SUMMARY REPORT 76 CAMELLIA DRIVE (FORMERLY 659 CAMELLIA 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

JUNE 2021

SUMMARY REPORT 76 CAMELLIA DRIVE (FORMERLY 659 CAMELLIA 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

Prepared by:



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

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



# Table of Contents

1.0	INTRODUCTION	. 1
1.1 1.2	Background Information UST Removal and Assessment Process	
2.0	SAMPLING ACTIVITIES AND RESULTS	. 3
2.1 2.2	UST REMOVAL AND SOIL SAMPLING Soil Analytical Results	
3.0	PROPERTY STATUS	. 4
4.0	REFERENCES	. 4

# Table

Table 1	Laboratory	Analytical	Results - Soil
	Laboratory	ranaryticar	Results Soll

# Appendices

- Appendix A Multi-Media Selection Process for LBMH
- Appendix B UST Assesment Report
- Appendix C Regulatory Correspondence



# List of Acronyms

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
СТО	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 76 Camellia Drive (Formerly 659 Camellia 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 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 76 Camellia Drive (Formerly 659 Camellia Drive). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 659 Camellia Drive* (MCAS Beaufort, 2015). The UST Assessment Report is provided in Appendix B.

# 2.1 UST Removal and Soil Sampling

On February 11, 2015, a single 280 gallon heating oil UST was removed from the landscaped area adjacent to the driveway at 76 Camellia Drive (Formerly 659 Camellia Drive). The former UST location is indicated on Figures 1 and 2 of the UST Assessment Report (Appendix B). The UST was removed and properly disposed of (i.e., shipped offsite for recycling or transported to a landfill). There was no visual evidence (i.e., staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depth to the base of the UST was 6'0" bgs and a single soil sample was collected from that depth. The sample was collected from the fill port side of the former UST to represent a worst case scenario.

Following UST removal, a soil sample was collected from the base of the excavation and shipped to an offsite laboratory for analysis of the petroleum COPCs. Sampling was performed in



accordance with applicable South Carolina regulation R.61-92, Part 280 (SCDHEC, 2017) and assessment guidelines.

# 2.2 Soil Analytical Results

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

The soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form (Appendix B). The results of the soil sampling at the former UST location were used by MCAS Beaufort, in consultation with SCDHEC, to determine a path forward (i.e., additional sampling or NFA) for the property. The soil results collected from 76 Camellia Drive (Formerly 659 Camellia Drive) 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.

# 3.0 PROPERTY STATUS

Based on the analytical results for soil, SCDHEC made the determination that NFA was required for 76 Camellia Drive (Formerly 659 Camellia 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 – 659 Camellia Drive, Laurel Bay Military Housing Area*, July 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 1Laboratory Analytical Results - Soil76 Camellia Drive (Formerly 659 Camellia Drive)Laurel Bay Military Housing AreaMarine Corps Air Station BeaufortBeaufort, South Carolina

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Results Sample Collected 02/11/15
Volatile Organic Compounds Analyzed	by EPA Method 8260B (mg/kg)	
Benzene	0.003	ND
Ethylbenzene	1.15	ND
Naphthalene	0.036	ND
Toluene	0.627	ND
Xylenes, Total	13.01	ND
Semivolatile Organic Compounds Anal	yzed by EPA Method 8270D (mg/kg)	
Benzo(a)anthracene	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Chrysene	0.66	ND
Dibenz(a,h)anthracene	0.66	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

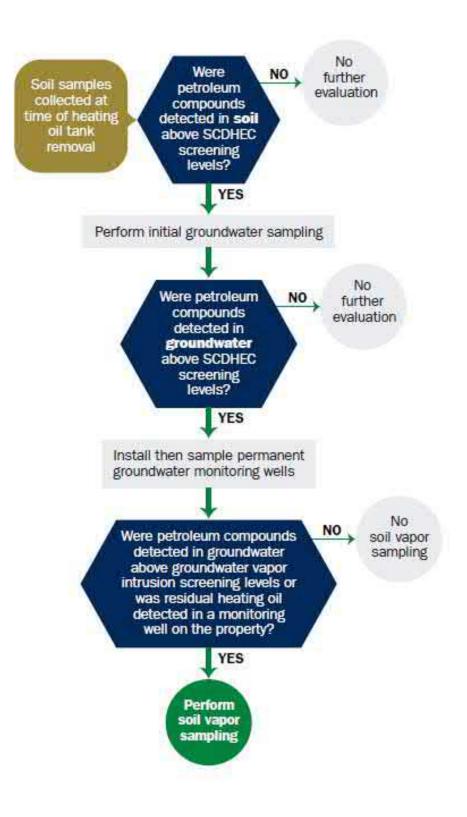
ND - not detected at the reporting limit (or method detection limit if shown on the laboratory report). The laboratory report is provided in Appendix B.

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



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		AO (Craig Ehde)
Owner Name (Corporation, Individua	al, 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

# **II.** SITE IDENTIFICATION AND LOCATION

Permit I.D. # Laurel Bay Mili Facility Name or Comp	tary Housing Area, Marine Corps Air Station, Beaufort, SC any Site Identifier
659 Camellia D:	rive, 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.

# IV. REQUEST FOR SUPERB FUNDING

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

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

I certify that I have personally examined and am familiar with the information submitted in this and all attached documents; and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Name (Type or print.)

Signature

# To be completed by Notary Public:

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

(Name)

# VI. UST INFORMATION

		659Camellia
A.	Product(ex. Gas, Kerosene)	Heating oil
B.	Capacity(ex. lk, 2k)	280 gal
C.	Age	Late 1950s
D.	Construction Material(ex. Steel, FRP)	Steel
E·	Month/Year of Last Use	Mid 1980s
F.	Depth (ft.) To Base of Tank	6'
G.	Spill Prevention Equipment Y/N	No
H∙	Overfill Prevention Equipment Y/N	No
I.	Method of Closure Removed/Filled	Removed
J	Date Tanks Removed/Filled	2/11/2015
K.	Visible Corrosion or Pitting Y/N	Yes
L.	Visible Holes Y/N	Yes

M. Method of disposal for any USTs removed from the ground (attach disposal manifests) UST 659Camellia was removed from the ground and disposed at a Subtitle "D" landfill. See Attachment "A".

N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests) UST 659Camellia had been previously filled with sand by others.

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

# VII. PIPING INFORMATION

		659Camellia
		Steel
A.	Construction Material(ex. Steel, FRP)	& Copper
B.	Distance from UST to Dispenser	N/A
C.	Number of Dispensers	N/A
D.	Type of System Pressure or Suction	Suction
E.	Was Piping Removed from the Ground? Y/N	No
F.	Visible Corrosion or Pitting Y/N	Yes
G.	Visible Holes Y/N	No
H.	Age	Late 1950s
<b>.</b>		

I. If any corrosion, pitting, or holes were observed, describe the location and extent for each piping run.

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

# **VIII. BRIEF SITE DESCRIPTION AND HISTORY**

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

IX.	SITE	CONDITIONS
-----	------	------------

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

# X. SAMPLE INFORMATION

# A. SCDHEC Lab Certification Number 84009

Β.

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
659 Camellia	Excav at fill end	Soil	Sandy	6'	2/11/15 1215 hrs	P. Shaw	100
-		-	_				11-1
_		-				_	_
	-	-					-
		-	-	-			-
		-		-	-	-	-
8							
9	1						
10	0.01						-
11		1			1. L.		-
12		1.000				0	
13					1.000		
14					1	1	
15	-		1				
16							
17							
18							
19							
20	-			1	1		

\* = 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.

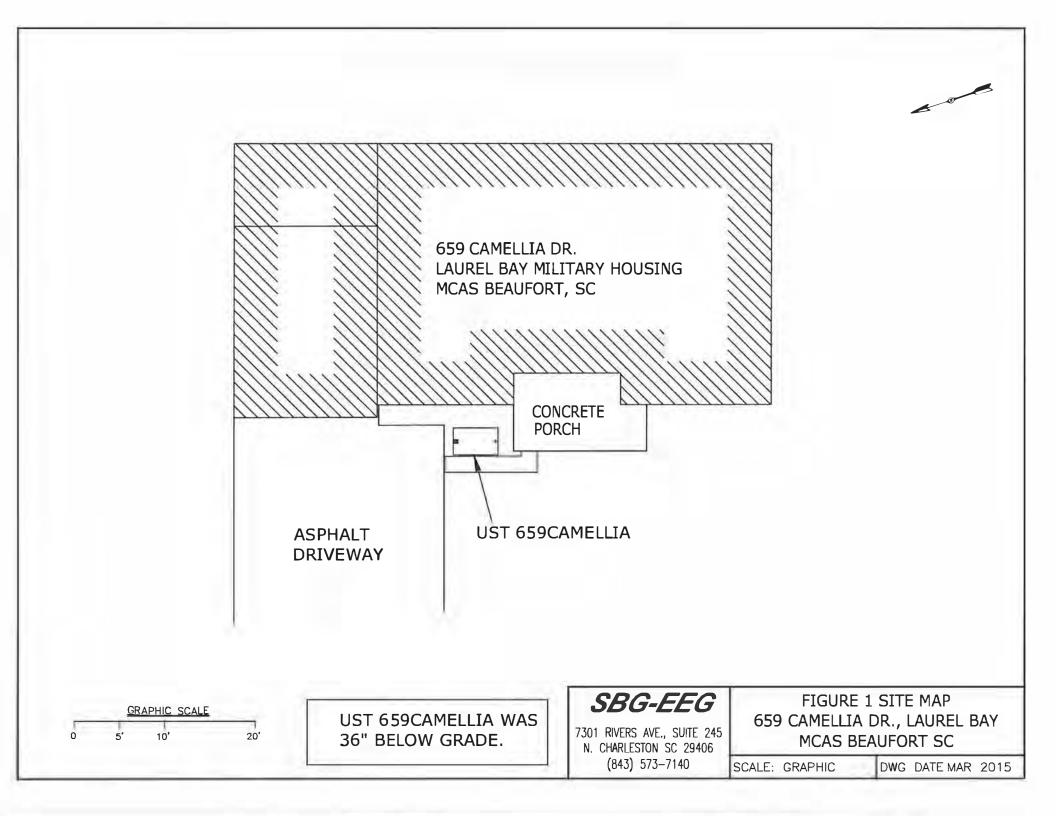
# **XII. RECEPTORS**

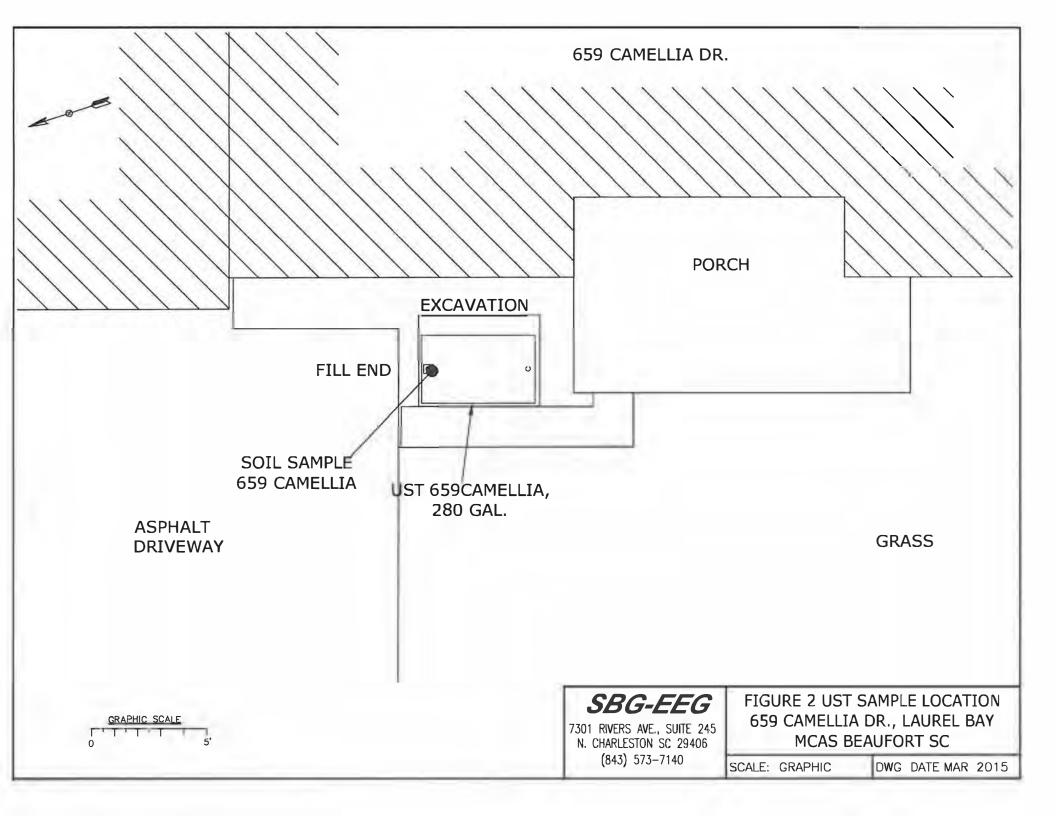
		Yes	No
A.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?		х
	If yes, indicate type of receptor, distance, and direction on site map.	1	
B.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		X
	If yes, indicate type of well, distance, and direction on site map.		
C.	Are there any underground structures (e.g., basements) Located within 100 feet of the UST system?		х
	If yes, indicate type of structure, distance, and direction on site map.		
D.	Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination? *Sewer, water, electrici	*X ty,	
	cable, fiber optic & geo If yes, indicate the type of utility, distance, and direction on the site map.	thern	nal
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)







Picture 1: Location of UST 659Camellia.



Picture 2: Tank excavation.



Picture 3: UST 659Camellia.



Picture 4: Site after tank removal is completed.

# 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	659Camellia				
Benzene	ND				
Toluene	ND				
Ethylbenzene	ND				
Xylenes	ND				X STO
Naphthalene	ND				
Benzo (a) anthracene	ND				
Benzo (b) fluoranthene	ND				
Benzo (k) fluoranthene	ND				
Chrysene	ND				
Dibenz (a, h) anthracene	ND	1.1	1		-
ТРН (ЕРА 3550)					
CoC			T		1
Benzene	1.224			1.1	
Toluene	1000				
Ethylbenzene					
Xylenes					
Naphthalene	5.01				
Benzo (a) anthracene			-	1	
Benzo (b) fluoranthene				-	
Benzo (k) fluoranthene					
Chrysene				1.1.1	
Dibenz (a, h) anthracene				1200	
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/I)	<b>W</b> -1	W-2	W -3	W -4
Free Product Thickness	None				
Benzene	5	-	1-25	1.00	
Toluene	1,000		1	1	
Ethylbenzene	700				
Xylenes	10,000				
Total BTEX	N/A		12.		
МТВЕ	40			1	
Naphthalene	25				
Benzo (a) anthracene	10				
Benzo (b) flouranthene	10		1		
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)



# <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: 490-72561-1 Client Project/Site: Laurel Bay Housing Project

For:

Small Business Group Inc. 10179 Highway **7**8 Ladson, South Carolina 29456

Attn: Tom McElwee

Kuth Hay

Authorized for release by: 2/27/2015 11:41:53 AM

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

LINKS Review your project





2

# **Table of Contents**

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Definitions	5
Client Sample Results	6
QC Sample Results	8
QC Association	14
Chronicle	16
Method Summary	17
Certification Summary	18
Chain of Custody	19
Receipt Checklists	21

Project/Site: Laurel	Bay Housing Project			
Lab Sample ID	Client Sample ID	Matrix	Collected Received	3
490-72561-1	563 Dahlia	Soil	02/10/15 14:15 02/14/15 08:30	
490-72561-2	659 Camellia	Soil	02/11/15 12:15 02/14/15 08:30	
				5

# Job ID: 490-72561-1

# Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-72561-1

# Comments

No additional comments.

### Receipt

The samples were received on 2/14/2015 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5° C.

### GC/MS VOA

Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 228630 were outside control limits. Poor purge is suspected because the associated laboratory control sample (LCS) and matrix spike (MS) recovery was within acceptance limits. See lcs/lcsd for batch precision.

No additional analytical or quality issues were noted, other than those described above or 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.

# 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.

# Glossary

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
Percent Recovery
Contains Free Liquid
Contains no Free Liquid
Duplicate error ratio (normalized absolute difference)
Dilution Factor
Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
Decision level concentration
Minimum detectable activity
Estimated Detection Limit
Minimum detectable concentration
Method Detection Limit
Minimum Level (Doxin)
Not Caculated
Not detected at the reporting limit (or MDL or EDL if shown)
Practical Quantitation Limit
Quality Control
Relative error ratio
Reporting Limit or Requested Limit (Radiochemistry)
Relative Percent Difference, a measure of the relative difference between two points
Toxicity Equivalent Factor (Dioxin)
Toxicity Equivalent Quotient (Dioxin)

TestAmerica Job ID: 490-72561-1

TestAmerica Nashville

# Client Sample ID: 563 Dahlia

Date Collected: 02/10/15 14:15 Date Received: 02/14/15 08:30

Lab Sample I	D: 490-72561-1
--------------	----------------

Matrix: Soil Percent Solids: 92.8

Method: 8260B - Volatile Orga	nic Compounds	(GC/MS)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.00217	0.000729	mg/Kg	22	02/10/15 14:15	02/20/15 17:10	1	
Ethylbenzene	ND		0.00217	0.000729	mg/Kg	13	02/10/15 14:15	02/20/15 17:10		6
Naphthalene	0.00313	J	0.00544	0.00185	mg/Kg	11	02/10/15 14:15	02/20/15 17:10	. 1	
Toluene	0.000926	J	0.00217	0.000805	mg/Kg	20	02/10/15 14:15	02/20/15 17:10	1	
Xylenes, Total	0.000765	J	0.00326	0.000729	mg/Kg	¤	02/10/15 14:15	02/20/15 17:10	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DilFac	
1,2-Dichloroethane-d4 (Surr)	96		70-130				02/10/15 14:15	02/20/15 17:10	÷1	
4 Bromofluorobenzene (Surr)	101		70 - 130				02/10/15 14:15	02/20/15 17:10	1	
Dibromofluoromethane (Surr)	103		70_ 130				02/10/15 14:15	02/20/15 17:10	1	
Toluene-d8 (Surr)	91		70-130				02/10/15 14:15	02/20/15 17:10	1	
Method: 8270D - Semivolatile	Organic Compou	nds (GC/MS	)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Acenaphthene	ND		0.0702	0.0105	mg/Kg	ñe	02/19/15 09:50	02/20/15 21:44	. 1	
Acenaphthylene	ND		0 0702	0.00943	mg/Kg	1~	02/19/15 09:50	02/20/15 21:44	1	
Anthracene	ND		0.0702	0.00943	mg/Kg	il	02/19/15 09:50	02/20/15 21:44	1	
Despelatestheases			0.0700	0.0457		14	004045 00 50	00100115 01 11	1.5	

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0702	0.0105	mg/Kg	ne.	02/19/15 09:50	02/20/15 21:44	1
Acenaphthylene	ND		0 0702	0.00943	mg/Kg	1~	02/19/15 09:50	02/20/15 21:44	1
Anthracene	ND		0.0702	0.00943	mg/Kg	11	02/19/15 09:50	02/20/15 21:44	1
Benzo[a]anthracene	ND		0.0702	0.0157	mg/Kg	11	02/19/15 09:50	02/20/15 21:44	24
Benzo[a]pyrene	ND		0 0702	0.0126	mg/Kg	п	02/19/15 09:50	02/20/15 21:44	1
Benzo[b]fiuoranthene	ND		0.0702	0.0126	mg/Kg	r	02/19/15 09:50	02/20/15 21:44	1
Benzo[g,h,i]perylene	ND		0.0702	0.00943	mg/Kg	a	02/19/15 09:50	02/20/15 21:44	3.9
Benzo[k]f.uoranthene	ND		0.0702	0.0147	mg/Kg	п	02/19/15 09:50	02/20/15 21:44	1
1-Methylnaphthalene	ND		0.0702	0.0147	mg/Kg	a	02/19/15 09:50	02/20/15 21:44	1
Pyrene	ND		0.0702	0.0126	mg/Kg	ü	02/19/15 09:50	02/20/15 21:44	11
Phenanthrene	ND		0.0702	0.00943	mg/Kg	I	02/19/15 09:50	02/20/15 21:44	1
Chrysene	ND		0.0702	0.00943	mg/Kg	Ħ	02/19/15 09:50	02/20/15 21:44	1
Dibenz(a,h)anthracene	ND		0.0702	0.00733	mg/Kg		02/19/15 09:50	02/20/15 21:44	1
Fluoranthene	ND		0.0702	0.00943	mg/Kg		02/19/15 09:50	02/20/15 21:44	1
Fluorene	ND		0.0702	0.0126	mg/Kg	10	02/19/15 09:50	02/20/15 21:44	1
Indeno[1,2,3-cd]pyrene	ND		0.0702	0.0105	mg/Kg		02/19/15 09:50	02/20/15 21:44	1
Naphthalene	ND		0.0702	0.00943	mg/Kg	Ħ	02/19/15 09:50	02/20/15 21:44	. 1
2-Methylnaphthalene	ND		0.0702	0.0168	mg/Kg	12	02/19/15 09:50	02/20/15 21:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DilFac
2-Fluorobiphenyl (Surr)	66		29-120				02/19/15 09:50	02/20/15 21:44	+
Terphenyl d 14 (Surr)	69		13 - 120				02/19/15 09:50	02/20/15 21:44	1
Nitrobenzene-d5 (Surr)	55		27 - 120				02/19/15 09:50	02/20/15 21:44	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93		0.10	0.10	%			02/19/15 13:03	1

### Client Sample ID: 659 Camellia

Date Collected: 02/11/15 12:15 Date Received: 02/14/15 08:30

### Lab Sample ID: 490-72561-2

TestAmerica Job ID: 490-72561-1

Matrix: Soil Percent Solids: 73.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00284	0.000952	mg/Kg	ŭ	02/11/15 12:15	02/23/15 14:23	1
Ethylbenzene	ND		0.00284	0.000952	mg/Kg	ц	02/11/15 12:15	02/23/15 14:23	1
Naphthalene	ND		0.00710	0.00242	mg/Kg	¥:	02/11/15 12:15	02/23/15 14:23	
Toluene	ND		0 00284	0.00105	mg/Kg	51.	02/11/15 12:15	02/23/15 14:23	1
Xylenes, Total	ND		0.00426	0.000952	mg/Kg	形)	02/11/15 12:15	02/23/15 14:23	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DilFac
1,2-Dichloroethane-d4 (Surr)	94		70-130				02/11/15 12:15	02/23/15 14:23	1
4-Bromofluorobenzene (Sun <sup>-</sup> )	96		70 - 130				02/11/15 12:15	02/23/15 14:23	
Dibromofluoromethane (Surr)	106		70-130				02/11/15 12:15	02/23/15 14.23	
Toluene-d8 (Sun <sup>-</sup> )	84		70-130				02/11/15 12:15	02/23/15 14:23	1
Method: 8270D - Semivolatile	Organic Compou	nds (GC/MS	5)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0 0 9 0 2	0.0135	mg/Kg	ŭ	02/19/15 09:50	02/20/15 22:06	1
Acenaphthylene	ND		0.0902	0.0121	mg/Kg	а	02/19/15 09:50	02/20/15 22:06	1
Anthracene	ND		0.0902	0.0121	mg/Kg		02/19/15 09:50	02/20/15 22:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		00902	0.0135	mg/Kg	ŭ	02/19/15 09:50	02/20/15 22:06	3
Acenaphthylene	ND		0.0902	0.0121	mg/Kg	а	02/19/15 09:50	02/20/15 22:06	1
Anthracene	ND		0.0902	0.0121	mg/Kg		02/19/15 09:50	02/20/15 22:06	1
Benzo[a]anthracene	ND		0.0902	0.0202	mg/Kg	z	02/19/15 09:50	02/20/15 22:06	1
Benzo[a]pyrene	ND		0.0902	0.0162	mg/Kg	12	02/19/15 09:50	02/20/15 22:06	4
Benzo[b]fluoranthene	ND		0.0902	0.0162	mg/Kg	E	02/19/15 09:50	02/20/15 22:06	1
Benzo[g,h,i]perylene	ND		0.0902	0.0121	mg/Kg	L.	02/19/15 09:50	02/20/15 22:06	2.1
Benzo[k]fluoranthene	ND		0.0902	0.0188	mg/Kg	Li	02/19/15 09:50	02/20/15 22:06	1
1-Methylnaphthalene	ND		0.0902	0.0188	mg/Kg	· E :	02/19/15 09:50	02/20/15 22:06	1
Pyrene	ND		0.0902	0.0162	mg/Kg		02/19/15 09:50	02/20/15 22:06	.1
Phenanthrene	ND		0.0902	0.0121	mg/Kg	13	02/19/15 09:50	02/20/15 22:06	-1
Chrysene	ND		0.0902	0.0121	mg/Kg	n	02/19/15 09:50	02/20/15 22:06	1
Dibenz(a,h)anthracene	ND		0.0902	0.00942	mg/Kg	n	02/19/15 09:50	02/20/15 22:06	1
Fluoranthene	ND		0.0902	0.0121	mg/Kg	- R	02/19/15 09:50	02/20/15 22:06	
Fluorene	ND		0.0902	0.0162	mg/Kg		02/19/15 09:50	02/20/15 22:06	-1
Indeno[1,2,3 cd]pyrene	ND		0.0902	0.0135	mg/Kg	ŭ	02/19/15 09:50	02/20/15 22:06	31
Naphthalene	ND		0.0902	0.0121	mg/Kg		02/19/15 09:50	02/20/15 22:06	1
2-Methylnaphthalene	ND		0.0902	0.0215	mg/Kg	5.2	02/19/15 09:50	02/20/15 22:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	D il Fac
2-Fluorobiphenyl (Surr)	58		29-120				02/19/15 09:50	02/20/15 22:06	1
Terphenyl-d14 (Surr)	62		13 _ 120				02/19/15 09:50	02/20/15 22:06	1
Nitrobenzene-d5 (Surr)	50		27 - 120				02/19/15 09:50	02/20/15 22:06	t
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	73		0.10	0.10	%			02/17/15 14:55	1

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

Lab Sample ID: MB 490-228630/9							Client Sa	ample ID: Metho	d Blank
Matrix: Solid								Prep Type: T	otal/NA
Analysis Batch: 228630									
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			02/20/15 13:49	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			02/20/15 13:49	1
Naphthalene	ND		0.00500	0.00170	mg/Kg			02/20/15 13:49	1
Toluene	ND		0.00200	0.000740	mg/Kg			02/20/15 13:49	1
Xylenes, Total	ND		0.00300	0.000670	mg/Kg			02/20/15 13:49	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	DilFac

1.2-Dichloroethane-d4 (Surr)	96	70 - 130	02/20/15 13:49
4-Bromofluorobenzene (Surr)	101	70 - 130	02/20/15 13:49
Dibromofluoromethane (Surr)	107	70 - 130	02//20/15 13:49
Toluene-d8 (Surr)	91	70 - 130	02/20/15 13:49

#### Lab Sample ID: LCS 490-228630/4 Matrix: Solid Analysis Batch: 228630

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.0500	0.05033		mg/Kg		101	75 - 127
Ethylbenzene	0.0500	0.04877		mg/Kg		98	80 - 134
Naphthalene	0.0500	0.05704		mg/Kg		114	69.150
Toluene	0.0500	0 04666		mg/Kg		93	80 - 132
Xylenes, Total	0.100	0.1009		mg/Kg		101	80 - 137
1	CS LCS						

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	85		70-130
4 Bromofluorobenzene (Sur <sup>*</sup> )	102		70 - 130
Dibromofluoromethane (Surr)	101		70 - 130
Toluene-d8 (Surr)	90		70_ 130

#### Lab Sample ID: LCSD 490-228630/10 Matrix: Solid

#### Analysis Batch: 228630

Analysis Batch: 228630			0.1								
			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene			0.0500	0.04498		mg/Kg		90	75 - 127	11	50
Ethylbenzene			0.0500	0.04561		mg/Kg		91	80 - 134	7	50
Naphthalene			0.0500	0.05482		mg/Kg		110	69-150	4	50
Toluene			0.0500	0.04272		mg/Kg		85	80 - 132	9	50
Xy enes, Total			0.100	0.09800		mg/Kg		98	80 - 137	3	50
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1,2 Dichloroethane-d4 (Surr)	95		70 - 130								
Surrogate	%Recovery		Limits	0.09800		mg/Kg		98	80 - 137	3	50

4 Bromofluorobenzene (Surr)	96	70 - 130
Dibromofluoromethane (Surr)	105	70 - 130
Toluene-d8 (Surr)	91	70 - 130

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

r

r.

ť

Client Sample ID: La	ab Control Sample Dup
	Prep Type: Total/NA

Client Sample ID: Matrix Spike

Prep Type: Total/NA

7

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

#### Lab Sample ID: 490-72829-A-4-E MS Matrix: Solid 000447 .

Analysis Batch: 229147									Prep Batch: 228919
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	ND		0.0586	0.04526		mg/Kg	20.	77	31 - 143
Ethylbenzene	ND		0 0586	0.04241		mg/Kg	- 8	72	23 - 161
Naphthalene	ND		0.0586	0.01573		mg/Kg	п	27	10 - 176
Toluene	ND		0.0586	0.03621		mg/Kg	ц	62	30 - 155
Xylenes, Total	ND		0.117	0.07842		mg/Kg	ц	67	25 - 162
	ME	MC							

	11/3	11/13	
Surrogate	%Recovery	Qualifier	Limits
1,2 Dichloroethane-d4 (Surr)	89		70-130
4 Bromofluorobenzene (Surr)	106		70_ 130
Dibromofluoromethane (Surr)	89		70-130
Toluene-d8 (Surr)	86		70.130

#### Lab Sample ID: 490-72829-A-4-F MSD Matrix: Solid Analysis Batch: 229147

Lab Sample ID: MB 490-229147/9

Analysis Batch: 229147

Matrix: Solid

	Sample	Sample	Spike
Analyte	Result	Qualifier	Added
Benzene	ND		0.0597
Ethylbenzene	ND		0.0597
Naphtha ene	ND		0.0597
Toluene	ND		0.0597
Xylenes, Total	ND		0.119
	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	82		70.130
4-Bromofluorobenzene (Surr)	110		70-130
Dibromofluoromethane (Surr)	94		70-130
Toluened 8 (Surr)	89		70 - 130

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

					Prep Batch: 22891					
MSD	MSD				%Rec.		RPD			
Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit			
0.06299		mg/Kg	12	106	31 - 143	33	50			
0.06171		mg/Kg	12	103	23 - 161	37	50			
0.02004		mg/Kg	n	34	10 - 176	24	50			
0.05348		mg/Kg	12	90	30 - 155	39	50			
0.1177		mg/Kg	X	99	25 - 162	40	50			

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

-	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			02/23/15 13:24	81
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			02/23/15 13:24	1
Naphthalene	ND		0.00500	0.00170	mg/Kg			02/23/15 13:24	1
Toluene	ND		0.00200	0.000740	mg/Kg			02/23/15 13:24	1
Xyenes, Total	ND		0.00300	0.000670	mg/Kg			02/23/15 13:24	. 1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70_130					02/23/15 13:24	1
4-Bromofluorobenzene (Surr)	98		70-130					02/231/15 13:24	
Dibromofluoromethane (Surr)	106		70_ 130					02/23/15 13:24	1
Toluene-d8 (Surr)	85		70-130					02/23/15 13.24	1

Client Sample ID: Lab Control Sample

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

#### Lab Sample ID: LCS 490-229147/3 Matrix: Solid Analysis Batch: 229147

Analysis Baton. 220147		Spike	LCS	LCS				%Rec.
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene		0.0500	0.05242		mg/Kg		105	75 - 127
Ethylbenzene		0.0500	0.05423		mg/Kg		108	80 - 134
Naphthalene		0.0500	0.05292		mg/Kg		106	69 - 150
Toluene		0.0500	0.04554		mg/Kg		91	80 - 132
Xylenes, Total		0.100	0.1081		mg/Kg		108	80 - 137
	LCS LCS							
Currente	Propuest Qualifier	Limito						

Surrogate	%Recovery Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87	70-130
4-Bromofluorobenzene (Suir)	97	70-130
Dibromofluoromethane (Surr)	100	70_ 130
Toluene-d8 (Surr)	86	70-130

### Lab Sample ID: LCS 490-229147/6 Matrix: Solid

Analysis	Batch:	229147
----------	--------	--------

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	2.50	2.803		mg/Kg		112	75-127
Ethylbenzene	2.50	2.777		mg/Kg		111	80 - 134
Naphthalene	2.50	2.708		mg/Kg		108	69-150
Totuene	2.50	2.279		mg/Kg		91	80.132
Xylenes, Total	5.00	5.579		mg/Kg		112	80-137

	LCS LCS	
Surrogate	%Recovery Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90	70 - 130
4-Bromofluorobenzene (Surr)	97	70-130
Dibromofluoromethane (Surr)	101	70.130
Toluene-d8 (Surr)	85	70-130

#### Lab Sample ID: LCSD 490-229147/4 Matrix: Solid

#### Analysis Batch: 229147

			Spike	LCSD	LCSD				%Rec.		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene			0.0500	0.05473		mg/Kg		109	75-127	4	50
Ethylbenzene			0.0500	0.05396		mg/Kg		108	80 - 134	0	50
Naphthalene			0.0500	0.05309		mg/Kg		106	69-150	0	50
Toluene			0.0500	0.04407		mg/Kg		88	80-132	3	50
Xyenes, Total			0.100	0.1054		mg/Kg		105	80-137	3	50
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	87		70-130								
4-Bromofluorobenzene (Surr)	98		70-130								
Dibromofluoromethane (Surr)	100		70-130								
Toluene-d8 (Surr)	85		70-130								

Prep Type: Total/NA

5

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

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

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

Lab Sample ID: MB 490-228293/1-A							Client Sa	mple ID: Metho	d Blank
Matrix: Solid								Prep Type: T	otal/NA
Analysis Batch: 228595								Prep Batch:	228293
		MB							
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0670	0.0100	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
Acenaphthylene	ND		0.0670	0.00900	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
Anthracene	ND		0.0670	0.00900	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
Benzo[a]anthracene	ND		0.0670	0.0150	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
Benzo[a]pyrene	ND		0.0670	0.0120	mg/Kg		02/19/15 09:50	02/20/15 13:46	4
Benzo[b]fluoranthene	ND		0.0670	0.0120	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
Benzo[g,h, ]perylene	ND		0 0670	0.00900	mg/Kg		02/19/15 09:50	02/20/15 13:46	3
Benzo[k]fluoranthene	ND		0.0670	0.0140	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
1-Methylnaphthalene	ND		0.0670	0.0140	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
Pyrene	ND		0.0670	0.0120	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
Phenanthrene	ND		0.0670	0.00900	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
Chrysene	ND		0.0670	0.00900	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
Dibenz(a,h)anthracene	ND		0.0670	0.00700	mg/Kg		02/19/15 09:50	02/20/15 13:46	. 1
Fluoranthene	ND		0.0670	0.00900	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
Fluorene	ND		0.0670	0.0120	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
indeno[1,2,3-cd]pyrene	ND		0.0670	0.0100	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
Naphthalene	ND		0.0670	0.00900	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
2-Methylnaphthalene	ND		0.0670	0.0160	mg/Kg		02/19/15 09:50	02/20/15 13:46	1
	MB	MB							
Surrogate	Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	74		29-120				02/19/15 09:50	02/20/15 13:46	1
Terphenyl-d14 (Surr)	73		13 - 120				02/19/15 09:50	02/20/15 13:46	1
Nitrobenzene-d5 (Surr)	75		27 - 120				02/19/15 09:50	02/20/15 13:46	1

## Lab Sample ID: LCS 490-228293/2-A Matrix: Solid

### Analysis Batch: 228595

	Spike	LCS	LCS			%Rec.
Analyte	Added	Result	Qualifier L	Jnit D	%Rec	Limits
Acenaphthylene	1.67	1.289	n	mg/Kg	77	38 - 120
Anthracene	1.67	1.277	n	mg/Kg	77	46 - 124
Benzo[a]anthracene	1.67	1.338	n	ng/Kg	80	45 - 120
Benzo[a]pyrene	1.67	1.285	п	ng/Kg	77	45 _ 120
Benzo[b]fluoranthene	1.67	1.289	п	mg/Kg	77	42 - 120
Benzo[g,h,i]perylene	1.67	1.516	n	mg/Kg	91	38 - 120
Benzo[k]fluoranthene	1.67	1.264	п	mg/Kg	76	42 - 120
1-Methylnaphthalene	1.67	1.227	п	ng/Kg	74	32 _ 120
Pyrene	1.67	1.252	п	ng/Kg	75	43 - 120
Phenanthrene	1.67	1.269	n	ng/Kg	76	45 - 120
Chrysene	1.67	1.320	n	ng/Kg	79	43 - 120
Dibenz(a,h)anthracene	1.67	1.495	п	ng/Kg	90	32 - 128
Fluoranthene	1.67	1.177	r	ng/Kg	71	46 - 120
Fluorene	1.67	1.320	г	mg/Kg	79	42 - 120
Indeno[1,2,3cd]pyrene	1.67	1.453	г	ng/Kg	87	41 - 121
Naphthalene	1.67	1.239	r	ng/Kg	74	32 - 120
2-Methylnaphthaiene	1.67	1.167	r	mg/Kg	70	28 - 120

TestAmerica Nashville

TestAmerica Job ID: 490-72561-1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 228293

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

#### Lab Sample ID: LCS 490-228293/2-A Matrix: Solid Analysis Batch: 228595

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl (Surr)	76		29 - 120
Terphenyl-d14 (Surr)	79		13 - 120
Nitrobenzene-d5 (Surr)	73		27 _ 120

## Lab Sample ID: 490-72554-A-3-B MS Matrix: Solid

									the second se
Analysis Batch: 228595									Prep Batch: 228293
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Acenaphthylene	ND		1.98	1.250		mg/Kg	10	63	25 - 120
Anthracene	ND		1.98	1.249		mg/Kg	n	63	28 - 125
Benzo[a]anthracene	ND		1.98	1.310		mg/Kg	п	66	23.120
Benzo[a]pyrene	ND		1.98	1.202		mg/Kg	α.	61	15 - 128
Benzo[b]fluoranthene	ND		1.98	1.280		mg/Kg	ü	65	12 - 133
Benzo[g,h,i]perylene	ND		1.98	1.355		mg/Kg	E	68	22 - 120
Benzo[k]fluoranthene	ND		1.98	1.227		mg/Kg	Ħ	62	28 _ 120
1-Methylnaphthalene	ND		1.98	1.226		mg/Kg	n	62	10 - 120
Pyrene	ND		1.98	1.257		mg/Kg	n	63	20 - 123
Phenanthrene	ND		1.98	1.270		mg/Kg	5	64	21 - 122
Chrysene	ND		1.98	1.287		mg/Kg	u	65	20 - 120
Dibenz(a,h)anthracene	ND		1.98	1.327		mg/Kg	u	67	12_128
Fluoranthene	ND		1.98	1.262		mg/Kg	ŭ	64	10_143
Fluorene	ND		1.98	1.252		mg/Kg	100	63	20 - 120
Indeno[1,2,3-cd]pyrene	ND		1.98	1.306		mg/Kg	n	66	22 - 121
Naphthalene	ND		1.98	1.252		mg/Kg		63	10 _ 120
2-Methylnaphthalene	ND		1.98	1.219		mg/Kg	n	61	13 - 120
	MS	MS							
Surrogate	%Recovery	Qualifier	Limits						
2-Fluorobiphenyl (Surr)	57		29-120						

13.120

27 - 120

### Lab Sample ID: 490-72554-A-3-C MSD

Matrix: Solid

Terphenyl-d14 (Surr)

Nitrobenzene-d5 (Surr)

								Prep I	Batch: 2	28293
Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
ND		1.97	1 053		mg/Kg	11	53	25 - 120	17	50
ND		1.97	1.014		mg/Kg	4	51	28_125	21	49
ND		1.97	1.108		mg/Kg	ц	56	23 - 120	17	50
ND		1.97	1.091		mg/Kg	13	55	15 - 128	10	50
ND		1.97	1.102		mg/Kg	1.4	56	12 - 133	15	50
ND		1.97	1.197		mg/Kg	21	61	22-120	12	50
ND		1.97	1.020		mg/Kg	11	52	28 - 120	18	45
ND		1.97	1.030		mg/Kg	18	52	10 - 120	17	50
ND		1.97	1.059		mg/Kg	澎	54	20 - 123	17	50
ND		1.97	1.030		mg/Kg	**	52	21 - 122	21	50
ND		1.97	1.085		mg/Kg	~4	55	20 - 120	17	49
	Result ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND ND	Result Qualifier Added   ND 1.97   ND 1.97	Result Qualifier Added Result   ND 1.97 1.053   ND 1.97 1.014   ND 1.97 1.018   ND 1.97 1.091   ND 1.97 1.012   ND 1.97 1.020   ND 1.97 1.020   ND 1.97 1.020   ND 1.97 1.030   ND 1.97 1.030   ND 1.97 1.030   ND 1.97 1.030   ND 1.97 1.030	Result Qualifier Added Result Qualifier   ND 1.97 1.053   ND 1.97 1.014   ND 1.97 1.014   ND 1.97 1.018   ND 1.97 1.091   ND 1.97 1.02   ND 1.97 1.102   ND 1.97 1.020   ND 1.97 1.020   ND 1.97 1.030   ND 1.97 1.030   ND 1.97 1.030	Result Qualifier Added Result Qualifier Unit   ND 1.97 1.053 mg/Kg   ND 1.97 1.014 mg/Kg   ND 1.97 1.014 mg/Kg   ND 1.97 1.014 mg/Kg   ND 1.97 1.091 mg/Kg   ND 1.97 1.091 mg/Kg   ND 1.97 1.102 mg/Kg   ND 1.97 1.102 mg/Kg   ND 1.97 1.020 mg/Kg   ND 1.97 1.020 mg/Kg   ND 1.97 1.030 mg/Kg	Result Qualifier Added Result Qualifier Unit D   ND 1.97 1.053 mg/Kg I   ND 1.97 1.014 mg/Kg I   ND 1.97 1.014 mg/Kg I   ND 1.97 1.018 mg/Kg I   ND 1.97 1.091 mg/Kg I   ND 1.97 1.012 mg/Kg I   ND 1.97 1.102 mg/Kg I   ND 1.97 1.102 mg/Kg I   ND 1.97 1.020 mg/Kg I   ND 1.97 1.030 mg/Kg I	Result Qualifier Added Result Qualifier Unit D %Rec   ND 1.97 1.053 mg/Kg 3 53   ND 1.97 1.014 mg/Kg 53   ND 1.97 1.014 mg/Kg 53   ND 1.97 1.014 mg/Kg 55   ND 1.97 1.091 mg/Kg 55   ND 1.97 1.020 mg/Kg 56   ND 1.97 1.102 mg/Kg 56   ND 1.97 1.102 mg/Kg 56   ND 1.97 1.102 mg/Kg 55   ND 1.97 1.020 mg/Kg 52   ND 1.97 1.030 mg/Kg 52   ND 1.97 1.059 mg/Kg 54   ND 1.97 1.030 mg/Kg 54   ND 1.97 1.030 mg/Kg 54	Sample Sample Spike MSD MSD D %Rec.   Result Qualifier Added Result Qualifier Unit D %Rec. Limits   ND 1.97 1.053 mg/Kg 105 25.120   ND 1.97 1.014 mg/Kg 53 25.120   ND 1.97 1.014 mg/Kg 54 28.125   ND 1.97 1.018 mg/Kg 55 23.120   ND 1.97 1.012 mg/Kg 55 15.128   ND 1.97 1.02 mg/Kg 56 12.133   ND 1.97 1.102 mg/Kg 56 12.133   ND 1.97 1.020 mg/Kg 52 28.120   ND 1.97 1.020 mg/Kg 52 28.120   ND 1.97 1.030 mg/Kg 52 10.120   ND 1.97 1.059 mg/Kg 52 <td< td=""><td>Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD   ND 1.97 1.053 mg/Kg 1 53 25 - 120 17   ND 1.97 1.014 mg/Kg 1 53 25 - 120 17   ND 1.97 1.014 mg/Kg 1 56 23 - 120 17   ND 1.97 1.018 mg/Kg 1 56 23 - 120 17   ND 1.97 1.091 mg/Kg 15 15 - 128 10   ND 1.97 1.091 mg/Kg 16 12 - 133 15   ND 1.97 1.102 mg/Kg 16 22 - 120 12   ND 1.97 1.020 mg/Kg 15 28 - 120 18   ND 1.97 1.030 mg/Kg 52 10 - 120 17   ND 1.97 1.030 mg/Kg 54 20 - 123 17<!--</td--></td></td<>	Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD   ND 1.97 1.053 mg/Kg 1 53 25 - 120 17   ND 1.97 1.014 mg/Kg 1 53 25 - 120 17   ND 1.97 1.014 mg/Kg 1 56 23 - 120 17   ND 1.97 1.018 mg/Kg 1 56 23 - 120 17   ND 1.97 1.091 mg/Kg 15 15 - 128 10   ND 1.97 1.091 mg/Kg 16 12 - 133 15   ND 1.97 1.102 mg/Kg 16 22 - 120 12   ND 1.97 1.020 mg/Kg 15 28 - 120 18   ND 1.97 1.030 mg/Kg 52 10 - 120 17   ND 1.97 1.030 mg/Kg 54 20 - 123 17 </td

TestAmerica Nashville

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 228293

Client Sample ID: Matrix Spike

Prep Type: Total/NA

7

Client Sample ID: Matrix Spike Duplicate

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

ab Sample ID: 490-72554	-A-3-C MSD					CI	ient Sa	mple ID	): Matrix Sp	oike Dup	licate	
Matrix: Solid									Prep T	ype: Tot	tal/NA	
Analysis Batch: 228595									Prep E	Batch: 2	28293	
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Dibenz(a,h)anthracene	ND		1.97	1.192		mg/Kg	2.	60	12 - 128	11	50	
luoranthene	ND		1.97	1.055		mg/Kg		54	10_143	18	50	
luorene	ND		1.97	0.9818		mg/Kg		50	20.120	24	50	
ndeno[1,2,3-cd]pyrene	ND		1.97	1.199		mg/Kg		61	22 - 121	8	50	5
Naphthalene	ND		1.97	1.033		mg/Kg	n	52	10.120	19	50	
2-Methylnaphthalene	ND		1.97	1.013		mg/Kg	22	51	13.120	18	50	
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									
2-Fluorobiphenyl (Surr)	47		29 - 120									
Terphenyl-d14 (Surr)	48		13 - 120									
Nitrobenzene-#5 (Surr)	52		27 _ 120									
ethod: Moisture - Per	cent Moisture											

#### Method: Moisture - Percent Moisture

Lab Sample ID: 490-72524	B-1 D <b>U</b>						Client Sample ID: Dup	
Matrix: Solid							Prep Type: Tot	tal/NA
Analysis Batch: 228012								
	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Solids	79		82		%		4	20
Lab Sample ID: 490-72561	1 DU						Client Sample ID: 563 [	Dahlia
Matrix: Soil							Prep Type: Tot	tal/NA
Analysis Batch: 228349								
	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Solids	93		93		%		0.2	20

## **QC** Association Summary

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-72561-1

### GC/MS VOA

#### Prep Batch: 227860

GC/MS VOA					
Prep Batch: 227860					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-72561-1	563 Dahlia	Total/NA	Soil	5035	
49072561-2	659 Camellia	Total/NA	Soil	5035	
Analysis Batch: 228630	)				
Lab Sample ID	ClientSample ID	Prep Type	Matrix	Method	Prep Batch
490-72561-1	563 Dahlia	Total/NA	Soil	8260B	227860
LCS 490-228630/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-228630/10	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-228630/9	Method Blank	Total/NA	Solid	8260B	
Prep Batch: 228919					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-72829 A-4-E MS	Matrix Spike	Total/NA	Solid	5030B	
490-72829-A-4-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5030B	
Analysis Batch: 22914	7				
LabSampleID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-72561-2	659 Camellia	Total/NA	Soil	8260B	227860
490-72829-A-4-E MS	Matrix Spike	Total/NA	Solid	8260B	228919
49072829A-4-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B	228919
LCS 490-229147/3	Lab Control Sample	Total/NA	Solid	8260B	
LCS 490-229147/6	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-229147/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-229147/9	Method Blank	Total/NA	Solid	8260B	
GC/MS Semi VOA					
Prep Batch: 228293					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
49072554A-3-B MS	Matrix Spike	Tota/NA	Solid	3550C	
490-72554-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Solid	3550C	
490-72561-1	563 Dahlia	Total/NA	Soil	3550C	
490-72561-2	659 Camellia	Total/NA	Soil	3550C	
LCS 490-228293/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 490-228293/1-A	Method Blank	Total/NA	Solid	3550C	
Analysis Batch: 22859	2				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-72561-1	563 Dahlia	Total/NA	Soil	8270D	228293
490-72561-2	659 Camellia	Total/NA	Soil	8270D	228293
Analysis Batch: 22859	5				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-72554-A-3-B MS	Matrix Spike	Total/NA	Solid	8270D	228293
49072554 A 3-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8270D	228293
LCS 490-228293/2 A	Lab Control Sample	Total/NA	Solid	8270D	228293
MB 490-228293/1-A	Method Blank	Tota!/NA	Solid	8270D	228293

## **QC** Association Summary

Client: Small Business Group Inc. Project/Site: Laurel Bay Housing Project TestAmerica Job ID: 490-72561-1

### **General Chemistry**

#### Analysis Batch: 228012

ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
90-72524-B-1 DU	Duplicate	Total/NA	Solid	Moisture	
190-72526-A 1 MS	Matrix Spike	Total/NA	Solid	Moisture	
490-72526-A-1 MSD	Matrix Spike Duplicate	Total/NA	Solid	Moisture	
190-72561-2	659 Camellia	Total/NA	Soil	Moisture	
nalysis Batch: 22834	9				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
490-72561-1	563 Dahlia	Total/NA	Soil	Moisture	
490-72561-1 DU	563 Dahlia	Tota/NA	Soil	Moisture	

TestAmerica Job ID: 490-72561-1

Lab Sample ID: 490-72561-2

Matrix: Soil

Percent Solids: 73.2

## Client Sample ID: 563 Dahlia

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

Date Collected: 02/10/15 14:15 Date Received: 02/14/15 08:30

Date Received	02/14/15 08:3	0							Percent	Solids: 92.8
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.954 g	5.0 mL	227860	02/10/15 14:15	JLP	TAL NSH
Total/NA	Analysis	8260B		. *	4.954 g	5.0 mL	228630	02/20/15 17:10	NC	TAL NSH
Total/NA	Prep	3550C			30.86 g	1.00mL	228293	02/19/15 09:50	LDC	TALNSH
Tota /NA	Analysis	8270D		1	30.86 g	1.00 mL	228592	02/20/15 21:44	ккн	TALNSH
Tota /NA	Analysis	Moisture		1			228349	02/19/15 13:03	AJK	TAL NSH

## Client Sample ID: 659 Camellia

Date Collected: 02/11/15 12:15 Date Received: 02/14/15 08:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.805 g	5.0 mL	227860	02/11/15 12:15	JLP	TALNSH
Total/NA	Analysis	8260B			4.805 g	5.0 mL	229147	02/23/15 14:23	ККК	TAL NSH
Total/NA	Prep	3550C			30.43 g	1.00 mL	228293	02/19/15 09:50	LDC	TALNSH
Total/NA	Analysis	8270D		1	30.43 g	1.00mL	228592	02/20/15 22:06	ккн	TAL NSH
Total/NA	Analysis	Moisture		S4			228012	02/17/15 14:55	BGD	TAL NSH

Laboratory References:

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

Lab Sample ID: 490-72561-1 Matrix: Soil

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)7260177

## **Certification Summary**

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

### Laboratory: TestAmerica Nashville

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program		EPA Region	Certification ID	Expiration Date
South Carolina	State Prog	gram	4	84009 (001)	02-28-15 *
0,	are included in this report, bu		, , ,		
Analysis Method	Prep Method	Matrix	Analyt	e	
5 ,	, .		Analyt		

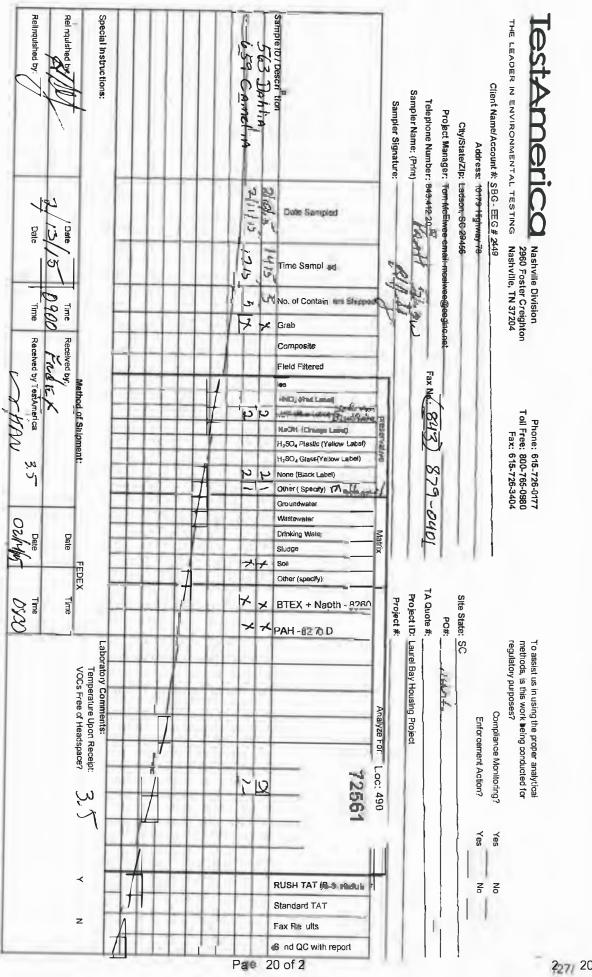
TestAmerica Job ID: 490-72561-1

\* Certification renewal pending - certification considered valid.

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING Nashville, TN COOLER RECEIPT FORM 490-72561 Chain of	
Cooler Received/Opened On 2/14/2015 @ 0830	outrody
1. Tracking # 0006 (last 4 digits, FedEx)	
Courier: Fed-ex IR Gun ID 97310166	
2. Temperature of rep. sample or temp blank when opened: $35$ Degrees Celsius	
3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES	NO. NA
	NONA
If yes, how many and where:	
5. Were the seals intact, signed, and dated correctly?	NONA
6. Were custody papers inside cooler?	NONA
I certing that I opened the cooler and answered questions 1-6 Initial	(a)
7. Were custody seals on containers: YES NO and Intact YES	NO.NA
Were these signed and dated correctly? YES	.NO.(.NA
8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Othe	r None
9. Cooling process: Ice lice lice-pack lice (direct contact) Dry ice Other	er None
10. Did all containers arrive in good condition (unbroken)?	.NONA
11. Were all container labels complete (#, date, signed, pres., etc)?	NONA
12. Did all container labels and tags agree with custody papers?	NONA
13a. Were VOA vials received?	NONA
b. Was there any observable headspace present in any VOA vial? YES	.NO(NA
14. Was there a Trip Blank in this cooler? YES NO NA If multiple coolers, sequence #	
I certify that I unloaded the cooler and answered guestions 7-14 (intial)	$\sim$
15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES. I	NQ.NA
b. Did the bottle labels indicate that the correct preservatives were used YES.	NONA
16. Was residual chlorine present? YES	.NpNA
I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)	A
17. Were custody papers properly filled out (ink, signed, etc)?	NONA
18. Did you sign the custody papers in the appropriate place?	.)NONA
19. Were correct containers used for the analysis requested?	.)NONA
20. Was sufficient amount of sample sent In each container?	.)NONA
I certify that I entered this project into LIMS and answered guestions 17-20 (intial)	$\sim$
I certify that I attached a label with the unique LIMS number to each container (intial)	$\Delta$
21. Were there Non-Conformance issues at login? YESNO Was a NCM generated? YESNO#	

5

----



Client: Small Business Group Inc.

#### Login Number: 72561 List Number: 1

## Creator: Gambill, Shane

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.	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	3.5
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 <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Number: 490-72561-1

List Source: TestAmerica Nashville

# ATTACHMENT A

NON-HAZARDOUS MANIFEST	1. Generator's	US EPA ID No.	Manifest Doc	No.	2. Page 1 d				
Generator's Mailing Address: MCAS BEAUFORT AUREL BAY HOUSING BEAUFORT, SC 29904	1	Generator's Site A	ddress (If different than r	mailing):		t Number MNA	01519 Generator's		
	879-0411				-				_
Transporter 1 Company Name	×2   1	6. 8.	US EPA ID Number		C. State Transporter's ID D. Transporter's Phone				
							)		
. Designated Facility Name and Si HCKORY HILL LANDFILL 621 LOW COUNTRY DRIVE RIDGELAND, SC 29936	te A <b>d</b> dress	10.	0. US EPA ID Number			F. Transporter's Phone G. State Facility ID H. State Facility Phone 843-9			
1. Description of Waste Materials				Containers	13. Total	14. Unit	1. Mi	sc. Comment	ts
. HEATING OIL TANK FILLED			No.	Туре	Quantity	Wt./Vol.	F7~~~	~ .	_
1				di.	5.49	1.11	155		_
WM Pr	ofile # 102655	50	1000					_	_
WM Profile #		_	-	1.			_		
. wivi Profile #				-	-				
WM Profile #			1.2				-	_	_
						12.			
WM Profile			1			N		-	
Additional Descriptions for Ma	terials Listed Abov	e	K. Dispo	osal Location					
			Cell	Į			Level		_
5. Special Handling Instructions a CIST'S FREM	1	mation	Grid dinal	2) (	563 D	ALIA 3)	659 (	) _ 1403-)c	11:
Purchase Order #		EMER	GENCY CONTACT / P	HONE NO .:		1	0.0		-
.6. GENERATOR'S CERTIFICATE: hereby certify that the above-des	cribed materials ar	e not hazardous was	tes as defined by 40	CFR Part 261	or any applic	able state lav	v, have beer	n fully and	d
ccurately described, classified and Printed Name	l packaged and are		for transportation acc e "On behalf of"	cording to ap	plicable regu	lations.	Month	Day	T - Y
in it is to	to the N.	` <u> </u>		·	1.414 5 1.46		-,		1.
7. Transporter 1 Acknowledgeme	nt of Receipt of Ma					_			
Printed Name PRAH.	ShAN)	Signature	e \$1/1	1			Month	Day	Ye
18. Transporter 2 Acknowledgeme	ent of Receipt of Ma	aterials	1.1						-
Printed Name		Signatur	e t				Month	Day	Y
19. Certificate of Final Treatment/	ed treatment facili			above-descr	ibed waste w	vas managed i	n complianc	e with all	1
certify, on behalf of the above list applicable laws, regulations, permi									
			materials covered by	this manife	st.		Month	Day	TY

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 seq., 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,

XIRS

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	