SUMMARY REPORT 377 BOBWHITE DRIVE (FORMERLY 1184 BOBWHITE DRIVE) 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
377 BOBWHITE DRIVE (FORMERLY 1184 BOBWHITE DRIVE)

LAUREL BAY MILITARY HOUSING AREA

MARINE CORPS AIR STATION BEAUFORT

BEAUFORT, SC

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9324 Virginia Avenue Norfolk, Virginia 23511-3095

Prepared by:



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

Contract Number: N62470-14-D-9016

CTO WE52

**JUNE 2021** 



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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

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 377 Bobwhite Drive (Formerly 1184 Bobwhite Drive). 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 377 Bobwhite Drive (Formerly 1184 Bobwhite Drive). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1184 Bobwhite Drive* (MCAS Beaufort, 2015). The UST Assessment Report is provided in Appendix B.

### 2.1 UST Removal and Soil Sampling

On August 24, 2015, two 280 gallon heating oil USTs were removed from the rear patio area at 377 Bobwhite Drive (Formerly 1184 Bobwhite Drive). The former UST locations are indicated on Figures 1 and 2 of the UST Assessment Report (Appendix B). The USTs were removed and properly disposed of (i.e., shipped offsite for recycling or transported to a landfill). There was no visual evidence (i.e., staining or sheen) of petroleum impact at the time of the UST removals. According to the UST Assessment Report (Appendix B), the depth to the bases of the USTs were 4'8" (Tank 1) and 5'6" (Tank 2) bgs and a single soil sample was collected for each



from 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 bases 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 and 2) 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 the former UST locations (Tanks 1 and 2) at 377 Bobwhite Drive (Formerly 1184 Bobwhite Drive) were less than the SCDHEC RBSLs, which indicated the subsurface was not impacted by COPCs associated with the former USTs at concentrations that presented a potential risk to human health and the environment.

#### 3.0 PROPERTY STATUS

Based on the analytical results for soil, SCDHEC made the determination that NFA was required for 377 Bobwhite Drive (Formerly 1184 Bobwhite Drive). This NFA determination was obtained in a letter dated August 3, 2016. SCDHEC's NFA letter is provided in Appendix C.

#### 4.0 REFERENCES

Marine Corps Air Station Beaufort, 2015. South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 1184 Bobwhite Drive, Laurel Bay Military Housing Area, November 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.

# **Table**



#### Table 1

# Laboratory Analytical Results - Soil 377 Bobwhite Drive (Formerly 1184 Bobwhite Drive) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort

Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Results Samples Collected 08/24/15		
		1184 Bobwhite -1	1184 Bobwhite -2	
Volatile Organic Compounds Analyz	ed by EPA Method 8260B (mg/kg)			
Benzene	0.003	ND	ND	
Ethylbenzene	1.15	ND	ND	
Naphthalene	0.036	ND	ND	
Toluene	0.627	ND	ND	
Xylenes, Total	13.01	ND	ND	
Semivolatile Organic Compounds A	nalyzed by EPA Method 8270D (mg/kg)			
Benzo(a)anthracene	0.66	ND	ND	
Benzo(b)fluoranthene	0.66	ND	ND	
Benzo(k)fluoranthene	0.66	ND	ND	
Chrysene	0.66	ND	ND	
Dibenz(a,h)anthracene	0.66	ND	ND	

#### **Notes:**

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

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

mg/kg - milligram per kilogram

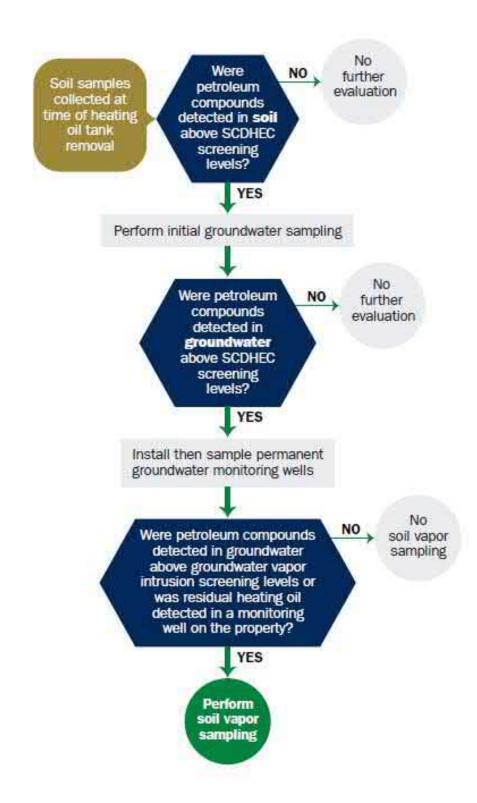
ND - not detected at the reporting limit (or method detection limit if shown on the laboratory report). The laboratory report is provided in Appendix B.

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

# Appendix A Multi-Media Selection Process for LBMH





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

# Appendix B UST Assessment Report



# 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)

	mmanding Officer Attn: n, Individual, Public Agency, Othe	
	i, individual, i dono rigolicy, Onic	1)
P.O. Box 55001		
Mailing Address		
Beaufort,	South Carolina	29904-5001
City	State	Zip Code
843	228-7317	Craig Ehd
Area Code	Telephone Number	Contact Person

# II. SITE IDENTIFICATION AND LOCATION

Permit I.D. #	
Taurel Ray Mil	tary Housing Area, Marine Corps Air Station, Beaufort, SC
Facility Name or Comp	any Site Identifier
1184 Bobwhite Street Address or State	Drive, Laurel Bay Military Housing Area Road (as applicable)
Beaufort,	Beaufort
City	County

Attachment 2

# III. INSURANCE INFORMATION

The petroleum release reported to DHEC on qualify to receive state monies to pay for appropriate site rehal allowed in the State Clean-up fund, written confirmation of the insurance policy is required. This section must be completed  Is there now, or has there ever been an insurance policy UST release? YES NO (check one)  If you answered YES to the above question, ple  My policy provider is:  The policy deductible is:  The policy limit is:	bilitation activities. Before participation is e existence or non-existence of an environmental  y or other financial mechanism that covers this ease complete the following information:
UST release? YES NO (check one)  If you answered YES to the above question, ple  My policy provider is:  The policy deductible is:	ease complete the following information:
My policy provider is: The policy deductible is:	
My policy provider is: The policy deductible is: The policy limit is:	
- Francis minimum mini	
If you have this type of insurance, please include a cop	by of the policy with this report.
V. CERTIFICATION (To be	e signed by the UST owner)
I certify that I have personally examined and am familiar attached documents; and that based on my inquiry of the information, I believe that the submitted information is true.	with the information submitted in this and al
Name (Type or print.)	
Signature	
To be completed by Notary Public:	
Sworn before me this day of, 2	0
(Name)	
Notary Public for the state of	i. Comma line an

Product(ex. Gas, Kerosene)	Bobwhite-1 Heating oil 280 gal Late 1950s Steel Mid 80s 4'8"	Bobwhite-2 Heating oil 280 gal Late 1950s Steel Mid 80s 5'6"
Capacity(ex. 1k, 2k)	280 gal  Late 1950s  Steel  Mid 80s  4'8"	280 gal  Late 1950s  Steel  Mid 80s  5'6"
Age  Construction Material(ex. Steel, FRP)  Month/Year of Last Use  Depth (ft.) To Base of Tank  Spill Prevention Equipment Y/N	Late 1950s Steel Mid 80s 4'8"	Late 1950s Steel Mid 80s 5'6"
Construction Material(ex. Steel, FRP)  Month/Year of Last Use  Depth (ft.) To Base of Tank  Spill Prevention Equipment Y/N	Steel Mid 80s 4'8"	Steel Mid 80s 5'6"
Month/Year of Last Use  Depth (ft.) To Base of Tank  Spill Prevention Equipment Y/N	Mid 80s	Mid 80s
Depth (ft.) To Base of Tank  Spill Prevention Equipment Y/N	4'8"	5'6"
Spill Prevention Equipment Y/N		
	No	No
Overfill Prevention Equipment Y/N		
	No	No
Method of Closure Removed/Filled	Removed	Removed
Date Tanks Removed/Filled	8/24/2015	8/24/2015
Visible Corrosion or Pitting Y/N	Yes	Yes
Visible Holes Y/N	Yes	Yes
Method of disposal for any USTs removed from the UST 1184Bobwhite-1 was removed fr	Control of the contro	
"D" landfill. UST 1184Bobwhite-2		
recycled. See Attachment "A".		
Method of disposal for any liquid petroleum, sludge disposal manifests)  UST 1184Bobwhite-1 had been prev		
Contaminated water was pumped fr	om UST 1184E	Bobwhite-2 and dispos

If any corrosion, pitting, or holes were observed, describe the location and extent for each UST

Corrosion, pitting and holes were found in both tanks.

0.

# VII. PIPING INFORMATION

		1184 Bobwhite-1	1184 Bobwhite-2
		Steel	Steel
	Construction Material(ex. Steel, FRP)	& Copper	& Copper
0-1	Distance from UST to Dispenser	N/A	N/A
	Number of Dispensers	N/A	N/A
	Type of System Pressure or Suction	Suction	Suction
4	Was Piping Removed from the Ground? Y/N	No	No
	Visible Corrosion or Pitting Y/N	Yes	Yes
	Visible Holes Y/N	No	No
		Late 1950s describe the location	Late 1950s
	Age  If any corrosion, pitting, or holes were observed,  Steel vent piping for both tanks  copper supply and return piping	describe the location	n and extent for each pipir
	If any corrosion, pitting, or holes were observed,  Steel vent piping for both tanks  copper supply and return piping  VIII. BRIEF SITE DESCE  The USTs at the residences are of	describe the location were sound.  RIPTION AND constructed of	n and extent for each pipin ed and pitted. Al  HISTORY  single wall steel
	If any corrosion, pitting, or holes were observed,  Steel vent piping for both tanks  copper supply and return piping  VIII. BRIEF SITE DESCE  The USTs at the residences are compand and formerly contained fuel oil	describe the locations were corrode were sound.  RIPTION AND constructed of for heating.	n and extent for each pipin ed and pitted. Al  HISTORY  single wall steel These USTs were
	If any corrosion, pitting, or holes were observed,  Steel vent piping for both tanks  copper supply and return piping  VIII. BRIEF SITE DESCE  The USTs at the residences are of	describe the locations were corrode were sound.  RIPTION AND constructed of for heating.	n and extent for each pipir ed and pitted. Al  HISTORY single wall steel These USTs were
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	If any corrosion, pitting, or holes were observed,  Steel vent piping for both tanks  copper supply and return piping  VIII. BRIEF SITE DESCE  The USTs at the residences are compand and formerly contained fuel oil	describe the locations were corrode were sound.  RIPTION AND constructed of for heating.	n and extent for each pipin ed and pitted. Al  HISTORY single wall steel These USTs were

# IX. SITE CONDITIONS

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

# X. SAMPLE INFORMATION

A. SCDHEC Lab Certification Number 84009

B.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA#
1184 Bob'-1	Excav at fill end	Soil	Sandy	4'8"	8/24/15 1415 hrs	P. Shaw	
1184 Bob'-2	Excav at fill end	Soil	Sandy	5'6"	8/24/15 1515 hrs	P. Shaw	
8							
9							
10							
11							
12							
13							
14	7						
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.

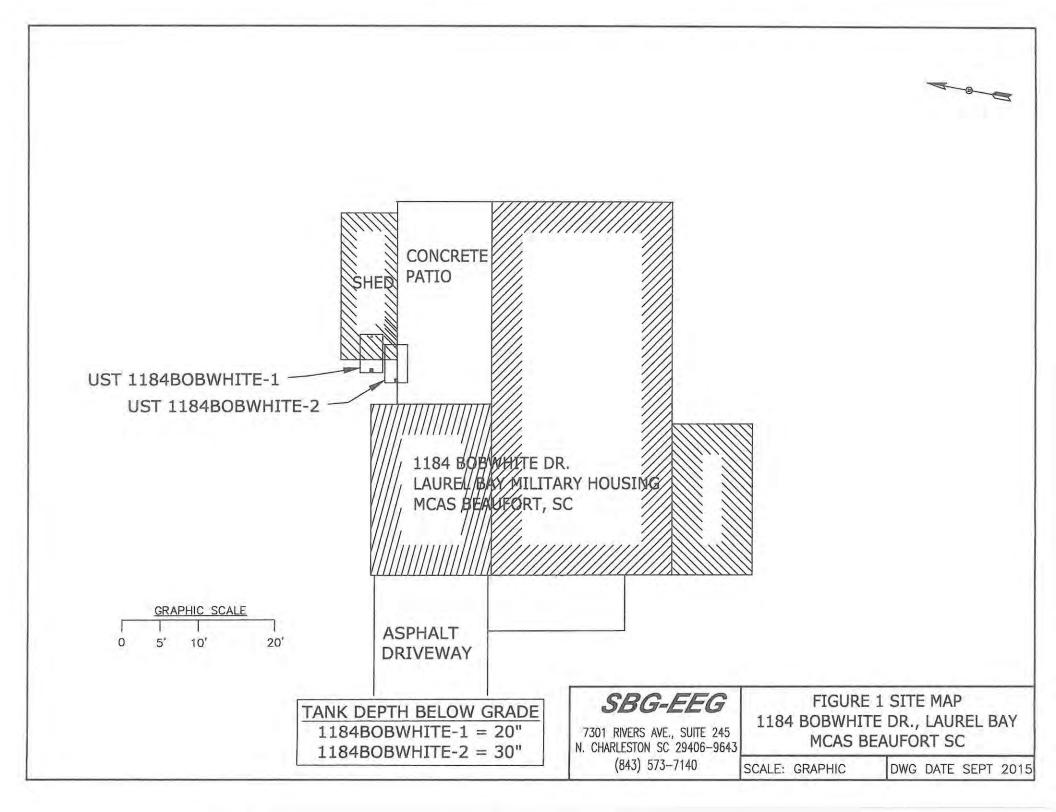
# XII. RECEPTORS

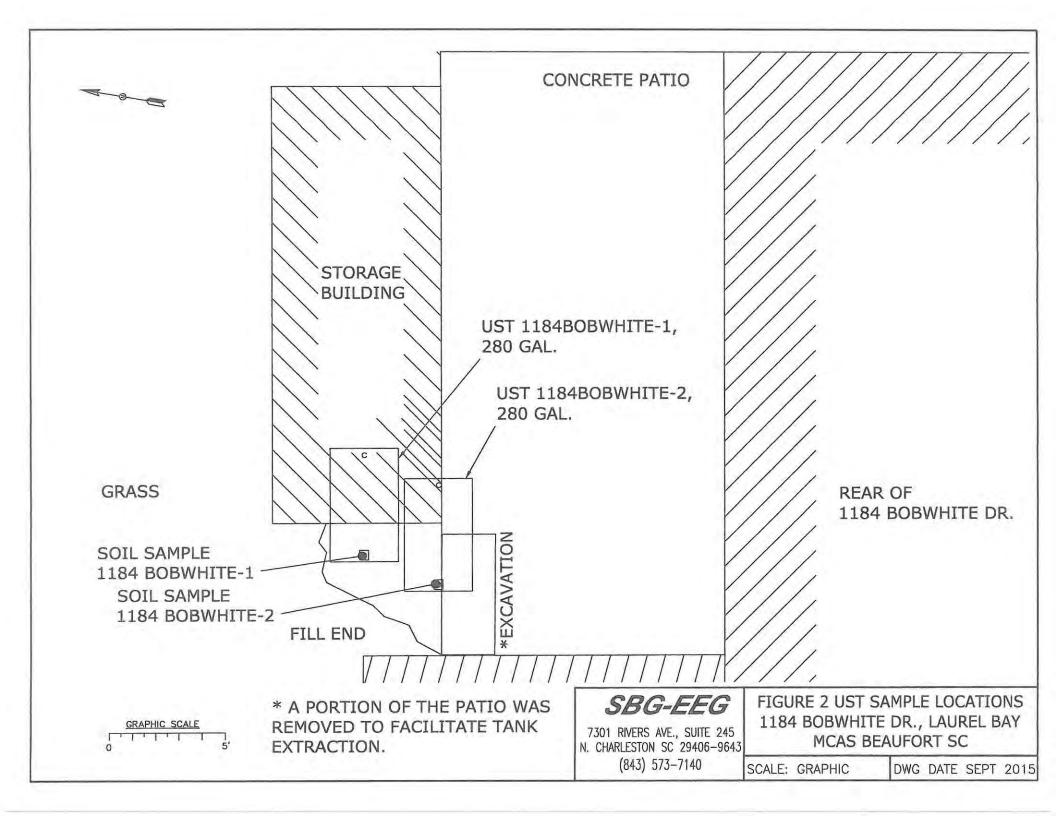
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?		X
	If yes, indicate type of receptor, distance, and direction on site map.		
B.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		Х
	If yes, indicate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

# XIII. SITE MAP

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

(Attach Site Map Here)







Picture 1: Location of tanks at 1184 Bobwhite Drive.



Picture 2: UST 1184Bobwhite excavation in progress. Workers are pointing to the buried tanks.



Picture 3: Tanks' excavation.



Picture 4: Site after completion of tank removal.

# 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	1184Bobwhite	-1	1184Bobwhite	-2	
Benzene	ND		ND		
Toluene	ND		ND		
Ethylbenzene	ND		ND		
Xylenes	ND		ND		
Naphthalene	ND		ND		
Benzo (a) anthracene	ND		ND		
Benzo (b) fluoranthene	ND		ND		
Benzo (k) fluoranthene	ND		ND		
Chrysene	ND		ND		
Dibenz (a, h) anthracene	ND		ND		
TPH (EPA 3550)					
CoC					T
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.

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

# XV. ANALYTICAL RESULTS

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

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

# **TestAmerica**

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: 490-86250-1

Client Project/Site: Laurel Bay Housing Project

For:

Small Business Group Inc. 10179 Highway 78 Ladson, South Carolina 29456

Attn: Tom McElwee

Authorized for release by: 9/15/2015 4:56:47 PM

Kuth Hage

Ken Hayes, Project Manager II (615)301-5035

ken.hayes@testamericainc.com

..... LINKS .....

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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.

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ertification Summary	
hain of Custody	
eceipt Checklists	

# Sample Summary

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-86250-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-86250-1	1184 Bobwhite - 1	Soil	08/24/15 14:15	08/29/15 09:00
490-86250-2	1184 Bobwhite - 2	Soil	08/24/15 15:15	08/29/15 09:00
490-86250-3	732 Bluebell	Soil	08/27/15 11:15	08/29/15 09:00

## Case Narrative

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-86250-1

Job ID: 490-86250-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-86250-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 8/29/2015 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### **VOA Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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# Definitions/Glossary

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-86250-1

#### Qualifiers

#### GC/MS VOA

Qualifier Qualifier Description

F1 MS and/or MSD Recovery is outside acceptance limits.

F2 MS/MSD RPD exceeds control limits

## Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

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

%R Percent Recovery
CFL Contains Free Liquid
CNF Contains no Free Liquid

DER Duplicate error ratio (normalized absolute difference)

Dil Fac Dilution Factor

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

DLC Decision level concentration
MDA Minimum detectable activity
EDL Estimated Detection Limit

MDC Minimum detectable concentration

MDL Method Detection Limit
ML Minimum Level (Dioxin)

NC Not Calculated

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

PQL Practical Quantitation Limit

QC Quality Control
RER Relative error ratio

RL Reporting Limit or Requested Limit (Radiochemistry)

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

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

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# **Client Sample Results**

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-86250-1

Client Sample ID: 1184 Bobwhite - 1

Date Collected: 08/24/15 14:15 Date Received: 08/29/15 09:00 Lab Sample ID: 490-86250-1

Matrix: Soil

Method: 8260B - Volatile C Analyte		Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	Quanner	0.00252	0.000844	400354	ō	Andrew St. Co. Co. State	09/03/15 07:00	Dii Fac
Ethylbenzene	ND		0.00252	0.000844		\$	08/24/15 14:15	09/03/15 07:00	1
Naphthalene	ND		0.00232	0.00044		4		09/03/15 07:00	1
Toluene	ND		0.00252	0.000214		٥	08/24/15 14:15	09/03/15 07:00	1
Xylenes, Total	ND		0.00232	0.000952		÷			
Aylenes, Total	ND		0.00030	0.00155	ing/kg	*	08/24/15 14:15	09/03/15 07:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130				08/24/15 14:15	09/03/15 07:00	1
4-Bromofluorobenzene (Surr)	101		70 - 130					09/03/15 07:00	7
Dibromofluoromethane (Surr)	95		70 - 130				08/24/15 14:15	09/03/15 07:00	1
Toluene-d8 (Surr)	108		70 - 130				08/24/15 14:15		1
Method: 8270D - Semivola	tile Organic Co	mpounds	(GC/MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Acenaphthene	ND		0.0831	0.0124	mg/Kg	0	09/01/15 12:32	09/02/15 17:40	1
Acenaphthylene	ND		0.0831	0.0112	mg/Kg	0	09/01/15 12:32	09/02/15 17:40	1
Anthracene	ND		0.0831	0.0112	mg/Kg	¢	09/01/15 12:32	09/02/15 17:40	1
Benzo[a]anthracene	ND		0.0831	0.0186	mg/Kg	50	09/01/15 12:32	09/02/15 17:40	1
Benzo[a]pyrene	ND		0.0831	0.0149	mg/Kg	4	09/01/15 12:32	09/02/15 17:40	1
Benzo[b]fluoranthene	ND		0.0831	0.0149	mg/Kg	9	09/01/15 12:32	09/02/15 17:40	1
Benzo[g,h,i]perylene	ND		0.0831	0.0112	mg/Kg	÷	09/01/15 12:32	09/02/15 17:40	1
Benzo[k]fluoranthene	ND		0.0831	0.0174	mg/Kg	Ç.	09/01/15 12:32	09/02/15 17:40	1
1-Methylnaphthalene	ND		0.0831	0.0174	mg/Kg	0	09/01/15 12:32	09/02/15 17:40	1
Pyrene	ND		0.0831	0.0149	mg/Kg		09/01/15 12:32	09/02/15 17:40	1
Phenanthrene	ND		0.0831	0.0112	mg/Kg	•	09/01/15 12:32	09/02/15 17:40	1
Chrysene	ND		0.0831	0.0112	mg/Kg	2	09/01/15 12:32	09/02/15 17:40	1
Dibenz(a,h)anthracene	ND		0.0831	0.00868	mg/Kg	4	09/01/15 12:32	09/02/15 17:40	1
Fluoranthene	ND		0.0831	0.0112	mg/Kg	2	09/01/15 12:32	09/02/15 17:40	1
Fluorene	ND		0.0831	0.0149	mg/Kg	* }	09/01/15 12:32	09/02/15 17:40	1
Indeno[1,2,3-cd]pyrene	ND		0.0831	0.0124	mg/Kg	Ŏ.	09/01/15 12:32	09/02/15 17:40	1
Naphthalene	ND		0.0831	0.0112	mg/Kg	\$	09/01/15 12:32	09/02/15 17:40	1
2-Methylnaphthalene	ND		0.0831	0.0198	mg/Kg	\$	09/01/15 12:32	09/02/15 17:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	60		29 - 120				09/01/15 12:32	09/02/15 17:40	1
Terphenyl-d14 (Surr)	69		13 - 120				09/01/15 12:32	09/02/15 17:40	1
Nitrobenzene-d5 (Surr)	55		27 - 120				09/01/15 12:32	09/02/15 17:40	1
General Chemistry									
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79		0.10	0.10	%			09/01/15 12:55	1

## **Client Sample Results**

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-86250-1

Client Sample ID: 1184 Bobwhite - 2

Date Collected: 08/24/15 15:15 Date Received: 08/29/15 09:00 Lab Sample ID: 490-86250-2

Matrix: Soil

Method: 8260B - Volatile				MDI	Unit		Descripted	A I	DUE
Analyte	ND	Qualifier	RL	40 41400	100000	D o	Prepared	Analyzed	Dil Fac
Benzene			0.00198	0.000664	0 0			09/03/15 07:31	1
Ethylbenzene	ND		0.00198	0.000664		٥	08/24/15 15:15	09/03/15 07:31	1
Naphthalene	ND		0.00495	0.00168		Ç		09/03/15 07:31	1
Toluene	ND		0.00198		mg/Kg	Φ.		09/03/15 07:31	1
Xylenes, Total	ND		0.00495	0.00122	mg/Kg	4	08/24/15 15:15	09/03/15 07:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130				08/24/15 15:15	09/03/15 07:31	1
4-Bromofluorobenzene (Surr)	97		70 - 130				08/24/15 15:15	09/03/15 07:31	1
Dibromofluoromethane (Surr)	96		70 - 130				08/24/15 15:15	09/03/15 07:31	1
Toluene-d8 (Surr)	106		70 - 130				08/24/15 15:15	09/03/15 07:31	1
Method: 8270D - Semivola	atile Organic Co	mpounds	(GC/MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0832		mg/Kg	÷.	09/01/15 12:32	09/02/15 18:04	1
Acenaphthylene	ND		0.0832	0.0112	mg/Kg	0	09/01/15 12:32	09/02/15 18:04	1
Anthracene	ND		0.0832	0.0112	mg/Kg	<b>\$</b>	09/01/15 12:32	09/02/15 18:04	1
Benzo[a]anthracene	ND		0.0832	0.0186	mg/Kg	4	09/01/15 12:32	09/02/15 18:04	1
Benzo[a]pyrene	ND		0.0832	0.0149	mg/Kg	3	09/01/15 12:32	09/02/15 18:04	1
Benzo[b]fluoranthene	ND		0.0832	0.0149	mg/Kg	0	09/01/15 12:32	09/02/15 18:04	1
Benzo[g,h,i]perylene	ND		0.0832	0.0112	mg/Kg	Ó	09/01/15 12:32	09/02/15 18:04	1
Benzo[k]fluoranthene	ND		0.0832	0.0174	mg/Kg	0	09/01/15 12:32	09/02/15 18:04	1
1-Methylnaphthalene	ND		0.0832	0.0174	mg/Kg	*	09/01/15 12:32	09/02/15 18:04	1
Pyrene	ND		0.0832	0.0149	mg/Kg	^	09/01/15 12:32	09/02/15 18:04	1
Phenanthrene	ND		0.0832	0.0112	mg/Kg	<b>\$</b>	09/01/15 12:32	09/02/15 18:04	1
Chrysene	ND		0.0832	0.0112	mg/Kg	4	09/01/15 12:32	09/02/15 18:04	1
Dibenz(a,h)anthracene	ND		0.0832	0.00869	mg/Kg	4	09/01/15 12:32	09/02/15 18:04	1
Fluoranthene	ND		0.0832	0.0112	mg/Kg	0	09/01/15 12:32	09/02/15 18:04	1
Fluorene	ND		0.0832	0.0149	mg/Kg	4	09/01/15 12:32	09/02/15 18:04	1
Indeno[1,2,3-cd]pyrene	ND		0.0832	0.0124	mg/Kg	$\Rightarrow$	09/01/15 12:32	09/02/15 18:04	1
Naphthalene	ND		0.0832	0.0112	mg/Kg	<b>\$</b>	09/01/15 12:32	09/02/15 18:04	1
2-Methylnaphthalene	ND		0.0832	0.0199	mg/Kg	<b>*</b>	09/01/15 12:32	09/02/15 18:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	58		29 - 120				09/01/15 12:32	09/02/15 18:04	1
Terphenyl-d14 (Surr)	67		13 - 120				09/01/15 12:32	09/02/15 18:04	1
Nitrobenzene-d5 (Surr)	53		27 - 120				09/01/15 12:32	09/02/15 18:04	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79		0.10	0.10	%			09/01/15 12:55	1

## **Client Sample Results**

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-86250-1

Client Sample ID: 732 Bluebell

Date Collected: 08/27/15 11:15 Date Received: 08/29/15 09:00

Lab Sample ID: 490-86250-3 Matrix: Soil

Method: 8260B - Volatile O	rganic Compo	unds (GC/	MS)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	- 1	0.00215	0.000722	mg/Kg	*	08/24/15 11:15	09/03/15 08:02	1
Ethylbenzene	ND		0.00215	0.000722	mg/Kg	4	08/24/15 11:15	09/03/15 08:02	1
Naphthalene	ND		0.00539	0.00183	mg/Kg	*	08/24/15 11:15	09/03/15 08:02	1
Toluene	ND		0.00215	0.000797	mg/Kg	0	08/24/15 11:15	09/03/15 08:02	1
Xylenes, Total	ND		0.00539	0.00133	mg/Kg	Ф	08/24/15 11:15	09/03/15 08:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104	.0.0	70 - 130				08/24/15 11:15	09/03/15 08:02	1
4-Bromofluorobenzene (Surr)	95		70 - 130				08/24/15 11:15	09/03/15 08:02	1
Dibromofluoromethane (Surr)	94		70 - 130				08/24/15 11:15	09/03/15 08:02	1
Toluene-d8 (Surr)	91		70 - 130				08/24/15 11:15	09/03/15 08:02	1
Method: 8270D - Semivolar	tile Organic Co	mpounds	(GC/MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0714	0.0107	mg/Kg	4	09/01/15 12:32	09/02/15 18:28	1
Acenaphthylene	ND		0.0714	0.00959	mg/Kg	*	09/01/15 12:32	09/02/15 18:28	1
Anthracene	ND		0.0714	0.00959	mg/Kg	4	09/01/15 12:32	09/02/15 18:28	1
Benzo[a]anthracene	ND		0.0714	0.0160	mg/Kg	×	09/01/15 12:32	09/02/15 18:28	1
Benzo[a]pyrene	ND		0.0714		mg/Kg	<b>\$</b>	09/01/15 12:32	09/02/15 18:28	1
Benzo[b]fluoranthene	ND		0.0714	0.0128	mg/Kg	\$	09/01/15 12:32	09/02/15 18:28	1
Benzo[g,h,i]perylene	ND		0.0714	0.00959	mg/Kg	0	09/01/15 12:32	09/02/15 18:28	1
Benzo[k]fluoranthene	ND		0.0714	0.0149	mg/Kg	1.00	09/01/15 12:32	09/02/15 18:28	1
1-Methylnaphthalene	ND		0.0714	0.0149	mg/Kg	0	09/01/15 12:32	09/02/15 18:28	1
Pyrene	ND		0.0714	0.0128	mg/Kg	20	09/01/15 12:32	09/02/15 18:28	1
Phenanthrene	ND		0.0714	0.00959	mg/Kg	i.	09/01/15 12:32	09/02/15 18:28	1
Chrysene	ND		0.0714	0.00959	mg/Kg	- 5	09/01/15 12:32	09/02/15 18:28	1
Dibenz(a,h)anthracene	ND		0.0714	0.00746	mg/Kg	Ó	09/01/15 12:32	09/02/15 18:28	1
Fluoranthene	ND		0.0714	0.00959	mg/Kg	4	09/01/15 12:32	09/02/15 18:28	1
Fluorene	ND		0.0714	0.0128	mg/Kg	4	09/01/15 12:32	09/02/15 18:28	1
Indeno[1,2,3-cd]pyrene	ND		0.0714	0.0107	mg/Kg	ø	09/01/15 12:32	09/02/15 18:28	1
Naphthalene	ND		0.0714	0.00959	mg/Kg	\$	09/01/15 12:32	09/02/15 18:28	1
2-Methylnaphthalene	ND		0.0714	0.0170	mg/Kg	\$	09/01/15 12:32	09/02/15 18:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	52		29 - 120				09/01/15 12:32	09/02/15 18:28	1
Terphenyl-d14 (Surr)	61		13 - 120				09/01/15 12:32	09/02/15 18:28	1
Nitrobenzene-d5 (Surr)	48		27 - 120				09/01/15 12:32	09/02/15 18:28	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93		0.10	0.10	%			09/01/15 12:55	1

### QC Sample Results

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project

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

Lab Sample ID: 490-85708-C-33-D MS

Matrix: Solid

Analysis Batch: 278643

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

TestAmerica Job ID: 490-86250-1

Prep Batch: 276979

Prep Type: Total/NA

	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.000649	JF1	0.0990	0.03654		mg/Kg		36	31 - 143
Ethylbenzene	0.00480		0.0990	0.04064		mg/Kg		36	23 - 161
Naphthalene	ND	F2	0.0990	0.03770		mg/Kg		38	10 - 176
Toluene	0.00215	F1	0.0990	0.03434		mg/Kg		33	30 - 155
Xylenes, Total	ND		0.248	0.1040		mg/Kg		42	25 - 162

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	95		70 - 130
Dibromofluoromethane (Surr)	96		70 - 130
Toluene-d8 (Surr)	90		70 - 130

Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 278643

Lab Sample ID: 490-85708-C-33-E MSD

Analysis Batch: 278643									Prep Ba	tch: 27	76979
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.000649	JF1	0.0984	0.02708	F1	mg/Kg		27	31 - 143	30	50
Ethylbenzene	0.00480		0.0984	0.03215		mg/Kg		28	23 - 161	23	50
Naphthalene	ND	F2	0.0984	0.01662	F2	mg/Kg		17	10 - 176	78	50
Toluene	0.00215	F1	0.0984	0.02593	F1	mg/Kg		24	30 - 155	28	50
Xylenes, Total	ND		0.246	0.07743		mg/Kg		31	25 - 162	29	50

MSD MSD

%Recovery	Qualitier	Limits
105		70 - 130
91		70 - 130
97		70 - 130
87		70 - 130
	105 91 97	91 97

Client Sample ID: Method Blank

Prep Type: Total/NA

Matrix: Solid Analysis Batch: 278643

Analysis	Datell.	210043	

Lab Sample ID: MB 490-278643/7

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			09/03/15 04:24	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			09/03/15 04:24	1
Naphthalene	ND		0.00500	0.00170	mg/Kg			09/03/15 04:24	1
Toluene	ND		0.00200	0.000740	mg/Kg			09/03/15 04:24	1
Xylenes, Total	ND		0.00500	0.00123	mg/Kg			09/03/15 04:24	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 130					09/03/15 04:24	1
4-Bromofluorobenzene (Surr)	93		70 - 130					09/03/15 04:24	1
Dibromofluoromethane (Surr)	98		70 - 130					09/03/15 04:24	1
Toluene-d8 (Surr)	108		70 - 130					09/03/15 04:24	1

TestAmerica Nashville

Client: Small Business Group Inc.

Project/Site: Laurel Bay Housing Project

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

Lab Sample ID: LCS 490-278643/3

Matrix: Solid

Analysis Batch: 278643

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	0.04886		mg/Kg		98	75 - 127
Ethylbenzene	0.0500	0.04952		mg/Kg		99	80 - 134
Naphthalene	0.0500	0.05385		mg/Kg		108	69 - 150
Toluene	0.0500	0.05304		mg/Kg		106	80 - 132
Xylenes, Total	0.150	0.1581		mg/Kg		105	80 - 137

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101	2000	70 - 130
4-Bromofluorobenzene (Surr)	90		70 - 130
Dibromofluoromethane (Surr)	99		70 - 130
Toluene-d8 (Surr)	105		70 - 130

Lab Sample ID: LCSD 490-278643/4

Matrix: Solid

Analysis Batch: 278643

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	Spike	LUSD	LCSD				%Rec.		KPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0500	0.04807		mg/Kg		96	75 - 127	2	50
Ethylbenzene	0.0500	0.04804		mg/Kg		96	80 - 134	3	50
Naphthalene	0.0500	0.05337		mg/Kg		107	69 - 150	1	50
Toluene	0.0500	0.04413		mg/Kg		88	80 - 132	18	50
Xylenes, Total	0.150	0.1455		mg/Kg		97	80 - 137	8	50

ICED ICED

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		70 - 130
4-Bromofluorobenzene (Surr)	91		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
Toluene-d8 (Surr)	89		70 - 130

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

Lab Sample ID: MB 490-278144/1-A

Matrix: Solid

Analysis Batch: 278388

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 278144

	MB MI	В							
Analyte	Result Qu	ualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0670	0.0100	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Acenaphthylene	ND		0.0670	0.00900	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Anthracene	ND		0.0670	0.00900	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Benzo[a]anthracene	ND		0.0670	0.0150	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Benzo[a]pyrene	ND		0.0670	0.0120	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Benzo[b]fluoranthene	ND		0.0670	0.0120	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Benzo[g,h,i]perylene	ND		0.0670	0.00900	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Benzo[k]fluoranthene	ND		0.0670	0.0140	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
1-Methylnaphthalene	ND		0.0670	0.0140	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Pyrene	ND		0.0670	0.0120	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Phenanthrene	ND		0.0670	0.00900	mg/Kg		09/01/15 12:32	09/02/15 13:14	1

TestAmerica Nashville

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

Lab Sample ID: MB 490-278144/1-A

Matrix: Solid

Analysis Batch: 278388

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 278144

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	ND		0.0670	0.00900	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Dibenz(a,h)anthracene	ND		0.0670	0.00700	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Fluoranthene	ND		0.0670	0.00900	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Fluorene	ND		0.0670	0.0120	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Indeno[1,2,3-cd]pyrene	ND		0.0670	0.0100	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
Naphthalene	ND		0.0670	0.00900	mg/Kg		09/01/15 12:32	09/02/15 13:14	1
2-Methylnaphthalene	ND		0.0670	0.0160	mg/Kg		09/01/15 12:32	09/02/15 13:14	1

MB MB

Surrogate	%Recovery Qualifier	Limits	3	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	67	29 - 120		09/01/15 12:32	09/02/15 13:14	1
Terphenyl-d14 (Surr)	77	13-120		09/01/15 12:32	09/02/15 13:14	1
Nitrobenzene-d5 (Surr)	64	27 - 120		09/01/15 12:32	09/02/15 13:14	1

Lab Sample ID: LCS 490-278144/2-A

Matrix: Solid

Analysis Batch: 278388

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 278144

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Acenaphthylene	1.67	1.259		mg/Kg		76	38 - 120	
Anthracene	1.67	1.304		mg/Kg		78	46 - 124	
Benzo[a]anthracene	1.67	1.305		mg/Kg		78	45 - 120	
Benzo[a]pyrene	1.67	1.296		mg/Kg		78	45 - 120	
Benzo[b]fluoranthene	1.67	1.329		mg/Kg		80	42 - 120	
Benzo[g,h,i]perylene	1.67	1.333		mg/Kg		80	38 - 120	
Benzo[k]fluoranthene	1.67	1.281		mg/Kg		77	42 - 120	
1-Methylnaphthalene	1.67	1.218		mg/Kg		73	32 - 120	
Pyrene	1.67	1.291		mg/Kg		77	43 - 120	
Phenanthrene	1.67	1.247		mg/Kg		75	45 - 120	
Chrysene	1.67	1.303		mg/Kg		78	43 - 120	
Dibenz(a,h)anthracene	1.67	1.328		mg/Kg		80	32 - 128	
Fluoranthene	1.67	1.317		mg/Kg		79	46 - 120	
Fluorene	1.67	1.228		mg/Kg		74	42 - 120	
Indeno[1,2,3-cd]pyrene	1.67	1.295		mg/Kg		78	41 - 121	
Naphthalene	1.67	1.082		mg/Kg		65	32 - 120	
2-Methylnaphthalene	1.67	1.134		mg/Kg		68	28 - 120	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	69		29 - 120
Terphenyl-d14 (Surr)	80		13 - 120
Nitrobenzene-d5 (Surr)	68		27 - 120

Lab Sample ID: LCSD 490-278144/3-A

Matrix: Solid

Analysis Batch: 278388

Client	Sample	ID:	Lab	Control	Sample D	up
				Dunia T.	T	ALA

Prep Type: Total/NA Prep Batch: 278144

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acenaphthylene	1.67	1.214		mg/Kg		73	38 - 120	4	50
Anthracene	1.67	1.194		mg/Kg		72	46 - 124	9	49

TestAmerica Nashville

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9/15/2015

### QC Sample Results

Client: Small Business Group Inc.
Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-86250-1

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

Lab Sample ID: LCSD 490-278144/3-A

Matrix: Solid

Analysis Batch: 278388

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 278144

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzo[a]anthracene	1.67	1.201		mg/Kg	-	72	45 - 120	8	50
Benzo[a]pyrene	1.67	1.170		mg/Kg		70	45 - 120	10	50
Benzo[b]fluoranthene	1.67	1.179		mg/Kg		71	42 - 120	12	50
Benzo[g,h,i]perylene	1.67	1.210		mg/Kg		73	38 - 120	10	50
Benzo[k]fluoranthene	1.67	1.172		mg/Kg		70	42 - 120	9	45
1-Methylnaphthalene	1.67	1.221		mg/Kg		73	32 - 120	0	50
Pyrene	1.67	1.176		mg/Kg		71	43 - 120	9	50
Phenanthrene	1.67	1.136		mg/Kg		68	45 - 120	9	50
Chrysene	1.67	1.178		mg/Kg		71	43 - 120	10	49
Dibenz(a,h)anthracene	1.67	1.198		mg/Kg		72	32 - 128	10	50
Fluoranthene	1.67	1.194		mg/Kg		72	46 - 120	10	50
Fluorene	1.67	1.165		mg/Kg		70	42 - 120	5	50
Indeno[1,2,3-cd]pyrene	1.67	1.172		mg/Kg		70	41 - 121	10	50
Naphthalene	1.67	1.129		mg/Kg		68	32 - 120	4	50
2-Methylnaphthalene	1.67	1.149		mg/Kg		69	28 - 120	1	50

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	68		29 - 120
Terphenyl-d14 (Surr)	72		13-120
Nitrobenzene-d5 (Surr)	71		27 - 120

Lab Sample ID: 490-86234-B-4-C MS

Matrix: Solid

Analysis Batch: 278388

Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 278144

Sample Sample Spike MS MS %Rec. Result Qualifier Result Qualifier Unit %Rec Analyte Added Limits 1.61 ND 0.9121 25 - 120 Acenaphthylene mg/Kg 56 0.9635 Anthracene ND 1.61 60 28 - 125 mg/Kg Benzo[a]anthracene ND 1.61 0.9560 mg/Kg 59 23 - 120 Benzo[a]pyrene ND 1.61 0.9514 mg/Kg 59 15 - 128 Benzo[b]fluoranthene ND 0.9555 1.61 mg/Kg 59 12-133 Benzo[g,h,i]perylene ND 1.61 0.9941 mg/Kg 62 22.120 0.9589 Benzo[k]fluoranthene ND 1.61 mg/Kg 59 28 - 120 ND 10-120 1-Methylnaphthalene 1.61 0.8997 mg/Kg 56 Pyrene ND 1.61 0.9249 mg/Kg 57 20 - 123 Phenanthrene ND 1.61 0.9234 mg/Kg 57 21 - 122 0.9417 Chrysene ND 1.61 mg/Kg 58 20 - 120 Dibenz(a,h)anthracene ND 1.61 0.9800 mg/Kg 61 12-128 Fluoranthene ND 1.61 1.018 mg/Kg 63 10-143 Fluorene ND 1.61 0.9177 mg/Kg 57 20 - 120 ND 1.61 0.9477 59 Indeno[1,2,3-cd]pyrene mg/Kg 22 - 121 Naphthalene ND 1.61 0.8078 mg/Kg 50 10-120 2-Methylnaphthalene ND 1.61 0.8331 52 mg/Kg 13 - 120

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	51		29 - 120
Terphenyl-d14 (Surr)	58		13-120

TestAmerica Nashville

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project

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

Lab Sample ID: 490-86234-B-4-C MS

Matrix: Solid

Analysis Batch: 278388

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

Prep Batch: 278144

MS MS

Surrogate %Recovery Qualifier Limits Nitrobenzene-d5 (Surr) 50 27 - 120

Lab Sample ID: 490-86234-B-4-D MSD

Matrix: Solid

Analysis Batch: 278388

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA Prep Batch: 278144

MSD MSD Spike Sample Sample %Rec. RPD Result Qualifier Analyte Result Qualifier Added Unit %Rec Limits RPD Limit Acenaphthylene ND 1.65 1.000 mg/Kg 60 25 - 120 9 50 Anthracene ND 1.65 1.074 mg/Kg 65 28 - 125 11 49 Benzo[a]anthracene ND 1.65 1.071 mg/Kg 65 23 - 120 11 50 ND 1.65 1.061 mg/Kg 64 15-128 50 Benzo[a]pyrene Benzo[b]fluoranthene ND 1.65 1.044 mg/Kg 63 12 - 133 9 50 ND 1.65 68 1.117 22 - 120 50 Benzo[g,h,i]perylene mg/Kg 12 ND 66 Benzo[k]fluoranthene 1.65 1.099 mg/Kg 28 - 120 14 45 1-Methylnaphthalene ND 1.65 0.9321 56 10-120 mg/Kg 4 50 Pyrene ND 1.65 1.060 mg/Kg 64 20 - 123 14 50 ND 1.027 62 21-122 Phenanthrene 1.65 mg/Kg 11 50 Chrysene ND 1.65 1.071 mg/Kg 65 20 - 120 13 49 ND 1.100 66 12-128 Dibenz(a,h)anthracene 1.65 mg/Kg 12 50 Fluoranthene ND 1.096 66 10-143 1.65 mg/Kg 7 50 Fluorene ND 1.65 1.011 mg/Kg 61 20 - 120 10 50 Indeno[1,2,3-cd]pyrene ND 1.65 1.070 mg/Kg 65 22 - 121 12 50 Naphthalene ND 1.65 0.8259 mg/Kg 50 10-120 2 50 2-Methylnaphthalene ND 1.65 0.8623 mg/Kg 52 13-120 3 50

MSD MSD

Limits Surrogate %Recovery Qualifier 54 29 - 120 2-Fluorobiphenyl (Surr) Terphenyl-d14 (Surr) 66 13 - 120 Nitrobenzene-d5 (Surr) 51 27 - 120

Method: Moisture - Percent Moisture

Lab Sample ID: 490-86285-G-8 DU

Matrix: Solid

Analysis Batch: 278057

Client Sample ID: Duplicate

Prep Type: Total/NA

DU DU Sample Sample RPD Result Qualifier Result Qualifier Unit Analyte D RPD Limit Percent Solids 83 84 % 0.3 20

TestAmerica Nashville

## **QC Association Summary**

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-86250-1

#### GC/MS VOA

Prep	Batch:	276979
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-85708-C-33-D MS	Matrix Spike	Total/NA	Solid	5030B	
490-85708-C-33-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5030B	

#### Prep Batch: 277646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-86250-1	1184 Bobwhite - 1	Total/NA	Soil	5035	
490-86250-2	1184 Bobwhite - 2	Total/NA	Soil	5035	
490-86250-3	732 Bluebell	Total/NA	Soil	5035	

#### Analysis Batch: 278643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-85708-C-33-D MS	Matrix Spike	Total/NA	Solid	8260B	276979
490-85708-C-33-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B	276979
490-86250-1	1184 Bobwhite - 1	Total/NA	Soil	8260B	277646
490-86250-2	1184 Bobwhite - 2	Total/NA	Soil	8260B	277646
490-86250-3	732 Bluebell	Total/NA	Soil	8260B	277646
LCS 490-278643/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-278643/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-278643/7	Method Blank	Total/NA	Solid	8260B	

#### GC/MS Semi VOA

#### Prep Batch: 278144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-86234-B-4-C MS	Matrix Spike	Total/NA	Solid	3550C	op Batton
490-86234-B-4-D MSD	Matrix Spike Duplicate	Total/NA	Solid	3550C	
490-86250-1	1184 Bobwhite - 1	Total/NA	Soil	3550C	
490-86250-2	1184 Bobwhite - 2	Total/NA	Soil	3550C	
490-86250-3	732 Bluebell	Total/NA	Soil	3550C	
LCS 490-278144/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 490-278144/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
MB 490-278144/1-A	Method Blank	Total/NA	Solid	3550C	

### Analysis Batch: 278388

Lab Sample ID 490-86234-B-4-C MS	Client Sample ID  Matrix Spike	Prep Type Total/NA	Matrix Solid	Method 8270D	Prep Batch 278144
490-86234-B-4-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8270D	278144
490-86250-1	1184 Bobwhite - 1	Total/NA	Soil	8270D	278144
490-86250-2	1184 Bobwhite - 2	Total/NA	Soil	8270D	278144
490-86250-3	732 Bluebell	Total/NA	Soil	8270D	278144
LCS 490-278144/2-A	Lab Control Sample	Total/NA	Solid	8270D	278144
LCSD 490-278144/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	278144
MB 490-278144/1-A	Method Blank	Total/NA	Solid	8270D	278144

### **General Chemistry**

#### Analysis Batch: 278057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-86245-A-5 MS	Matrix Spike	Total/NA	Solid	Moisture	
490-86245-A-5 MSD	Matrix Spike Duplicate	Total/NA	Solid	Moisture	

TestAmerica Nashville

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#### TestAmerica Job ID: 490-86250-1

## **QC Association Summary**

Client: Small Business Group Inc.

Project/Site: Laurel Bay Housing Project

### General Chemistry (Continued)

### Analysis Batch: 278057 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	
490-86250-1	1184 Bobwhite - 1	Total/NA	Soil	Moisture	
490-86250-2	1184 Bobwhite - 2	Total/NA	Soil	Moisture	
490-86250-3	732 Bluebell	Total/NA	Soil	Moisture	
490-86285-G-8 DU	Duplicate	Total/NA	Solid	Moisture	

Prep Batch

#### Lab Chronicle

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-86250-1

Client Sample ID: 1184 Bobwhite - 1

Date Collected: 08/24/15 14:15 Date Received: 08/29/15 09:00 Lab Sample ID: 490-86250-1

Matrix: Soil

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5.0 mL	277646	08/24/15 14:15	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.03 g	5.0 mL	278643	09/03/15 07:00	MJH	TAL NSH
Total/NA	Prep	3550C			30.66 g	1 mL	278144	09/01/15 12:32	LDC	TAL NSH
Total/NA	Analysis	8270D		1	30.66 g	1 mL	278388	09/02/15 17:40	SNR	TAL NSH
Total/NA	Analysis	Moisture		1			278057	09/01/15 12:55	MNM	TAL NSH

Client Sample ID: 1184 Bobwhite - 2

Date Collected: 08/24/15 15:15 Date Received: 08/29/15 09:00 Lab Sample ID: 490-86250-2

Matrix: Soil

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.423 g	5.0 mL	277646	08/24/15 15:15	JLP	TAL NSH
Total/NA	Analysis	8260B		1	6.423 g	5.0 mL	278643	09/03/15 07:31	MJH	TAL NSH
Total/NA	Prep	3550C			30.75 g	1 mL	278144	09/01/15 12:32	LDC	TAL NSH
Total/NA	Analysis	8270D		1	30.75 g	1 mL	278388	09/02/15 18:04	SNR	TAL NSH
Total/NA	Analysis	Moisture		1			278057	09/01/15 12:55	MNM	TAL NSH

Client Sample ID: 732 Bluebell

Date Collected: 08/27/15 11:15

Date Received: 08/29/15 09:00

Lab Sample ID: 490-86250-3

Matrix: Soil

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.013 g	5.0 mL	277646	08/24/15 11:15	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.013 g	5.0 mL	278643	09/03/15 08:02	MJH	TAL NSH
Total/NA	Prep	3550C			30.41 g	1 mL	278144	09/01/15 12:32	LDC	TAL NSH
Total/NA	Analysis	8270D		1	30.41 g	1 mL	278388	09/02/15 18:28	SNR	TAL NSH
Total/NA	Analysis	Moisture		1			278057	09/01/15 12:55	MNM	TAL NSH

Laboratory References:

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

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### **Method Summary**

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-86250-1

Method

Method Description

8260B 8270D Volatile Organic Compounds (GC/MS) Semivolatile Organic Compounds (GC/MS)

Moisture

Percent Moisture

Protocol

Laboratory

SW846 SW846 TAL NSH TAL NSH

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

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### **Certification Summary**

Client: Small Business Group Inc.

Project/Site: Laurel Bay Housing Project

TestAmerica Job ID: 490-86250-1

#### Laboratory: TestAmerica Nashville

Unless otherwise noted all analytes for this laboratory were covered under each continuation below

Authority	Program	EPA Region	Certification ID	<b>Expiration Date</b>
North Carolina (WW/SW)	State Program	4	387	12-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method Prep Method Matrix Analyte

Moisture Soil Percent Solids

South Carolina 84009 (001) State Program 4 02-28-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method Prep Method Matrix Analyte

3550C 8270D Soil 1-Methylnaphthalene Moisture Soil Percent Solids



### COOLER RECEIPT FORM



Cooler Received/Opened On 8/29/2015 @ 900

1. Tracking # 9995 (last 4 digits, FedEx)	DOZDO ONAIN DI CUSIOL
Courier: Fed-ex IR Gun ID 17960358	
2. Temperature of rep. sample or temp blank when opened: Lt Degrees Celsius	
3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen?	YES NO. NA
4. Were custody seals on outside of cooler?	YESNONA
If yes, how many and where:	ÆSNONA
5. Were the seals intact, signed, and dated correctly?	YESNONA
6. Were custody papers inside cooler?	YESNONA
certify that I opened the cooler and answered questions 1-6 (intial)	M
7. Were custody seals on containers: YES (NO) and Intact	YESNO.(.NA
Were these signed and dated correctly?	YESNO(NA)
8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Pape	or Other None
9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry Ice	e Other None
10. Did all containers arrive in good condition (unbroken)?	(YES)NONA
11. Were all container labels complete (#, date, signed, pres., etc)?	VES NONA
12. Did all container labels and tags agree with custody papers?	(ES).NONA
13a. Were VOA vials received?	YES. NO.NA
b. Was there any observable headspace present in any VOA vial?	YESNO.(NA)
14. Was there a Trip Blank in this cooler? YESNO NA If multiple coolers, sequer	ice #
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?	YESNO(NA)
b. Did the bottle labels indicate that the correct preservatives were used	YESNO (NA)
16. Was residual chlorine present?	YESNO. NA
Certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)	DA
17. Were custody papers properly filled out (ink, signed, etc)?	YES NO NA
18. Did you sign the custody papers in the appropriate place?	YES NONA
19. Were correct containers used for the analysis requested?	S.NONA
20. Was sufficient amount of sample sent in each container?	YES NO NA
I certify that I entered this project into LIMS and answered questions 17-20 (intial)	+
I certify that I attached a label with the unique LIMS number to each container (intial) $\mathcal{D}^k$	+
21. Were there Non-Conformance issues at login? YESNO Was a PIPE generated? YES	(NO.).#

Received by TestAmerica: TAN 8-14-15 0900	ethod of Shipment: FEDEX			\(\frac{1}{2}\)			tce HNO <sub>3</sub> (Red Label) WGI/(Bibe-Label) NaOH (Orange Label) H <sub>2</sub> SO <sub>4</sub> Plastic (Yellow Label) None (Black Label) Oither (Specify) Groundwater Wastewater Drinking Water Situdge Soil Other (specify): BTEX + Napth - 8260	eservative 9 Matrix	Project#:	1	Fax Not: Q43 412 - 2027 TA Quote #	BO# 1 6/01/2	Site State: SC	Enforcement Action?	Phone: 615-726-0177  To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?  Compliance Monitoring?
MUST 8/28/15 income Time				752 Bluebell 8/27/15 1115 5 X	1306 white - < 8/24/	けるかかん・ナレー1	Date Sampled  Time Sampled  No. of Containers Shipped  Grab  Composite  Field Filtered		Sampler Signature: FFTUL)	Sampler Name: (Print) - 244 Sh 456	Telephone Number: 843.412.2097	Project Wanager: Tom WcElwee email: mcelwee@eeginc net	City/State/Zip: Ladson, SC 29456	Address: 10179 Highway 78	THE LEADER IN ENVIRONMENTAL TESTING Nashville, TN 37204  Client Name/Account #: SBG - EEG # 2449

86250

9/15/2015

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### Login Sample Receipt Checklist

Client: Small Business Group Inc.

Job Number: 490-86250-1

Login Number: 86250

50 List Source: TestAmerica Nashville

List Number: 1 Creator: Armstrong, Daniel

Question	Answer	Comment		
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True			
The cooler's custody seal, if present, is intact.	True			
Sample custody seals, if present, are intact.	N/A			
The cooler or samples do not appear to have been compromised or tampered with.				
Samples were received on ice.	True			
Cooler Temperature is acceptable.	True			
Cooler Temperature is recorded.	True	1.1C		
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 containers received 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			
Containers requiring zero headspace have no headspace or bubble is N/A 6mm (1/4").				
Multiphasic samples are not present.	True			
Samples do not require splitting or compositing.	True			
Residual Chlorine Checked.	N/A			

### 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 1184Bobwhite-2, 1184 Bobwhite 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)



# **NON-HAZARDOUS MANIFEST**

	1. Generator's US EPA	A ID No. M	anifest Doc	No.	2. Page 1 c	of			
NON-HAZARDOUS MANIFEST					1				
3. Generator's Mailing Address:	Con	orator's Sita Address (16	different than n	malling):	A. Manifes	st Number			
MCAS BEAUFORT	Gen	Generator's Site Address (If different than mailing):		namia,	\A/I	WMNA 015191		2/1	
LAUREL BAY HOUSING							Generator's II		
BEAUFORT, SC 29904						D. State (	deficiator 5 it		
	79-0411								
5. Transporter 1 Company Name	75 0 122	6. US EPA I	D Number						
Carles A Carlon	N. S. Lin				C. State Tr	ansporter's II	)		
					D. Transpo	orter's Phone	A.		- 1
7. Transporter 2 Company Name		8. US EPA	D Number						
					E. State Transporter's ID				
		ph grant and a			F. Transpo	rter's Phone			
9. Designated Facility Name and Site	Address	10. US EPA	ID Number	r					
HICKORY HILL LANDFILL					G. State Facility ID				
2621 LOW COUNTRY DRIVE					H. State Facility Phone 843-987-4643				
RIDGELAND, SC 29936									
			1		1				
11. Description of Waste Materials			No.	Containers Type	13. Total Quantity	14. Unit Wt./Vol.	I. Mis	c. Comment	S
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WIVI Pro	file # 102655SC				1				
b.	10203330						<u> </u>		
			-	_			-		
WIVI Profile #					-				
C.									
			-	+	-		-		
WM Profile #					+		-		-
d.									
WM Profile #									
J. Additional Descriptions for Mate	rials Listed Above		K. Disp	osal Locatio	n				
		,	Call				Loyal		-
			Cell			3-1	Level		
15. Special Handling Instructions and	d Additional Information	n	Gild	2	11711	hapm	THE	K	
15. Special nandling instructions and	a Additional Information	Sobustale	-	and the same	1	TAME ON GA	40 11		
		310-6-1		4)	734 F	Albert.	C.R		
	the state of the s		ONTACT /D	HONE NO .	1				-
Purchase Order #		EMERGENCY C	UNIACI / P	HONE NO.:					_
16. GENERATOR'S CERTIFICATE:		ALTERNATION OF THE PARTY OF THE				eri alea	ric katena Basar		
I hereby certify that the above-descr accurately described, classified and p	ibed materials are not l	hazardous wastes as del	ined by 40	CFR Part 26	1 or any appli	cable state la	w, nave beer	fully and	1
Printed Name	Jackageo and are in pro	Signature "On bel		cording to a	philicaple regu	ilations.	Month	Day	Year
Elen helenin	- 14	Signature on bei					197	1h	16,
14 4 1 1 1 1 1	t of Receipt of Material		76						
Printed Name		Signature					Month	Day	Year
Frinted Name		0							
10 Transporter 7 Asknowledgemen	t of Receipt of Material	ls							
Printed Name		Signature					Month	Day	Year
		- Succession	50				* .		
the state of the s									
19. Certificate of Final Treatment/D									
I certify, on behalf of the above liste			wledge, the	above-desc	ribed waste \	was managed	in compliand	e with all	Į.
applicable laws, regulations, permits	and licenses on the da	toc listed above							
				200		-			
20. Facility Owner or Operator: Cer		non-hazardous materials	covered by	y this manife	est.	***			
			s covered by	y this manife	est.		Month	Day	Year

## Appendix C Regulatory Correspondence





August 3, 2016

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

RE: No Further Action

Laurel Bay Underground Storage Tank Assessment Reports

Dated July 2015, November 2015

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (the Department) received the Underground Storage Tanks (USTs) Assessment Reports for the addresses listed in the attachment. The regulatory authority for the investigation and cleanup of releases from these tank systems is the South Carolina Pollution Control Act (S.C. Code Ann. §48-1-10 et seg., as amended).

The Department has reviewed the referenced assessment reports and agrees there is no indication of soil or groundwater contamination on these properties 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,

XIRTS

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

Cc: Russell Berry, EQC Region 8 (via email)

Bryan Beck, NAVFAC MIDATLANTIC (via email)

Craig Ehde (via email)

Attachment to: Petrus to Drawdy
Subject: No Further Action
Dated August 3, 2016

## Laurel Bay Underground Assessment Reports for (28 addresses/29 tanks)

309 Ash	1001 Bobwhite
477 Dogwood Tank 2	1020 Foxglove
563 Dahlia	1063 Gardenia
659 Camellia	1065 Gardenia Tank 2
1213 Cardinal	1100 Iris Tank 3*
114 Banyan	1139 Iris
158 Cypress	1141 Iris Tank 2
459 Elderberry	1174 Bobwhite
611 Dahlia	1184 Bobwhite Tank 1
656 Camellia	1184 Bobwhite Tank 2
671 Camellia	1220 Cardinal
678 Camellia	1253 Dove
724 Bluebell	1332 Albatross
732 Bluebell	1387 Dove
934 Albacore	