood Drive	1422 Albatross Drive	1031
469 Dogwood Drive	1425 Albatross Drive	
471 Dogwood Drive	1427 Albatross Drive	
475 Dogwood Drive	1430 Dove Lane	
516 Laurel Bay Blvd	1432 Dove Lane	
531 Laurel Bay Blvd	1438 Dove Lane	
532 Laurel Bay Blvd	1453 Cardinal Lane	
645 Dahlia Drive	1455 Cardinal Lane	
763 Althea Street		

Attachment to: Petrus to Drawdy

Subject: Draft Final Initial Groundwater Investigation Report-May and June 2015

Specific Property Recommendations Dated February 22, 2016, Page 2