SUMMARY REPORT 246 BOBWHITE DRIVE (FORMERLY 1177 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

JUNE 2021

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Prepared by:



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



Summary Report 246 Bobwhite Drive (Formerly 1177 Bobwhite Drive) Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort June 2021

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List of Acronyms

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



1.0 INTRODUCTION

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

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

This report summarizes the results the environmental investigation activities associated with the storage of home heating oil and the potential release of petroleum constituents at the referenced property. Based on the results of the investigation, a No Further Action (NFA) determination has been made by the South Carolina Department of Health and Environmental Control (SCDHEC) for 246 Bobwhite Drive (Formerly 1177 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 246 Bobwhite Drive (Formerly 1177 Bobwhite Drive). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1177 Bobwhite Drive* (MCAS Beaufort, 2008) and *SCDHEC UST Assessment Report – 1177 Bobwhite Drive* (MCAS Beaufort, 2016). The UST Assessment Reports are provided in Appendix B. Details regarding the IGWA sampling activities at this site are provided in the *Investigation of Ground Water at Leaking Heating Oil UST Sites Report –* (Resolution Consultants, 2008) and the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017). The laboratory report that includes the pertinent IGWA analytical results for this site is presented in Appendix C.

2.1 UST Removal and Soil Sampling

In June 2007 and September 2015, two 280 gallon heating oil USTs were removed at 246 Bobwhite Drive (Formerly 1177 Bobwhite Drive). Tank 1 was removed on June 27, 2007 from

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Summary Report 246 Bobwhite Drive (Formerly 1177 Bobwhite Drive) Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort June 2021

the front landscaped bed area adjacent to the house. Tank 2 was removed on September 8, 2015 from underneath the edge of the front concrete porch and the front landscaped bed area. The former UST locations are indicated in the figures of the UST Assessment Reports (Appendix B). The USTs were removed, cleaned, and shipped offsite for recycling. Visual evidence (i.e., staining or sheen) of petroleum impact was recorded at the time of the Tank 1 UST removal. There was no visual evidence (i.e., staining or sheen) of petroleum impact to the UST Assessment Reports (Appendix B), the depths to the bases of the USTs were 5'2" (Tank 1) and 5'4" (Tank 2) bgs and a single soil sample was collected for each at that depth. An additional soil sample was collected from the side of the excavation at a depth of 3'7" for Tank 1. The samples were collected from the fill port side of the former USTs to represent a worst case scenario.

Following UST removal, a soil sample was collected from the base of each excavation and the side in the excavation for Tank 1 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 reports are included in the UST Assessment Reports presented in Appendix B. The laboratory analytical data reports include 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 246 Bobwhite Drive (Formerly 1177 Bobwhite Drive) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In letters dated July 16, 2008 and August 1, 2016 regarding Tank 1 and Tank 2, respectively, SCDHEC requested IGWAs be conducted at the former UST locations for 246 Bobwhite Drive (Formerly 1177 Bobwhite Drive) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letters are provided in Appendix D.



2.3 Groundwater Sampling

On July 30, 2008 and March 9, 2017, temporary monitoring wells were installed at 246 Bobwhite Drive (Formerly 1177 Bobwhite Drive), in accordance with the South Carolina Well Standards and Regulations (R.61-71.H-I, updated June 24, 2016). In order to provide data that can be used to determine whether COPCs are migrating to underlying groundwater, the monitoring wells were placed in the same general location as the former heating oil USTs (Tanks 1 and 2). The former UST locations are indicated in the figures of the UST Assessment Reports (Appendix B). Further details are provided in the *Investigation of Ground Water at Leaking Heating Oil UST Sites Report* (Resolution Consultants, 2008) and the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017).

The sampling strategy for this phase of the investigation required a one-time sampling event of the temporarily installed monitoring wells. Following well installation and development, groundwater samples were collected using low-flow methods and shipped to an offsite laboratory for analysis of the petroleum COPCs. Upon completion of groundwater sampling, the temporary well was abandoned in accordance with the South Carolina Well Standards and Regulations R.61-71 (SCDHEC, 2016). Field forms are provided in the *Investigation of Ground Water at Leaking Heating Oil UST Sites Report* (Resolution Consultants, 2008) and the *Initial Groundwater Investigation Report – February and March 2017* (Resolution Consultants, 2017).

2.4 Groundwater Analytical Results

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

The groundwater results collected from 246 Bobwhite Drive (Formerly 1177 Bobwhite Drive) were less than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 2), which indicated that the groundwater was not impacted by COPCs associated with the former USTs at concentrations that present a potential risk to human health and the environment.

3.0 **PROPERTY STATUS**

Based on the analytical results for groundwater, SCDHEC made the determination that NFA was required for 246 Bobwhite Drive (Formerly 1177 Bobwhite Drive). This NFA determination was



obtained in letters dated November 20, 2008 and July 27, 2017, regarding Tank 1 and Tank 2, respectively. SCDHEC's NFA letters are provided in Appendix D.

4.0 **REFERENCES**

- Marine Corps Air Station Beaufort, 2008. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 1177 Bobwhite Drive, Laurel Bay Military Housing Area*, November 2008.
- Marine Corps Air Station Beaufort, 2016. *South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank Assessment Report – 1177 Bobwhite Drive, Laurel Bay Military Housing Area*, March 2016.
- Resolution Consultants, 2008. *Investigation of Ground Water at Leaking Heating Oil UST Sites Report for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina*, October 2008.
- Resolution Consultants, 2017. Initial Groundwater Investigation Report February and March 2017 for Laurel Bay Military Housing Area, Multiple Properties, Laurel Bay Military Housing Area, Marine Corps Air Station Beaufort, Beaufort, South Carolina, June 2017.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2013. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 2.0*, April 2013.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2015. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.0*, May 2015.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2016. *Quality Assurance Program Plan for the Underground Storage Tank Management* Division, *Revision 3.1*, February 2016.
- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2017. *R.61-92, Part 280, Underground Storage Tank Control Regulations,* March 2017.



- South Carolina Department of Health and Environmental Control Bureau of Land and Waste Management, 2018. *Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service*, March 2018.
- South Carolina Department of Health and Environmental Control Bureau of Water, 2016. *R.61-71, Well Standards*, June 2016.

Tables



Table 1 Laboratory Analytical Results - Soil 246 Bobwhite Drive (Formerly 1177 Bobwhite Drive) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

		Results Samples Collected 07/25/07 and 09/08/15					
Constituent	SCDHEC RBSLs ⁽¹⁾	1177 Bobwhite Bottom 01 07/25/07	1177 Bobwhite Side 01 07/25/07	1177 Bobwhite 09/08/15			
Volatile Organic Compounds Analyz	ed by EPA Method 8260B (mg/kg)	ł					
Benzene	0.003	0.00259	0.00048	ND			
Ethylbenzene	1.15	0.00102	ND	0.0461			
Naphthalene	0.036	0.00342	ND	ND			
Toluene	0.627	0.00377	0.0021	ND			
Xylenes, Total	13.01	0.00116	0.000961	0.0873			
Semivolatile Organic Compounds A	nalyzed by EPA Method 8270D (mg/kg)						
Benzo(a)anthracene	0.66	0.194	ND	ND			
Benzo(b)fluoranthene	0.66	0.134	ND	ND			
Benzo(k)fluoranthene	0.66	0.0459	ND	ND			
Chrysene	0.66	0.272	ND	ND			
Dibenz(a,h)anthracene	0.66	ND	ND	ND			

Notes:

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

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

mg/kg - milligrams per kilogram

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

RBSL - Risk-Based Screening Level

SCDHEC - South Carolina Department Of Health and Environmental Control

Table 2 Laboratory Analytical Results - Groundwater 246 Bobwhite Drive (Formerly 1177 Bobwhite Drive) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

		Site-Specific	Results Samples Collected 07/30/08 and 03/09/17				
Constituent	SCDHEC RBSLs ⁽¹⁾	Groundwater VISLs (µg/L) ⁽²⁾	1177 Bobwhite A 07/30/08	1177 Bobwhite D 07/30/08	1177 Bobwhite Drive 03/09/17		
Volatile Organic Compounds Analy	zed by EPA Method 8260B	(μg/L)					
Benzene	5	16.24	ND	ND	ND		
Ethylbenzene	700	45.95	ND	ND	ND		
Naphthalene	25	29.33	ND	ND	ND		
Toluene	1000	105,445	ND	ND	ND		
Xylenes, Total	10,000	2,133	ND	ND	ND		
Semivolatile Organic Compounds	Analyzed by EPA Method 82	70D (µg/L)					
Benzo(a)anthracene	10	NA	ND	ND	ND		
Benzo(b)fluoranthene	10	NA	ND	ND	ND		
Benzo(k)fluoranthene	10	NA	ND	ND	ND		
Chrysene	10	NA	ND	ND	ND		
Dibenz(a,h)anthracene 10		NA	ND	ND	ND		

Notes:

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

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

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

JE - Johnson & Ettinger

NA - Not Applicable

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

SCDHEC - South Carolina Department Of Health and Environmental Control

µg/L - micrograms per liter

VISL - Vapor Intrusion Screening Level

Appendix A Multi-Media Selection Process for LBMH





Appendix A - Multi-Media Selection Process for LBMH

Appendix B UST Assessment Reports



Attachment 1 South Carolina Department of Health and Environmental Control (SCDHEC) Underground Storage Tank (UST) Assessment Report

Dale Received

Submit Completed Form To: UST Program SCDHEC 2600 Bull Street Columbia, South Carolina 29201 Telephone (803) 896-6240

I. OWNERSHIP OF UST (S)
Beaufort Military Complex FAMILY. Housing Owner Name (Corporation, Individual, Public Agency, Other)
Mailing Address BAY BLVD.
Beaufort SC 29906 City State Zip Code
843379-3305Kyle BROADFOOTArea CodeTelephone NumberContact Person

II. SITE IDENTIFICATION AND LOCATION
N/A
Permit I.D. # Actus LEND LEASE CONSTRUCTION Facility Name or Company Site Identifier_
Facility Name or Company Site Identifier
Street Address or State Road (as applicable)
Street Address or State Road (as applicable)
Beaufort, SC 29906 Beaufort
City ZIP County

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Attachment 2 III. INSURANCE INFORMATION

Insurance	Statement
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The petroleum release reported to DHEC on ν/A at Permit ID # 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.
And
I do/do not (circle one) wish to participate in the Superb Program.
IV. CERTIFICATION (To be signed by the UST error (country)

IV. CERTIFICATION (To be signed by the UST owner/operator.)

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

Name (Type or print.)

Signature To be completed by Notary Public:

Sworn before me this _____ day of _____, 20___.

(Name)

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

V. UST ' "ORMATION

A.	Product(ex. Gas, Kerosene)
B.	Capacity(ex. 1k, 2k) (APPPOP)
C.	Age
D.	Construction Material(ex. Steel, FRP)
E.	Month/Year of Last Use
F.	Depth (ft.) To Base of Tank
G.	Spill Prevention Equipment Y/N
H.	Overfill Prevention Equipment Y/N
I.	Method of Closure Removed Filled
J.	Date Tanks Removed/Filled
K.	Visible Corrosion or Pitting Y/N
L.	Visible Holes Y/N
•	

		-				_						
i	Tank	1	Tank	2	Tank	3	Tank	4	Tank	5	Tank	6
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M. Method of disposal for any USTs removed from the ground (attach disposal manifests)

Recycling - SCRAP Steel

N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests) BROADHURST LAWD-Fill -Solidufication & Subfitle D LAWDFILl

If any corrosion, pitting, or holes were observed, describe the location and extent for each UST О. TANK HAD PREVIOUSLY BEEN OUT OPEN AND FILLED W SAND

VI. PIPIN INFORMATION

		Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
А.	Construction Material(ex. Steel, FRP)	Steel		· · · · ·			
B.	Distance from UST to Dispenser	NIA					
C.	Number of Dispensers		·· ··				
D.	Type of System Pressure or Suction	-0- Electra					
E.	Was Piping Removed from the Ground? Y/N	PUMP		_			
F.	Visible Corrosion or Pitting Y/N	4					
G.	Visible Holes Y/N	N					
H.	Age						
		N					

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

Mild pitting + RUST WAS VISIBLE on the fill + Vent piper.

VII. BRIEF SITE DESCRIPTION AND HISTORY

Home Heating Oil TANK - RESIDENTIAL

VIII. SITE CONDATIONS

	Yes	No	Unk
 A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells? If yes, indicate depth and location on the site map. 	×		, s
 B. Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells? If yes, indicate location on site map and describe the odor (strong, mild, etc.) 	X		
C. Was water present in the UST excavation, soil borings, or trenches? If yes, how far below land surface (indicate location and depth)?	×		
 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: 		\star	
 E. Was a petroleum sheen or free product detected on any excavation or boring waters? If yes, indicate location and thickness. 	×		

IX. SAMPLE INFORMATION

Α.

SCDHEC Lab Certification Number DW: 84009002

В.	·····						
Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
						ECHENARRA	
1	BOTTOM	5	SAND	62"	し ノ クラ 入一	X. MARNING	
2	SIDE	5	SAND	43"	6-27-07	19. Although	ND
3							
4							
5							
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18							····
19							
20							

* = Depth Below the Surrounding Land Surface

SAMPLING METHODOLOGY

Х.

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.

datile ORGANic Compounds 8260 B FI thad Atwe Zer Sodium Researd BISULFATE lea EPA METHON Poly AROMAtic Hydro CARBONS 82 70 No PRESERVATI

ONC SIDEWAL ONE Bottom from 541 Secured TANK were 0 NCAVAT AND shipped well stoned 12 Alex AN Cooler IÈE INSURATED 10

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XI. RECEPTORS

	·	Yes	No
А.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?		
	If yes, indicate type of receptor, distance, and direction on site map.		$ \lambda $
В.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		
	If yes, indicate type of well, distance, and direction on site map.		ir i
C.	Are there any underground structures (e.g., basements) Located within 100 feet of the UST system?		
	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?		
	If yes, indicate the type of utility, distance, and direction on the site map.		~
E.	Has contaminated soil been identified at a depth less than 3 feet below land surface in an area that is not capped by asphalt or concrete?		~
	If yes, indicate the area of contaminated soil on the site map.		·

SUMMARY OF ANALYSIS RESULTS

NIA

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

CoC	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8
Benzene								
Toluene						·	 	
Ethylbenzene							•	· · ·
Xylenes								
Naphthalene						· · ·		
Benzo(a)anthracene								
Benzo(b)flouranthene				· · ·				
Benzo(k)flouranthene								
Chrysene								
Dibenz(a,h)anthracene								
ТРН (ЕРА 3550)								

CoC	SB-9	SB-10	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16
Benzene						<u> </u>		
Toluene								
Ethylbenzene								•
Xylenes								
Naphthalene								
Benzo(a)anthracene				<u> </u>			·····	
Benzo(b)flouranthene								
Benzo(k)flouranthene	<u> </u>							
Chrysene								
Dibenz(a,h)anthracene								
ТРН (ЕРА 3550)	· ·					<u> </u>		

SUMMARY OF ANALYSIS RESULTS (cont'd)

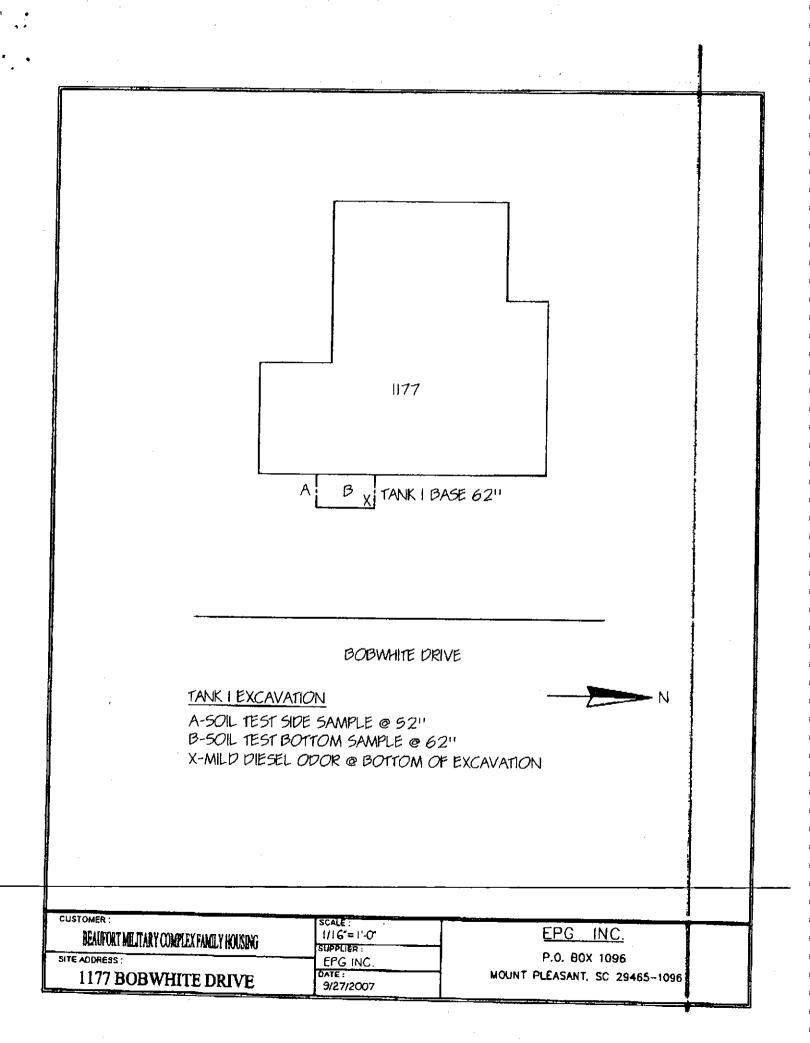
NIA

Enter the ground water analytical data for each sample for all CoC in the table below. If free product is present, indicate the measured thickness to the nearest 0.01 feet.

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



BUBWHITE 1177 6-17-07 44" 122" BASE DEPTH 62" (Milo Diesel Odores were Nothcable C Bottom of Excavation)



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) lestAmeric 2

THE LEADER IN ENVIRONMENTAL TESTING

4310 East Anderson Road Orlando, FL 32812 * 800-851-2560 * Fax 407-856-0886

Client: EPG, INC. PO BOX 1096 MT PLEASANT, SC 29465	Work Order: Project: Project Number:	OQG0558 LAUREL BAY EP 2362	Sampled: 07/25/07 Received: 07/27/07
-Attn:JOHN-MAHONEY			<u> </u>

LABORATORY REPORT

Sample ID: 388 ACORN SIDE 02 - Lab Number: OQG0558-06 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
'olynucl	ear Aromatic Hydrocarbor	1s by EPA Met	hod 827	70 - Cont.							
)5 -9 9-2	Benzo (b) fluoranthene	24.5	U	ug/kg dry	24.5	232	1	08/08/07 23:37	REM	EPA 8270C	7H01015
)7-08-9	Benzo (k) fluoranthene	24.5	U	ug/kg dry	24.5	232	1	08/08/07 23:37	REM	EPA 8270C	7H01015
)1-24-2	Benzo (g.h,i) perylene	24.1	U	ug/kg dry	24.1	232	1	08/08/07 23:37	REM	EPA 8270C	7H01015
)-32-8	Benzo (a) pyrene	28.6	U	ug/kg dry	28.6	232	1	08/08/07 23:37	REM	EPA 8270C	7H01015
)-12-0	1-Methylnaphthalene	840		ug/kg dry	117	232	1	08/08/07 23:37	REM	EPA 8270C	7H01015
8-01-9	Chrysene	27.8	U	ug/kg dry	27.8	232	1	08/08/07 23:37	REM	EPA 8270C	
-70-3	Dibenz (a,h) anthracene	30.5	U	ug/kg dry	30.5	232	1	08/08/07 23:37	REM	EPA 8270C	7H01015
ю - 44-0	Fluoranthene	34.8	I	ug/kg dry	33.4	232	1	08/08/07 23:37	REM	EPA 8270C	7H01015
-73-7	Fluorene	116	I	ug/kg dry	91.0	232	1	08/08/07 23:37	REM		7H01015
3-39-5	Indeno (1,2,3-cd) pyrene	30.1	U	ug/kg dry	30.1	232		08/08/07 23:37		EPA 8270C	7H01015
-57-6	2-Methylnaphthalene	1070		ug/kg dry	99.1	232		08/08/07 23:37	REM	EPA 8270C	7H01015
-20-3	Naphthalene	173	ī	ug/kg di y	93.5	232			REM	EPA 8270C	7H01015
-01-8	Phenanthrene	132	T	ug/kg dry	54.8	232		08/08/07 23:37	KEM	EPA 8270C	7H01015
9-00-0	Pyrene	47.2	U	ug/kg dry	47.2			08/08/07 23:37	REM	EPA 8270C	7H01015
rrogate: 2	-Fluorobiphenyl (24-121%)	50 %	U	-9 KS WIY	41.2	232	I	08/08/07 23:37	REM	EPA 8270C	7H01015
	litrobenzene-d5 (19-111%)	45 %									
	erphenyl-d14 (44-171%)	112 %									

LABORATORY REPORT

4.S #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
neral	Chemistry Parameters								<u> </u>		
	% Solids	81.3		%.	001.0	0.100	i	08/01/07 17:50	RRP	EPA 160.3	7110100
latile (Organic Compounds by EPA	Method 826	0B				•	00.01.07 17.50	i dici	CFA 100.3	7H0105
43-2	Benzene	2.59		ug/kg dry	0.359	0.982	1	08/03/07 18:16	JWT	EDA 99/00	511000 00
41-4	Ethylbenzene	1.02		ug/kg dry	0.415	0.982	1	08/03/07 18:16		EPA 8260B	7H03050
0-3	Naphthalene	3.42		ug/kg dry	0.542	0.982	1		JWT	EPA 8260B	7H03050
88-3	Toluene	3.77		ug/kg dry	0.848		1	08/03/07 18:16	JWT	EPA 8260B	7H03050
)-20-7	Xylenes, total	1.16	v		-	0.982	1	08/03/07 18:16	JWT	EPA 8260B	7H03050
ngate:]	,2-Dichloroethane-d4 (73-137%)		¥	ug/kg dry	0.510	0.982	1	08/03/07 18:16	JWT	EPA 8260B	7H03050
	-Bromofluorobenzene (59-118%)	96 %				••••					
	Dibromofluoromethane (55-145%)	109 %									
	oluene-d8 (80-117%)	99%									
	ar Aromatic Hydrocarbons b		ad 017	۵							
2-9	Acenaphthene	2040	100 027	ug/kg dry	91.0	205					
6-8	Acenaphthylene	120	u			205	1	08/08/07 23:59	REM	EPA 8270C	7H01015
2-7	Anthracene	1700	U	ug/kg dry	120	205	1	08/08/07 23:59	REM	EPA 8270C	7H01015
i-3	Benzo (a) anthracene			ug/kg dry	65.5	205	1	08/08/07 23:59	REM	EPA 8270C	7H01015
9-2		194	I	ug/kg dry	22.2	205	1	08/08/07 23:59	REM	EPA 8270C	7H01015
	Benzo (b) fluoranthene	134	I	ug/kg dry	21.6	205	1	08/08/07 23:59	REM	EPA 8270C	7H01015
8-9	Benzo (k) fluoranthene	45.9	I	ug/kg dry	21.6	205	1	08/08/07 23:59	REM	EPA 8270C	7H01015
24-2	Benzo (g,h,i) perylene	21.3	υ.	ug/kg dry	21.3	205			REM	EPA 8270C	7H01015

Sample ID: 1177 BOGWHITE BOTTOM 01 - Lab Number: OQG0558-07 - Matrix: Solid/Soil

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THE LEADER IN ENVIRONMENTAL TESTING

4310 East Anderson Road Orlando, FL 32812 * 800-851-2560 * Fax 407-856-0886

	: EPG, INC. PO BOX 1096 MT PLEASANT, SC 29465 JOHN MAHONEY	Work Order: Project: Project Number:	OQG0558 LAUREL BAY EP 2362	Sampled: Received:	
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LABORATORY REPORT Sample ID: 1177 BOGWHITE BOTTOM 01 - Lab Number: OQG0558-07 - Matrix: Solid/Soil

Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
ear Aromatic Hydrocarbor	s by EPA Metl	hod 82'	70 - Cont						<u> </u>	- <u> </u>
Benzo (a) pyrene	55.7	I		25.3	205	1	08/08/07 22.50	DEM		
1-Methylnaphthalene	31300					-		-		7H0101
Chrysene	272					20		. –		7H0101
Dibenz (a,h) anthracene						1		REM	EPA 8270C	7H0101:
		U	•			1	-	REM	EPA 8270C	7H0101
					205	1	08/08/07 23:59	REM	EPA 8270C	7H0101
				80.4	205	1	08/08/07 23:59	REM	EPA 8270C	7H0101
		U	ug/kg dry	26.6	205	1	08/08/07 23:59	REM	EPA 8270C	7H0101
	49600		ug/kg dry	1750	4110	20	08/10/07 04:55	REM		7H0101
Naphthalene	8590		ug/kg dry	1650	4110	20	08/10/07 04:55	-	-	7H0101
Phenanthrene	9990		ug/kg dry	969	4110	20				
Pyrene	1470			41.7		-				7H01015
-Fluorobiphenyl (24-121%)	J9 %		0.5-3		205	L	00/06/07 23:39	REM	EPA 8270C	7H01015
litrobenzene-d5 (19-111%)	92 %									
erphenyl-d14 (44-171%)	103 %									
	ear Aromatic Hydrocarbor Benzo (a) pyrene 1-Methylnaphthalene Chrysene Dibenz (a,h) anthracene Fluoranthene Fluorene Indeno (1,2,3-cd) pyrene 2-Methylnaphthalene Naphthalene Phenanthrene Pyrene Fluorobiphenyl (24-121%) iltrobenzene-d5 (19-111%)	RecommendedRecommendedBenzo (a) pyrene55.71-Methylnaphthalene31300Chrysene272Dibenz (a,h) anthracene27.0Fluoranthene590Fluoranthene590Fluorene3180Indeno (1,2,3-cd) pyrene26.62-Methylnaphthalene8590Phenanthrene9990Pyrene1470Fluorobiphenyl (24-121%)19 %	ear Aromatic Hydrocarbons by EPA Method 822 Benzo (a) pyrene 55.7 I 1-Methylnaphthalene 31300 Chrysene 272 Dibenz (a,h) anthracene 27.0 U Fluoranthene 590 Fluorene 3180 Indeno (1,2,3-cd) pyrene 26.6 U 2-Methylnaphthalene 49600 Naphthalene 8590 Phenanthrene 9990 Pyrene 1470 Fluorobiphenyl (24-121%) 59 %	Reduit Q officsear Aromatic Hydrocarbons by EPA Method 8270 - Cont.Benzo (a) pyrene55.7Iug/kg dry1-Methylnaphthalene31300ug/kg dryChrysene272ug/kg dryDibenz (a,h) anthracene27.0Uug/kg dryFluoranthene590ug/kg dryFluorene3180ug/kg dryIndeuo (1,2,3-cd) pyrene26.6Uug/kg dry2-Methylnaphthalene49600ug/kg dryNaphthalene8590ug/kg dryPhenanthrene9990ug/kg dryFluorobiphenyl (24-121%)19 %Itrobenzene-d5 (19-111%)92 %	Result Q Units MDL ear Aromatic Hydrocarbons by EPA Method 8270 - Cont. Benzo (a) pyrene 55.7 I ug/kg dry 25.3 1-Methylnaphthalene 31300 ug/kg dry 260 Chrysene 272 ug/kg dry 24.6 Dibenz (a,h) anthracene 27.0 U ug/kg dry 29.5 Fluoranthene 590 ug/kg dry 29.5 Fluorene 3180 ug/kg dry 26.6 1.deuo (1,2,3-cd) pyrene 26.6 U ug/kg dry 26.6 2-Methylnaphthalene 49600 ug/kg dry 1650 Phenanthrene 9990 ug/kg dry 1650 Phenanthrene 9990 ug/kg dry 41.7 Fluorobiphenyl (24-121%) J9 %i 19 %i	Population Population Population ear Aromatic Hydrocarbons by EPA Method 8270 - Cont. Benzo (a) pyrene 55.7 I ug/kg dry 25.3 205 1-Methylnaphthalene 31300 ug/kg dry 26.6 205 205 Dibenz (a,h) anthracene 27.0 U ug/kg dry 24.6 205 Dibenz (a,h) anthracene 27.0 U ug/kg dry 29.5 205 Fluoranthene 590 ug/kg dry 29.5 205 Fluorene 3180 ug/kg dry 26.6 205 Indeuo (1,2,3-cd) pyrene 26.6 U ug/kg dry 26.6 205 2-Methylnaphthalene 49600 ug/kg dry 1650 4110 Naphthalene 8590 ug/kg dry 1650 4110 Phenanthrene 9990 ug/kg dry 969 4110 Phenanthrene 19 % 19 % 110 Fluorobiphenyl (24-121%) 19 % 19 % 110	Analyte Result Q Units MDL PQL Factor ear Aromatic Hydrocarbons by EPA Method 8270 - Cont. Benzo (a) pyrene 55.7 I ug/kg dry 25.3 205 1 1-Methylnaphthalene 31300 ug/kg dry 26.6 205 1 Dibenz (a,h) anthracene 27.0 U ug/kg dry 27.0 205 1 Fluoranthene 590 ug/kg dry 29.5 205 1 Indeuo (1,2,3-cd) pyrene 26.6 U ug/kg dry 26.6 205 1 2-Methylnaphthalene 49600 ug/kg dry 26.6 205 1 Indeuo (1,2,3-cd) pyrene 26.6 U ug/kg dry 1650 4110 20 Naphthalene 8590 ug/kg dry 1650 4110 20 Phenanthrene 9990 ug/kg dry 969 4110 20 Pyrene 1470 ug/kg dry 969 410 20 Pyrene 1470 ug/kg dry	Analyte Result Q Units MDL PQL Factor Analyzed Date/Time ear Aromatic Hydrocarbons by EPA Method 8270 - Cont. 55.7 I ug/kg dry 25.3 205 1 08/08/07 23:59 1-Methylnaphthalene 31300 ug/kg dry 2060 4110 20 08/10/07 04:55 Chrysene 272 ug/kg dry 24.6 205 1 08/08/07 23:59 Dibenz (a,h) anthracene 27.0 U ug/kg dry 29.5 205 1 08/08/07 23:59 Fluoranthene 590 ug/kg dry 29.5 205 1 08/08/07 23:59 Indeuo (1,2,3-cd) pyrene 26.6 U ug/kg dry 80.4 205 1 08/08/07 23:59 2-Methylnaphthalene 49600 ug/kg dry 1650 4110 20 08/10/07 04:55 Naphthalene 8590 ug/kg dry 1650 4110 20 08/10/07 04:55	Analyte Result Q Units MDL PQL Factor Analyzed Date/Time By ear Aromatic Hydrocarbons by EPA Method 8270 - Cont. Benzo (a) pyrene 55.7 I ug/kg dry 25.3 205 1 08/08/07 23:59 REM 1-Methylnaphthalene 31300 ug/kg dry 2060 4110 20 08/10/07 04:55 REM Chrysene 272 ug/kg dry 24.6 205 1 08/08/07 23:59 REM Dibenz (a,h) anthracene 27.0 U ug/kg dry 29.5 205 1 08/08/07 23:59 REM Fluoranthene 590 ug/kg dry 29.5 205 1 08/08/07 23:59 REM Indeuo (1,2,3-cd) pyrene 26.6 U ug/kg dry 26.6 205 1 08/08/07 23:59 REM Naphthalene 49600 ug/kg dry 1650 4110 20 08/10/07 04:55 REM Pyrene <	Analyze Result Q Units MDL PQL Factor Analyzed Date/Time By Method ear Aromatic Hydrocarbons by EPA Method 8270 - Cont. - - - - Date/Time By Method Benzo (a) pyrene 55.7 I ug/kg dry 25.3 205 1 08/08/07 23.59 REM EPA 8270C 1-Methylnaphthalene 31300 ug/kg dry 26.6 205 1 08/08/07 23.59 REM EPA 8270C Chrysene 27.2 ug/kg dry 24.6 205 1 08/08/07 23.59 REM EPA 8270C Dibenz (a,h) anthracene 27.0 U ug/kg dry 29.5 205 1 08/08/07 23.59 REM EPA 8270C Fluoranthene 590 ug/kg dry 29.5 205 1 08/08/07 23.59 REM EPA 8270C Indeno (1,2,3-cd) pyrene 26.6 U ug/kg dry 26.6 205 1 0

LABORATORY REPORT

Sample ID: 1177 BOGWHITE SIDE 01 - Lab Number: OQG0558-08 - Matrix: Solid/Soil

AS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
neral	Chemistry Parameters				<u>_</u>						· · ·
	% Solids	84.2		%.	0.100	0.100	1	08/01/07 17:50	RRP		
latile	Organic Compounds by EPA	Method 826	0B			0.100	-	00/01/07 17:50	ĸĸr	EPA 160.3	7H01058
13-2	Beuzene	0.480	I	ug/kg dry	0.400	1.09	1	08/03/07 18:33	JWT	EDA 9270D	
41-4	Ethylbenzene	0.462	U	ug/kg dry	0.462	1.09	1	08/03/07 18:33		EPA 8260B	7H03050
20-3	Naphthalene	0.603	U	ug/kg dry	0.603	1.09	1	08/03/07 18:33	JWT	EPA 8260B	7H03050
88-3	Toluene	2.10		ug/kg dry	0.943	1.09	1	08/03/07 18:33	JWT	EPA 8260B	7H03050
)-20-7	Xylenes, total	0.961	V.I	ug/kg dry	0.567	1.09	1		JWT	EPA 8260B	7H03050
ogate:	1,2-Dichloroethane-d4 (73-137%)	122 %	• • •		0.507	1.09	1	08/03/07 18:33	JWT	EPA 8260B	7H03050
	4-Bromofluorobenzene (59-118%)	94 %									
	Dibromofluoromethane (55-145%)	108 %									
	Coluene-d8 (80-11796)	-101.%									
	ear Aromatic Hydrocarbons							· .			•• •••
2-9	Acenaphthene	87.9	U U	ug/kg dry	87.9	198		00/00/00 00 00			
96-8	Acenaphthylene	116	U	ug/kg dry	116	198		08/09/07 00:22	REM	EPA 8270C	7H01015
2-7	Anthracene	63.3	U	ug/kg dry	63.3	198		08/09/07 00:22	REM	EPA 8270C	7H01015
5-3	Benzo (a) anthracene	21.5	ט ע	ug/kg dry	21.5			08/09/07 00:22	REM	EPA 8270C	7H01015
9-2	Benzo (b) fluoranthene	20.9	U	ug/kg dry	21.5	198		08/09/07 00:22	REM	EPA 8270C	7H01015
8-9	Benzo (k) fluoranthene	20.9	U U	ug/kg dry		198		08/09/07 00:22	REM	EPA 8270C	7H01015
4-2	Benzo (g,h,i) pervlene	20.6	υ	- + •	20.9	198		08/09/07 00:22	REM	EPA 8270C	7H01015
-8	Benzo (a) pyrene	24.4	U	ug/kg dry	20.6	198		08/09/07 00:22	REM	EPA 8270C	7H01015
-0	1-Methylnaphthalene	99.6	_	ug/kg dry	24.4	198		08/09/07 00:22	REM	EPA 8270C	7H01015
1-9	Chrysene	23.7	U	ug/kg dry	99.6	198		08/09/07 00:22	REM	EPA 8270C	7H01015
-3	Dibenz (a,h) anthracene	26.1	U	ug/kg dry	23.7	198		08/09/07 00:22	REM	EPA 8270C	7H01015
		20.1	U	ug/kg dry	26.1	198	1 (08/09/07 00:22	REM	EPA 8270C	7H01015

TestAmerica - Orlando, FL Enid Ortiz For Shali Brown Project Manager



THE LEADER IN ENVIRONMENTAL TESTING

4310 East Anderson Road Orlando, FL 32812 * 800-851-2560 * Fax 407-856-0886

Clients	EDO INO				
Cilent;	EPG, INC.	Work Order:	OQG0558		
	PO BOX 1096			Sampled:	07/25/07
		Project:	LAUREL BAY		07/27/07
	MT PLEASANT, SC 29465	Project Number:	EP 2362	ICCCCIVED;	0//2//0/
Attn:	JOHN MAHONEY	j; amber;			

LABORATORY REPORT

Sample ID: 1177 BOGWHITE SIDE 01 - Lab Number: OQG0558-08 - Matrix: Solid/Soil

CAS # 	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	By	Method	Batch
olynucl	ear Aromatic Hydrocarbon	s by EPA Met	hod 82'	70 Cont							
6-44-0	Fluoranthene	28.5	τυ Που 02, Έ		0 0 c						
-73-7	Fluorene			ug/kg dry	28.5	198	1	08/09/07 00:22	REM	EPA 8270C	7H01015
3-39-5		77.6	U ,	ug/kg dry	77.6	198	1	08/09/07 00:22	REM	EPA 8270C	7H01015
	Indeno (1,2,3-cd) pyrene	25.7	U	ug/kg dry	25.7	198	1	08/09/07 00:22			
57-6	2-Methylnaphthalene	84.6	U	ug/kg dry	84.6	198	1			EPA 8270C	7H01015
20-3	Naphthalene	79.7	ប	ug/kg dry			1	08/09/07 00:22	REM	EPA 8270C	7H01015
01-8	Phenanthrene	46.8	_	- • •	7 9 .7	198	1	08/09/07 00:22	REM	EPA 8270C	7H01015
-00-0	Pyrene		U	ug/kg dry	46.8	198	1	08/09/07 00:22	REM	EPA 8270C	7H01015
	•	40.3	U	ug/kg dry	40.3	198	1	08/09/07 00:22		EPA 8270C	
	l-Fluorobiphenyl (24-121%)	31 %					-	00.22	KE WI	EFA 8270C	7H01015
rogate: N	Vitrobenzene-d5 (19-111%)	29 %									
rogate: T	erphenyl-d14 (44-171%)	76 %									

LABORATORY REPORT

Sample ID: 261 BIRCH BOTTOM 05 - Lab Number: OQG0558-09 - Matrix: Solid/Soil

4S #	Analyte	Result	Q	Units	MDL	PQL	Dil Facto		By	Method	Batch
neral	Chemistry Parameters						·			<u> </u>	
	% Solids	85.4		%.	0.100	0.100	1	08/01/07 17:50	O RRE		
latile 43-2	Organic Compounds by EPA	Method 826	0 B					00.01107 17.5		EPA 160.3	7H01058
+3-2 -41-4	Benzene	1.03		ug/kg dry	0.368	1.01	1	08/03/07 18:50	rwi (EPA 8260E	77707050
-41-4 30-3	Ethylbenzene	0.426	U	ug/kg dry	0.426	1.01	1	08/03/07 18:50		20111 02001	
	Naphthalene	0.926	I	ug/kg dry	0.556	1.01	1	08/03/07 18:50			
-88-3	Toluene	2.11		ug/kg dry	0.869	1.01	1	08/03/07 18:50			
)-20-7	Xylenes, total	0.563	V,I	ug/kg dry	0.523	1.01	1	08/03/07 18:50			
	1,2-Dichloroethane-d4 (73-137%)	126 %		•			1	06/03/07 18:30	JWT	EPA 8260B	7H03050
	4-Bromofluorobenzene (59-118%)	96 %									
	Dibromofluoromethane (55-145%)	107 %									
	Toluene-d8 (80-117%)	100 %									
ynucl	ear Aromatic Hydrocarbons	by EPA Meth	iod 827	/0							
2-9	Acenaphthene	175	1	ug/kg dry	86.7	196	1	08/09/07 00:44	REM		
)6-8	Acenaphthylene	114	U	ug/kg dry	114	196	1	08/09/07 00:44			7H01015
!2-7	Anthracene	321		ug/kg dry	62.4	196	1	08/09/07 00:44	REM		7H01015
i-3	Benzo (a) anthracene	2290		ug/kg dry	21.2	196	¹ I		REM		7H01015
9-2	Benzo (b) fluoranthene	2220		ug/kg dry	20.6	196		08/09/07 00:44	REM	EPA 8270C	7H01015
8-9	Benzo (k) fluoranthene	795		ug/kg dry	20.6	196	1	08/09/07 00:44	REM	EPA 8270C	7H01015
4-2	Benzo (g,h,i) perylene	571		ug/kg dry	20.3		1	08/09/07 00:44	REM	EPA 8270C	7H01015
-8	Benzo (a) pyrene	1350		ug/kg dry		196	l	08/09/07 00:44	REM	EPA 8270C	7H01015
-0	1-Methylnaphthalene	685		ug/kg dry	24.I	196	1	08/09/07 00:44	REM	EPA 8270C	7H01015
1-9	Chrysene	2740			98.2	196	1	08/09/07 00:44	REM	EPA 8270C	7H01015
.3	Dibenz (a,h) anthracene	182	-	ug/kg dry	23.4	196	1	08/09/07 00:44	REM	EPA 8270C	7H01015
1-0	Fluoranthene	192	I	ug/kg dry	25.7	196	I	08/09/07 00:44	REM	EPA 8270C	7H01015
7	Fluorene			ug/kg dry	28.1	196	1	08/09/07 00:44	REM	EPA 8270C	7H01015
)-5	Indeno (1,2,3-cd) pyrene	328		ug/kg dry	76.6	196	1	08/09/07 00:44	REM	EPA 8270C	7H01015
-	-часыо (тругсие ругсие	603		ug/kg dry	25.3	196	1 ·	08/09/07 00:44	REM	EPA 8270C	7H01015

Client Name	EPG DIB		Client#:		using the proper analytical meth ing conducted for regulatory pu ance Monitoring	oos, nposes?
City/State/Zip Code:	POBOX (Mt. Plicasa			Project Name:	Aukel BA	1
Project Manager:	JOHN M	AttoNitery		Project #:	P 2362	(
Telephone Number _ <u>_ </u>	573881-046	FT FE	8/388 77663	Site/Location ID:	St	ale:
Sampler Name: (Print Name)		Attores	-01.3 001 7 F603	Report To:		1
Sampler Signature:	AW			Invoice To:		
TAT	()//	Matrix Days		Quote #:		······································
Standard		Matrix Preservatio	a # of Containers	Analyze For:		
Rush (surcharges may apply) Date Needed:	Composite	Drinking Weee S - Soursouid Specify Other Specify Other	H_SO_A Wethtand None BTEX-MAPH BAL ALL BZZ			QC Deliverables
		udge DW - Srountwater Nastewater	H_SO_A Methand None BTE4_A/APTA AL	1		(Baich QC) Level 3 Level 4
	Uate Sa Time Sa G ⊨ Grab	SL - SH GW - G MW - V HNO3 HNO3 HNO3	$ \begin{array}{c} \begin{array}{c} & & \\$			Other:
39a Acoren Bottom-01 7/2	5612:56					PENADIKA
390Acapt 5108-02 0/2	JAZIZ/ACC	┝╼╼╌╂╾┼╾┽╶┤	1/22×1×			REMARKS
230 CyPRESS Bot- 01 7/2	10-10:30 G	┝━━╋╋╋	122 × ×		╼┾╾┾╾╋╌╸	
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388 Acoen B-01 11	"G	╺───╂╾╂╾╂╸	122 V X		╺┽╍╾┦╼╌┾╶╾╂╾╼	c
300 ACORN 5-02 11		╼╼╂╍┼╌┼	1122 XX		╾┿╼╼╄╼╾┿╼╼╂╾╍	
1177 Bogwhite B-01 11		╺──╂-<u>┤</u>╶┤ ╴┤	122 44		╺┼╾╌╀╶╌┠──	·
177-Bobwhites 5-01 11		╼╍╉╌┾╶┾╶┼	(ZZXX)		╺╀╼╌┼╌╌╂╼╌	
28 Bilch B-05 11	4 6	╾╼╉╶╁╌╄╾╄	(22××		┿╾┼╌╉╼╸	
28 BiRch 5-01 "	1. C	╼╍╋╼┽╾┼╾┼	1122XX		╺┼╌┼╌┼╌╂╌╴	
	RESULTS to		1/12/2/2/2		╶╀╾╾╄╼╾╊╼╼╂	ļ 0
	70	- VOHNCE	AG5C. Com	LAB	ORATORY COMMENTS	(
			·)		Init Lab Temp:	
elinquished By:	The the BA	00 -1.6			Rec Lab Temp: an Anto-2	
Indisno of laft	1.7/ //		in the Date	U/OTTRAOD		
	Deleta/Et Thie	SO Received By:	(hutin T	hi Rito Both	ody Seals: Y NNA	
Ninquished By:	Date: Time:	Received By:	Julion Later	26 Time 9:30 Bott		AYAN SAL
		Inevelved by:	Cate:	Time:Metho	ody Seals: Y NM N/A Supplied by Test America: ZZ ZS 7/A od of Shipment: FE / TX	
•					-	- QILIT-14/0

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

Date Received		They are	
			'n
1	State Use Only	 57.	

Ń

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, Command:		EAO (Craig Ehde)				
Owner Name (Corporation, Indivi	Owner Name (Corporation, Individual, Public Agency, Other)					
P.O. Box 55001 Mailing Address						
Beaufort,	South Carolina	29904-5001				
City	State	Zip Code				
843	228-7317	Craig Ehde				
Area Code	Telephone Number	Contact Person				

II. SITE IDENTIFICATION AND LOCATION

Permit I.D. #				
Laurel Bay Milita	ry Housing Area, Marine Corps Air Station, Beaufort, SC			
Facility Name or Company	v Site Identifier			
1177 Bobwhite Dr	ive, 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)

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

VI. UST INFORMATION

		Bobwhite
A.	Product(ex. Gas, Kerosene)	Heating oil
B.	Capacity(ex. 1k, 2k)	280 gal
C.	Age	Late 1950s
D.	Construction Material(ex. Steel, FRP)	Steel
E٠	Month/Year of Last Use	Mid 80s
F.	Depth (ft.) To Base of Tank	5 ' 4 "
G.	Spill Prevention Equipment Y/N	No
н∙	Overfill Prevention Equipment Y/N	No
I.	Method of Closure Removed/Filled	Removed
J.	Date Tanks Removed/Filled	9/8/2015
K.	Visible Corrosion or Pitting Y/N	Yes
L.	Visible Holes Y/N	Yes

1177

M. Method of disposal for any USTs removed from the ground (attach disposal manifests) UST 1177Bobwhite was removed from the ground, cleaned and recycled.

<u>See Attachment "A".</u>

- N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests) Contaminated water was pumped from UST 1177Bobwhite_and disposed by MCAS.
- O. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST <u>Corrosion</u>, pitting and holes were found throughout the tank.

VII. PIPING INFORMATION

		1177
		Bobwhite
		Steel
Α.	Construction Material(ex. Steel, FRP)	& Copper
B.	Distance from UST to Dispenser	N/A
C.	Number of Dispensers	N/A
D.	Type of System Pressure or Suction	Suction
E.	Was Piping Removed from the Ground? Y/N	No
F.	Visible Corrosion or Pitting Y/N	Yes
G.	Visible Holes Y/N	No
H.	Age	Late 1950s
I.	If any corrosion, pitting, or holes were observed, de	scribe the location and extent for each piping run.
	Corrosion and pitting were found of	

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.

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

IX. SITE CONDITIONS

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 #
1177 Bobwhite	Excav at fill end	Soil	Sandy	5'4"	9/8/15 1215 hrs	P. Shaw	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19						i	
20							

* = Depth Below the Surrounding Land Surface

XI. SAMPLING METHODOLOGY

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

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

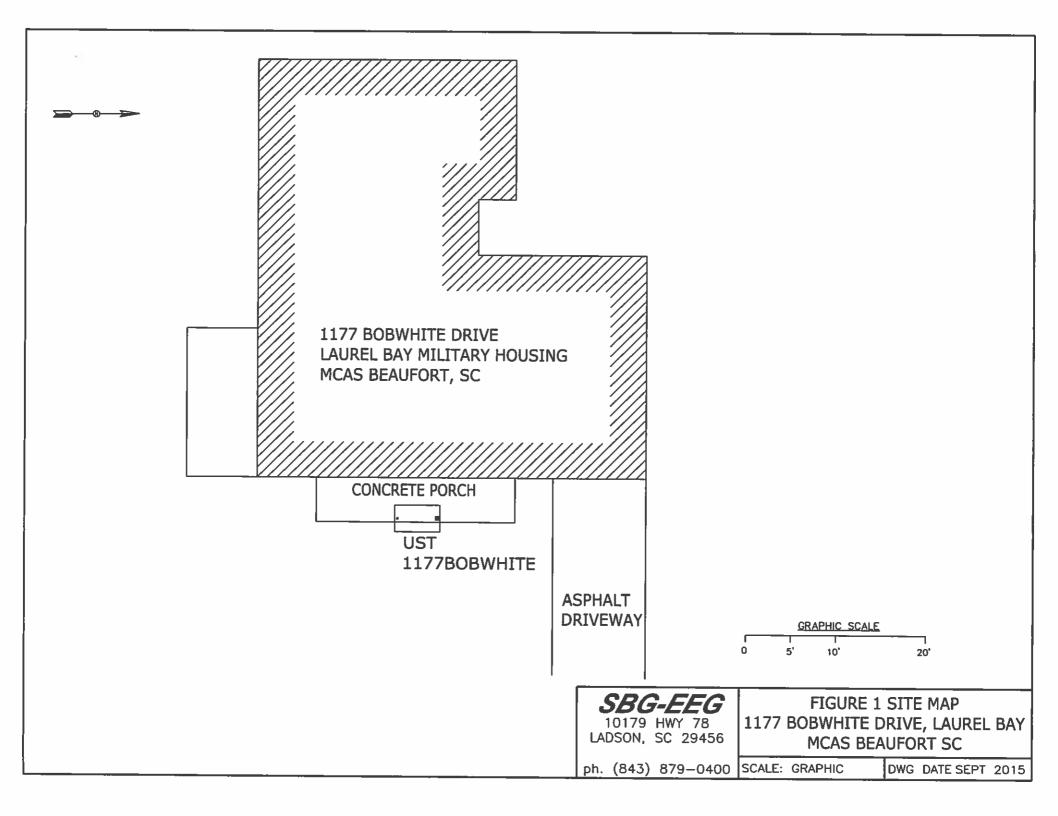
XII. RECEPTORS

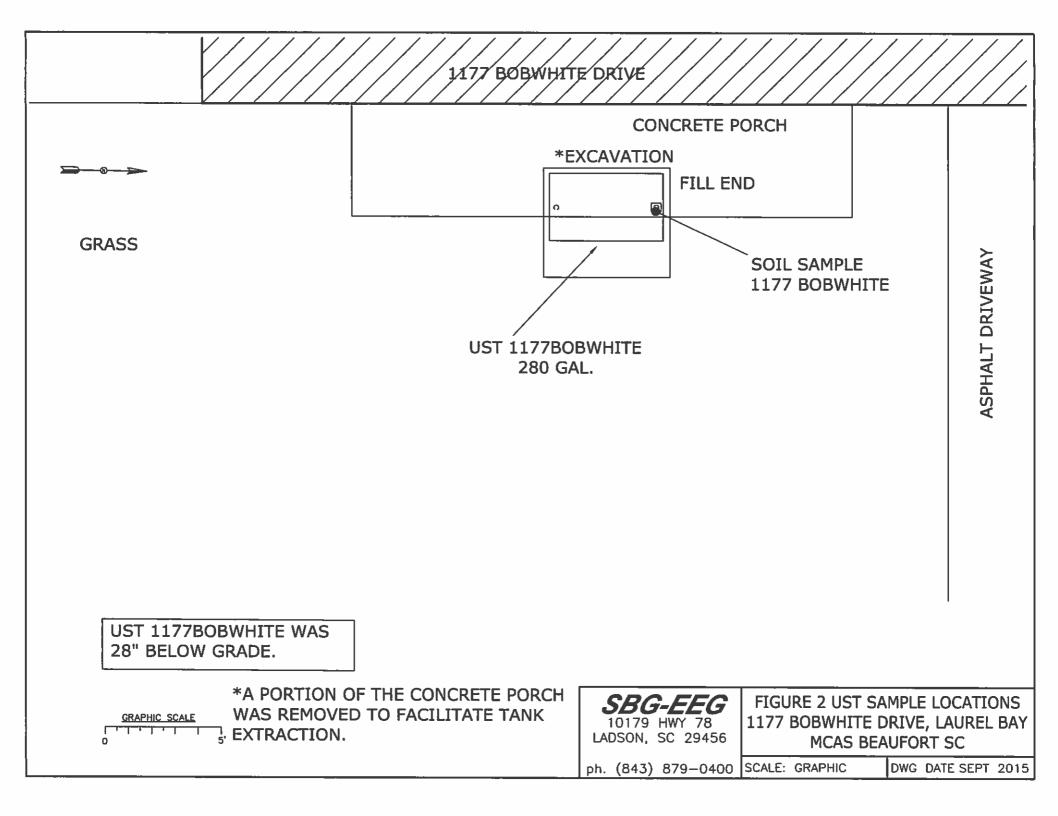
		Yes	No
Α.	Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system?		X
	If yes, indicate type of receptor, distance, and direction on site map.		
B.	Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system?		х
	If yes, indicate type of well, distance, and direction on site map.		
C.	Are there any underground structures (e.g., basements) Located within 100 feet of the UST system?		х
	If yes, indicate type of structure, distance, and direction on site map.		
D.	Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination? *Sewer, water, electricity.	*X Lcity	
	cable, fiber optic & g 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 UST 1174Bobwhite.



Picture 2: UST 1174Bobwhite excavation.



Picture 3: UST 1174Bobwhite 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.

				1	
CoC UST	1177Bobwhite				
Benzene	ND				
Toluene	ND				
Ethylbenzene	0.0461 mg/kg				
Xylenes	0.0873 mg/kg				
Naphthalene	ND				
Benzo (a) anthracene	ND				
Benzo (b) fluoranthene	ND				
Benzo (k) fluoranthene	ND				
Chrysene	ND				
Dibenz (a, h) anthracene	ND				
TPH (EPA 3550)					
		 ,	 ·		
CoC					
Benzene					
Toluene		 			
Ethylbenzene					
Xylenes					
Naphthalene					
Benzo (a) anthracene					
Benzo (b) fluoranthene				_	
Benzo (k) fluoranthene					
Chrysene				an te Man	
Dibenz (a, h) anthracene			24.3		
ТРН (ЕРА 3550)					

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

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

XV. ANALYTICAL RESULTS

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

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



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: 490-87222-1 Client Project/Site: Laurel Bay Housing Project

For:

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

Attn: Tom McElwee

Kuth Hay

Authorized for release by: 9/24/2015 1:08:33 PM

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.

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QC Association	11
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Certification Summary	14
Chain of Custody	15
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2

Lab Sample ID	Client Sample ID	Matrix	Collected Received
490-87222-1	1177 Bobwhite	Soil	09/08/15 12:15 09/12/15 12:10

TestAmerica Nashville

TestAmerica Job ID: 490-87222-1

Job ID: 490-87222-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-87222-1

Comments No additional comments.

Receipt

The sample was received on 9/12/2015 12:10 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

GC/MS VOA

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 490-282252.

Method(s) 8260B: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample: 1177 Bobwhite (490-87222-1).

Method(s) 8260B: The method blank for preparation batch 283431 contained Naphthalene above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

Method(s) 8260B: The method blank for analytical batch 490-283431 contained Xylenes, Total and Ethylbenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: The following sample was diluted due to the nature of the sample matrix: 1177 Bobwhite (490-87222-1). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 490-283431.

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
В	Compound was found in the blank and sample.
L	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
E	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	
Dil Fac	Duplicate error ratio (normalized absolute difference) 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 EOL 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)

TestAmerica Nashville

Client Sample ID: 1177 Bobwhite

Date Collected: 09/08/15 12:15 Date Received: 09/12/15 12:10

Lab Sample ID: 490-87222-1 Matrix: Soil

Method: 8260B - Volatile O	rganic Compo	unds (GC	(MS)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.120	0.0408	mg/Kg	0		09/22/15 21:03	1
Ethylbenzene	0.0461	JB	0.120		mg/Kg	0		09/22/15 21:03	1
Naphthalene	ND		0.300		mg/Kg	0		09/22/15 21:03	1.5
Toluene	ND		0.120		mg/Kg	0		09/22/15 21:03	1
Xylenes, Total	0.0873	JB	0.180		mg/Kg	¢		09/22/15 21:03	1
Surregate	N/Danasiani	0	8 f						
Surrogate 1,2-Dichloroethane-d4 (Surr)	%Recovery 72		Limits 70 - 130				Prepared	Analyzed	DII Fac
4-Bromofluorobenzene (Surr)	101							09/22/15 21:03	1
			70.130					09/22/15 21:03	1
Dibromofluoromethane (Surr)	92		70.130					09/22/15 21:03	1
Toluene-d8 (Surr)	107		70-130				09/22/15 11:13	09/22/15 21:03	1
Method: 8270D - Semivolat	ile Organic Co	mpounds	(GC/MS)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0744	0.0111	mg/Kg	Q	09/15/15 10:11	09/15/15 19:18	1
Acenaphthylene	ND		0.0744	0.0100	mg/Kg	Φ	09/15/15 10:11	09/15/15 19:18	1
Anthracene	ND		0.0744	0.0100	mg/Kg	0	09/15/15 10:11	09/15/15 19:18	1
Benzo(a)anthracene	ND		0.0744	0.0167	mg/Kg	Φ	09/15/15 10:11	09/15/15 19:18	1
Benzo[a]pyrene	ND		0.0744	0.0133	mg/Kg	Ð	09/15/15 10:11	09/15/15 19:18	1
Benzo(b)fluoranthene	ND		0.0744	0.0133	mg/Kg	Ð	09/15/15 10:11	09/15/15 19:18	1
Велzo[g,h,i]perylene	ND		0.0744		mg/Kg	¢.		09/15/15 19:18	1
Benzo[k]fluoranthene	ND		0.0744	0.0156	mg/Kg	0		09/15/15 19:18	1
1-Methylnaphthalene	ND		0.0744	0.0156	mg/Kg	0	09/15/15 10:11	09/15/15 19:18	1
Pyrene	ND		0.0744	0.0133	mg/Kg	¢	09/15/15 10:11	09/15/15 19:18	1
Phenanthrene	ND		0.0744	0.0100		o	09/15/15 10:11	09/15/15 19:18	1
Chrysene	ND		0.0744	0.0100		Q	09/15/15 10:11	09/15/15 19:18	1
Dibenz(a,h)anthracene	ND		0.0744	0.00778		Þ	09/15/15 10:11	09/15/15 19:18	1
Fluoranthene	ND		0.0744	0.0100		0	09/15/15 10:11	09/15/15 19:18	1
Fluorene	ND		0.0744	0.0133		0	09/15/15 10:11	09/15/15 19:18	1
Indeno[1,2,3-cd]pyrene	ND		0.0744	0.0111		¢	09/15/15 10:11		1
Naphthalene	ND		0.0744	0.0100		0	09/15/15 10 11		1
2-Methylnaphthalene	ND		0.0744	0.0178		¢	09/15/15 10:11		1
Surrogate	%Recovery	Qualifier	Limits				Bronnerd	Amelument	0// 5
2-Fluorobiphenyl (Surr)	50	quantier	29 - 120				Prepared 09/15/15 10:11	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	50 68		29 - 120 13 - 120						1
Nitrobenzene-d5 (Surr)	51							09/15/15 19:18	1
(3011)	51		27.120				09/15/15 10:11	09/15/15 19:18	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89		0.10	0.10		_		09/15/15 12:44	1
					100			00/10/10 12:44	

Client Sample ID: Method Blank

Client Sample ID: Method Blank

Prep Type: Total/NA

1

1

1

Prep Type: Total/NA

7

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

Lab Sample ID: MB 490-283431/11
Matrix: Solid
Analysis Batch: 283431

MB MB							
ult Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ND	0.100	0.0340	mg/Kg			09/22/15 15 34	1
)57 J	0,100	0.0340	mg/Kg			09/22/15 15:34	1
794	0.250	0.0850	mg/Kg			09/22/15 15 34	1
146	0.100	0.0370	mg/Kg			09/22/15 15:34	1
183 J	0.150	0.0620	mg/Kg			09/22/15 15:34	1
MB MB							
ery Qualifier	Limits				Prepared	Analyzed	Dil Fac
90	70.130					09/22/15 15:34	1
101	70.130					09/22/15 15:34	1
100	70 - 130					09/22/15 15:34	1
106	70 - 130					09/22/15 15:34	1
	ery Qualifier	Built Qualifier RL ND 0.100 057 J 0.100 794 0.250 446 0.100 483 J 0.150 MB MB 90 70.130 101 70.130 100 70.130	RL MDL ND 0.100 0.0340 057 J 0.100 0.0340 794 0.250 0.850 446 0.100 0.0370 483 J 0.150 0.0620 MB MB Environmental Point 90 70 - 130 100 101 70 - 130 100	Built Qualifier RL MDL Unit ND 0.100 0.0340 mg/Kg 057 J 0.100 0.0340 mg/Kg 794 0.250 0.0850 mg/Kg 446 0.100 0.0370 mg/Kg 483 J 0.150 0.0620 mg/Kg MB MB <td>Built Qualifier RL MDL Unit D ND 0.100 0.0340 mg/Kg 0.057 J 0.100 0.0340 mg/Kg 057 J 0.100 0.0340 mg/Kg 0.0340 mg/Kg 794 0.250 0.0850 mg/Kg 0.0340 mg/Kg 446 0.100 0.0370 mg/Kg 0.150 0.0620 mg/Kg 483 J 0.150 0.0620 mg/Kg 0.150 0.0620 mg/Kg MB MB 1.00 0.0100 1.0</td> <td>Built Qualifier RL MDL Unit D Prepared ND 0.100 0.0340 mg/Kg 0.000 0.0340 mg/Kg 0.0000 0.0000 0.0000 0.00</td> <td>MB MB Sult Qualifier RL MDL Unit D Prepared Analyzed ND 0.100 0.0340 mg/Kg 09/22/15 15:34 057 J 0.100 0.0340 mg/Kg 09/22/15 15:34 794 0.250 0.0850 mg/Kg 09/22/15 15:34 446 0.100 0.0370 mg/Kg 09/22/15 15:34 483 J 0.150 0.0620 mg/Kg 09/22/15 15:34 MB MB MB Erry Qualifier Limits Prepared Analyzed 90 70 - 130 09/22/15 15:34 09/22/15 15:34 09/22/15 15:34 101 70 - 130 09/22/15 15:34 09/22/15 15:34 09/22/15 15:34 100 70 - 130 09/22/15 15:34 09/22/15 15:34 09/22/15 15:34</td>	Built Qualifier RL MDL Unit D ND 0.100 0.0340 mg/Kg 0.057 J 0.100 0.0340 mg/Kg 057 J 0.100 0.0340 mg/Kg 0.0340 mg/Kg 794 0.250 0.0850 mg/Kg 0.0340 mg/Kg 446 0.100 0.0370 mg/Kg 0.150 0.0620 mg/Kg 483 J 0.150 0.0620 mg/Kg 0.150 0.0620 mg/Kg MB MB 1.00 0.0100 1.0	Built Qualifier RL MDL Unit D Prepared ND 0.100 0.0340 mg/Kg 0.000 0.0340 mg/Kg 0.0000 0.0000 0.0000 0.00	MB MB Sult Qualifier RL MDL Unit D Prepared Analyzed ND 0.100 0.0340 mg/Kg 09/22/15 15:34 057 J 0.100 0.0340 mg/Kg 09/22/15 15:34 794 0.250 0.0850 mg/Kg 09/22/15 15:34 446 0.100 0.0370 mg/Kg 09/22/15 15:34 483 J 0.150 0.0620 mg/Kg 09/22/15 15:34 MB MB MB Erry Qualifier Limits Prepared Analyzed 90 70 - 130 09/22/15 15:34 09/22/15 15:34 09/22/15 15:34 101 70 - 130 09/22/15 15:34 09/22/15 15:34 09/22/15 15:34 100 70 - 130 09/22/15 15:34 09/22/15 15:34 09/22/15 15:34

Lab Sample ID: MB 490-283431/19 Matrix: Solid Analysis Batch: 283431

-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.100	0.0340	mg/Kg			09/22/15 20:03	1
Ethylbenzene	0.04041	J	0.100	0.0340	mg/Kg			09/22/15 20:03	1
Naphthalene	0.2726		0.250	0.0850	mg/Kg			09/22/15 20:03	1
Toluene	ND		0.100	0.0370	mg/Kg			09/22/15 20:03	1
Xylenes, Total	0.07225	J	0.150	0.0620	mg/Kg			09/22/15 20:03	1
	MB	МВ							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		70-130					09/22/15 20:03	1

4-Bromofluorobenzene (Surr) 107 70 - 130 09/22/15 20:03 Dibromofluoromethane (Surr) 98 70 - 130 09/22/15 20:03 Toluene-d8 (Surr) 103 70 - 130 09/22/15 20:03

Lab Sample ID: LCS 490-283431/8 Matrix: Solid Analysis Batch: 283431

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Benzene 2.50 2.802 mg/Kg 112 75-127 Ethylbenzene 2.50 2.822 B mg/Kg 113 80 - 134 Naphthalene 2.50 2.884 B mg/Kg 115 69.150 Toluene 2.50 2.970 mg/Kg 119 80 - 132 Xylenes, Total 5.00 5807 B mg/Kg 116 80 - 137 LCS LCS Surrogate %Recovery Qualifier Limits 1.2-Dichlomethane.d/ (Sum) 06 70 - 130

80	70 - 130
100	70 - 130
93	70 - 130
99	70 - 130
	100 93

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

TestAmerica Nashville

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 281605

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

Lab Sample ID: LCSD 490 Matrix: Solid	-283431/9				C	Client Sa	mple	ID: Lat	Control Prep Ty			
Analysis Batch: 283431												5
			Spike	LCSD	LCSD				%Rec.		RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene			2.50	2.685		mg/Kg		107	75 - 127	4	50	
Ethylbenzene			2.50	2,676	в	mg/Kg		107	80 - 134	5	50	
Naphthalene			2.50	2.802	в	mg/Kg		112	69 - 150	3	50	7
Toluene			2.50	3.066		mg/Kg		123	80 - 132	3	50	(Second)
Xylenes, Total			5.00	5.486	в	mg/Kg		110	80 - 137	6	50	
	LCSD	LCSD										
Surrogate	%Recovery	Qualifier	Limits									
1,2-Dichloroethane-d4 (Surr)	86		70.130									
4-Bromofluorobenzene (Surr)	98		70 - 130									

70.130

70.130

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

93

100

Lab Sample ID: MB 490-281605/1-A Matrix: Solid Analysis Batch: 281656

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

	MB	MB							
Analyte	Result	Qualifier	RL	MDL.	Unit	D	Prepared	Analyzed	Dii Fac
Acenaphthene	ND		0.0670	0.0100	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Acenaphthylene	ND		0.0670	0.00900	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Anthracene	ND		0.0670	0.00900	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Benzo(a)anthracene	ND		0.0670	0.0150	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Benzo[a]pyrene	ND		0.0670	0.0120	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Benzo[b]fluoranthene	ND		0.0670	0.0120	mg/Kg		09/15/15 10:11	09/15/15 18 27	1
Benzo[g,h,i]perylene	ND		0.0670	0.00900	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Benzo[k]fluoranthene	ND		0.0670	0.0140	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
1-Methylnaphthalene	ND		0.0670	0.0140	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Pyrene	ND		0.0670	0.0120	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Phenanthrene	ND		0.0670	0.00900	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Chrysene	ND		0.0670	0.00900	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Dibenz(a,h)anthracene	ND		0.0670	0.00700	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Fluoranthene	ND		0.0670	0.00900	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Fluorene	ND		0.0670	0.0120	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Indeno[1,2,3-cd]pyrene	ND		0.0670	0.0100	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
Naphthalene	ND		0.0670	0.00900	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
2-Methylnaphthalene	ND		0.0670	0.0160	mg/Kg		09/15/15 10:11	09/15/15 18:27	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	78		29.120				09/15/15 10:11	09/15/15 18:27	1
Terphenyl-d14 (Surr)	92		13 - 120				09/15/15 10:11	09/15/15 18:27	1
Nitrobenzene-d5 (Surr)	88		27 - 120				09/15/15 10:11	09/15/15 18:27	1

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

Lab Sample ID: LCS 490-281605/2-A				Clier	nt Sai	nple ID	: Lab Control Sample	
Matrix: Solid							Prep Type: Total/NA	Iseri.
Analysis Batch: 281656							Prep Batch: 281605	5
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Acenaphthylene	1.67	1.401		mg/Kg		84	38 - 120	
Anthracene	1.67	1.458		mg/Kg		87	46 - 124	
Benzo[a]anthracene	1.67	1.437		mg/Kg		86	45 - 120	7
Benzo(a)pyrene	1.67	1.539		mg/Kg		92	45 - 120	in the second
Benzo[b]fluoranthene	1.67	1,519		mg/Kg		91	42 - 120	8
Benzo[g,h,i]perylene	1.67	1.557		mg/Kg		93	38 - 120	
Benzo[k]fluoranthene	1.67	1.412		mg/Kg		85	42 - 120	9
1-Methylnaphthatene	1.67	1.403		mg/Kg		84	32 - 120	
Pyrene	1.67	1.529		mg/Kg		92	43 - 120	
Phenanthrene	1.67	1.376		mg/Kg		83	45 - 120	
Chrysene	1.67	1.416		mg/Kg		85	43 - 120	
Dibenz(a,h)anthracene	1.67	1.597		mg/Kg		96	32.128	
Fluoranthene	1.67	1.489		mg/Kg		89	46 - 120	
Fluorene	1.67	1.395		mg/Kg		84	42 - 120	
Indeno[1,2,3-cd]pyrene	1.67	1.539		mg/Kg		92	41 - 121	
Naphthalene	1.67	1.387		mg/Kg		83	32 - 120	13
2-Methylnaphthalene	1,67	1.314		mg/Kg		79	28 - 120	
• •								
LCS LCS								

	L03 E03	
Surrogate	%Recovery Qualifie	r Limits
2-Fluorobiphenyl (Surr)	80	29 - 120
Terphenyl-d14 (Surr)	98	13-120
Nitrobenzene-d5 (Surr)	91	27.120

Lab Sample ID: 490-87222-1 MS Matrix: Soil Analysis Batch: 281656

Analysis Batch: 261000	Sample	Sample	Spike	MS	MS				Prep Bate %Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Acenaphthylene	ND		1.85	1,299		mg/Kg	¢	70	25 - 120
Anthracene	ND		1.85	1,483		mg/Kg	÷¢	80	28-125
Benzo[a]anthracene	ND		1.85	1,548		mg/Kg	¢	84	23 - 120
Benzo[a]pyrene	ND		1.85	1.643		mg/Kg	¢	89	15 - 128
Benzo[b]fluoranthene	ND		1,85	1,659		mg/Kg	Φ	90	12 - 133
Benzo[g,h,i]perylene	ND		1.85	1.608		mg/Kg	Φ	87	22 - 120
Benzo[k]fluoranthene	ND		1.85	1,569		mg/Kg	Ó	85	28 - 120
1-Methylnaphthalene	ND		1.85	1.153		mg/Kg	¢	62	10 - 120
Pyrene	ND		1,85	1.710		mg/Kg	¢	92	20.123
Phenanthrene	ND		1.85	1.432		mg/Kg	Ð	77	21 - 122
Chrysene	ND		1.85	1.553		mg/Kg	0	84	20.120
Dibenz(a,h)anthracene	ND		1.85	1.628		mg/Kg	¢.	88	12 - 128
Fluoranthene	ND		1.85	1.748		mg/Kg	¢	94	10-143
Fluorene	ND		1.85	1.349		mg/Kg	Ö	73	20 - 120
Indeno[1,2,3-cd]pyrene	ND		1,85	1.588		mg/Kg	O	86	22 - 121
Naphthalene	ND		1.85	1.090		mg/Kg	¢.	59	10 - 120
2-Methylnaphthalene	ND		1,85	1.085		mg/Kg	Q	59	13-120

Client Sample ID: 1177 Bobwhite Prep Type: Total/NA

Prep Batch: 281605

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

		-	•	•			1				
Lab Sample ID: 490-8722	2-1 MS						Clier	nt Sam	ple ID: 117	77 Bob	white
Matrix: Soil									Prep Ty	be: Tot	al/NA
Analysis Batch: 281656									Prep Ba		
	MS	MS									
Surrogate	%Recovery		Limits								
2-Fluorobiphenyl (Surr)	64	deanter	29 - 120								
Terphenyl-d14 (Surr)	88		13-120								
Nitrobenzene-d5 (Surr)	68		27 - 120								
1411000012010-03 (3011)	00		27 - 120								
Lab Sample ID: 490-8722	2-1 MSD						Clier	nt Sami	ole ID: 117	7 Bob	white
Matrix: Soil							01101		Prep Ty		
Analysis Batch: 281656									Prep Ba		
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acenaphthylene	ND		1.84	1.457		mg/Kg	Ō	79	25 - 120	11	50
Anthracene	ND		1.84	1.651		mg/Kg	Ð	90	28 - 125	11	49
Benzo(a)anthracene	ND		1.84	1.633		mg/Kg	o	89	23 - 120	5	50
Benzo[a]pyrene	ND		1.84	1.749		mg/Kg	¢	95	15.128	6	50
Benzo[b]fluoranthene	ND		1,84	1.769		mg/Kg	Q	96	12-133	6	50
Benzo[g,h,i]perylene	ND		1.84	1.772		mg/Kg	¢	96	22 - 120	10	50
Benzo[k]fluoranthene	ND		1.84	1.625		mg/Kg	0	88	28 - 120	4	45
1-Methylnaphthalene	ND		1.84	1.334		mg/Kg	Ð	72	10_120	15	50
Pyrene	ND		1.84	1.689		mg/Kg	¢	92	20 - 123	1	50
Phenanthrene	ND		1.84	1.550		mg/Kg	0	84	21.122	8	50
Chrysene	ND		1.84	1.610		mg/Kg	¢	88	20 - 120	4	49
Dibenz(a,h)anthracene	ND		1.84	1.803		mg/Kg	Ó	98	12 - 128	10	50
Fluoranthene	ND		1.84	1,734		mg/Kg	¢.	94	10-143	1	50
Fluorene	ND		1.84	1.505		mg/Kg	O	82	20 - 120	11	50
Indeno[1,2,3-cd]pyrene	ND		1.84	1.759		mg/Kg	0	96	22.121	10	50
Naphthalene	ND		1,84	1.236		mg/Kg	Q	67	10 - 120	13	50
2-Methylnaphthalene	ND		1.84	1.237		mg/Kg	0	67	13 - 120	13	50
	MSD	MSD									
Surrogate	%Recovery		Limits								
2-Fluorobiphenyl (Surr)	68	Quantier	29 - 120								
Terphenyl-d14 (Surr)	08 94		13 - 120								
Nitrobenzene-d5 (Surr)	94 71		27.120								
1000002000-00 (000)			21 - 120								

Method: Moisture - Percent Moisture

Lab Sample ID: 580-53250	-C-3 DU					Clie	ent Sample ID: Dup	licate
Matrix: Solid							Prep Type: Tot	al/NA
Analysis Batch: 281699								
·	Sample	Sample	DŲ	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Solids	88		86		%		2	20

TestAmerica Nashville

QC Association Summary

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

GC/MS VOA

Analysis Batch: 283431

Lab Sample ID 490-87222-1 LCS 490-283431/8 LCSD 490-283431/9 MB 490-283431/11 MB 490-283431/19	Client Sample ID 1177 Bobwhite Lab Control Sample Lab Control Sample Dup Method Blank Method Blank	Prep Type Totał/NA Total/NA Total/NA Total/NA Total/NA	Matrix Soil Solid Solid Solid Solid	Method 8260B 8260B 8260B 8260B 8260B	Prep Batch 283468
Prep Batch: 283468 Lab Sample ID 490-87222-1	Client Sample ID 1177 Bobwhite	Ргер Туре Total/NA	Matrix Soil	Method 5035	Prep Batch
GC/MS Semi VOA Prep Batch: 281605					
Lab Sample ID 490-87222-1 490-87222-1 MS 490-87222-1 MSD LCS 490-281605/2-A MB 490-281605/1-A Analysis Batch: 28165	Client Sample ID 1177 Bobwhite 1177 Bobwhite 1177 Bobwhite Lab Control Sample Method Blank	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Soil Soil Soil Solid Solid	Method 3550C 3550C 3550C 3550C 3550C	Prep Batch
Lab Sample ID 490-87222-1 490-87222-1 MS 490-87222-1 MSD LCS 490-281605/2-A MB 490-281605/1-A	Client Sample ID 1177 Bobwhite 1177 Bobwhite 1177 Bobwhite Lab Control Sample Method Blank	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Soil Soil Soit Soid Solid	Method 8270D 8270D 8270D 8270D 8270D 8270D	Prep Batch 281605 281605 281605 281605 281605
General Chemistry	/				
Analysis Batch: 28169	9				
Lab Sample ID 490-87222-1 490-87303-C-1 MS 490-87303-C-1 MSD 580-53250-C-3 DU	Client Sample ID 1177 Bobwhite Matrix Spike Matrix Spike Duplicate Duplicate	Prep Type Total/NA Total/NA Total/NA Total/NA	Matrix Soil Solid Solid Solid	Method Moisture Moisture Moisture Moisture	Prep Batch

Lab Sample ID: 490-87222-1

Matrix: Soil

Client Sample ID: 1177 Bobwhite

Date Collected: 09/08/15 12:15 Date Received: 09/12/15 12:10

Prep Type Total/NA Total/NA	Batch Type Prep Analysis	Batch Method 5035 8260B	Run	Dil Factor 1	Initial Amount 5.17 g 5.17 g	Final Amount 5.0 mL 5.0 mL	Batch Number 283468 283431	Prepared or Analyzed 09/22/15 11:13 09/22/15 21:03		Lab TAL NSH TAL NSH
Total/NA Total/NA	Prep Analysis	3550C 8270D		1	30.21 g 30.21 g	1 mL 1 mL	281605 281656	09/15/15 10:11 09/15/15 19:18	+	TAL NSH TAL NSH
Total/NA	Analysis	Moisture		1			281699	09/15/15 12:44	MNM	TAL NSH

Laboratory References:

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

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TestAmerica Nashville

Method Summary

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

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

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

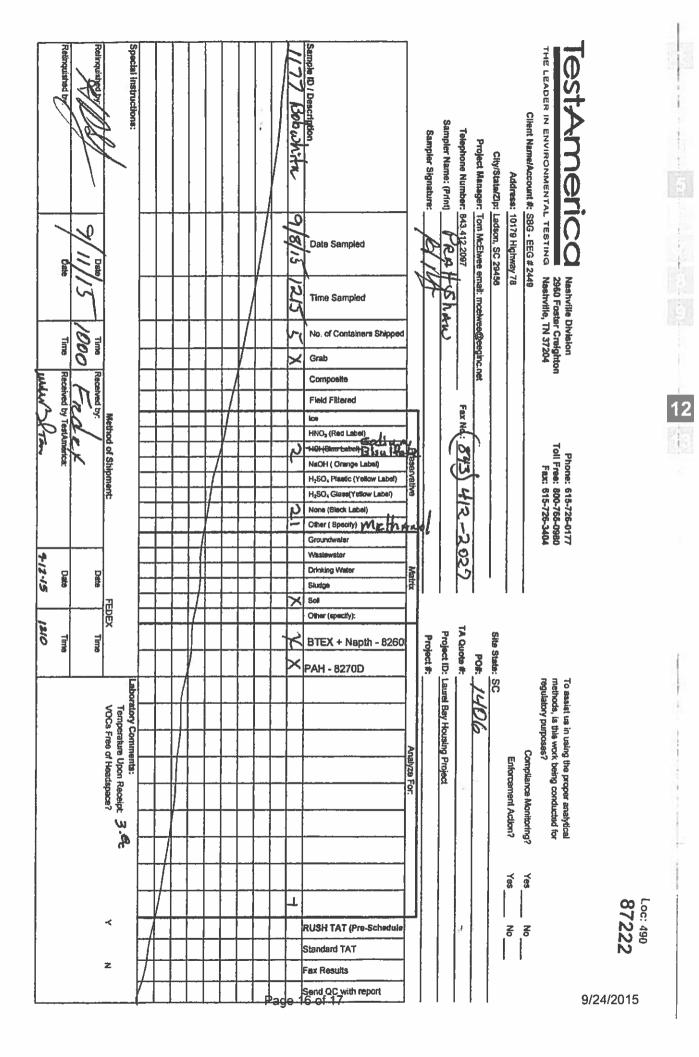
Authority South Carolina	Program State Program		EPA Region 4	Certification ID 84009 (001)	Expiration Date 02-28-16
The following analytes are	e included in this report, bu	t certification is not	offered by the go	overning authority	
Analysis Method	Prep Method	Matrix	Analyte	B	
8270D	3550C	Soil	1-Meth	lyinaphthalene	
Moisture		Soil	Percer	nt Solids	

TestAmerica Job ID: 490-87222-1

TestAmerica Nashville

TestAmerica	
THE LEADER IN ENVIRONMENTAL TESTING Nashville, TN COOLER RECEIPT FORM	Charleston
Cooler Received/Opened On 9/12/2015 @ 1210	
1. Tracking #91/0(last 4 digits, FedEx) 100 8777	2 Chain of Custody
Courler: Fed-ex IR Gun ID_17960357	
2. Temperature of rep. sample or temp blank when opened: <u>J.S.</u> 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?	ESNONA
If yes, how many and where:IF-ont//Buck	
5. Were the seals intact, signed, and dated correctly?	TES NO NA
6. Were custody papers Inside cooler?	YES NO NA
I certify that I opened the cooler and answered questions 1-6 (Initial)	5 C
7. Were custody seals on containers: YES 📈 and Intact	YESNO,
Were these signed and dated correctly?	YESNO
8. Packing mat'l used? Subblewrap Plastic bag Peanuts Vermiculite Foam Insert Pape	er Other None
9. Cooling process: (CG) Ice-pack Ice (direct contact) Dry ice	e Other None
10. Did all containers arrive in good condition (unbroken)?	ES.NONA
11. Were all container labels complete (#, date, signed, pres., etc)?	NONA
12. Did all container labels and tags agree with custody papers?	ES.NONA
13a. Were VOA vials received?	ES.NONA
b. Was there any observable headspace present in any VOA vial?	YESNO.
14. Was there a Trip Blank in this cooler? YESNO	ice #
I certify that I unloaded the cooler and answered questions 7-14 (initial)	min
15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level?	YESNO.
b. Did the bottle labels indicate that the correct preservatives were used	ESNONA
16. Was residual chlorine present?	YESNO.
I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (Intial)	<u>M.Bun</u>
17. Were custody papers properly filled out (Ink, signed, etc)?	MES.NONA
18. Did you sign the custody papers in the appropriate place?	ES.NONA
19. Were correct containers used for the analysis requested?	6NONA
20. Was sufficient amount of sample sent in each container?	ESNONA
certify that Lentered this project into LIMS and answered questions 17-20 (Initial)	menn
I certify that I attached a label with the unique LIMS number to each container (Intial)	mom
21. Were there Non-Conformance issues at login? YES NO Was a NCM generated? YES	NO#

12



Client: Small Business Group Inc.

Job Number: 490-87222-1

List Source: TestAmerica Nashville

Comment

3.8

	1.4.1		

1	3

Login Number: 87222 List Number: 1 Creator: McBride, Mike	
Question	Answer
Radioactivity wasn't checked or is = background as measured by a<br survey meter.	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.	True
Samples were received on ice.	True
Cooler Temperature is acceptable.	True

Cooler Temperature is recorded.	True
COC is present.	True
COC is filled out in ink and legible.	True
COC is filled out with all pertinent information.	True
Is the Field Sampler's name present on COC?	True
There are no discrepancies between the 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").	True
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 1177Bobwhite, 1177 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)

Appendix C Laboratory Analytical Reports - Groundwater



Pace Analytical www.pacelabs.com

Pace Analytical Services, Inc. 2225 Riverside Dr. Asheville, NC 28804 (828)254-7176

03744

Pace Analytical Services, Inc. 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 (704)875-9092

ANALYTICAL RESULTS

Project: LAUREL BAY 7/30/08

Pace Project No.: 9224584

Sample: 1468 CARDINAL A	Lab ID: 92	24584011	Collected: 07/30/0	8 16:50	Received: 08	8/01/08 07:55 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qu
8270 MSSV PAH by SIM SPE	Analytical Me	ethod: EPA 82	270 by SIM Preparati	ion Metl	nod: EPA 3535			
Nitrobenzene-d5 (S)	52 %	6	50-150	1	08/05/08 00:00	08/13/08 15:43	4165-60-0	
2-Fluorobiphenyl (S)	51 %	6	50-150	1	08/05/08 00:00	08/13/08 15:43	321-60-8	
Terphenyl-d14 (S)	67 %	6	50-150	1	08/05/08 00:00	08/13/08 15:43	1718-51-0	
8260 MSV Low Level	Analytical Me	thod: EPA 82	260					
Benzene	ND u	ıg/L	1.0	1		08/07/08 22:59	71-43-2	
Ethylbenzene	ND u	ıg/L	1.0	1	2	08/07/08 22:59	100-41-4	
Naphthalene	4.3 u		1.0	1		08/07/08 22:59	91-20-3	C8
Toluene	ND u		1.0	1		08/07/08 22:59	108-88-3	
m&p-Xylene	ND u		2.0	1		08/07/08 22:59		
o-Xylene	ND u	•	1.0	1		08/07/08 22:59		
4-Bromofluorobenzene (S)	98 %		87-109	1		08/07/08 22:59		
Dibromofluoromethane (S)	98 /		85-115	1		08/07/08 22:59		21
1,2-Dichloroethane-d4 (S)	100 %		79-120	1		08/07/08 22:59		
Toluene-d8 (S)	100 %		79-120	1		08/07/08 22:59		
Sample: 1177 BOBWHITE D	Lab ID: 92	24594042	Collected: 07/30/0	9 15.00	Received: 08	01/09 07:55 N	latrix: Water	
Parameters						Analyzed	CAS No.	Qı
							-	
	r					ne periode de la constante de l		
8270 MSSV PAH by SIM SPE	Analytical Me	thod: EPA 82	270 by SIM Preparati	ion Meth	nod: EPA 3535			
8270 MSSV PAH by SIM SPE Acenaphthene	Analytical Me	thod: EPA 82	270 by SIM Preparati 2.0	ion Metl	nod: EPA 3535 08/05/08 00:00	08/13/08 16:05	83-32-9	-
8270 MSSV PAH by SIM SPE Acenaphthene DU Acenaphthylene	Analytical Me	thod: EPA 82 g/L g/L	Report Limit 270 by SIM Preparati 2.0 1.5	ion Metł 1 1	nod: EPA 3535 08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05		
8270 MSSV PAH by SIM SPE Acenaphthene DU Acenaphthylene Anthracene		3	270 by SIM Preparati 2.0 1.5 0.050	ion Meth 1 1 1			208-96-8	
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene	ND u	g/L			08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7	
Acenaphthene DU Acenaphthylene Anthracene Benzo(a)anthracene		g/L g/L	0.050 0.10	1 1	08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3	
Benzo(a)pyrene	A ND u ND u ND u	g/L g/L g/L	0.050 0.10 0.20	1 1 1	08/05/08 00:00 08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8	, "
Benzo(a)pyrene Benzo(b)fluoranthene	A ND u ND u ND u ND u	g/L g/L g/L g/L	0.050 0.10 0.20 0.30	1 1 1 1	08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2	, "
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene	A ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20	1 1 1 1	08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20	1 1 1 1 1	08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.20 0.10	1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20	1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30	1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.30	1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.31 0.20	1 1 1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.31 0.20 2.0	1 1 1 1 1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 90-12-0	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene 2-Methylnaphthalene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.31 0.20 2.0 2.0	1 1 1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 90-12-0	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.31 0.20 2.0	1 1 1 1 1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 90-12-0 91-57-6	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene 2-Methylnaphthalene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.31 0.20 2.0 2.0	1 1 1 1 1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 90-12-0 91-57-6 91-20-3	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.31 0.20 2.0 2.0 2.0 1.5	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 90-12-0 91-57-6 91-20-3 85-01-8	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene Phenanthrene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.31 0.20 2.0 2.0 2.0 1.5 0.20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 90-12-0 91-57-6 91-20-3 85-01-8 129-00-0	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene Phenanthrene Pyrene	A ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.31 0.20 2.0 2.0 2.0 1.5 0.20 0.10	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 90-12-0 91-57-6 91-20-3 85-01-8 129-00-0 4165-60-0	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene Phenanthrene Pyrene Nitrobenzene-d5 (S)	ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.31 0.20 2.0 2.0 2.0 1.5 0.20 0.10 50-150	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 90-12-0 91-57-6 91-20-3 85-01-8 129-00-0 4165-60-0 321-60-8	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene Phenanthrene Pyrene Nitrobenzene-d5 (S) 2-Fluorobiphenyl (S)	A ND U ND U ND U ND U ND U ND U ND U ND U	g/L g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.31 0.20 2.0 2.0 2.0 1.5 0.20 0.10 50-150 50-150 50-150	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 90-12-0 91-57-6 91-20-3 85-01-8 129-00-0 4165-60-0 321-60-8	
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene Phenanthrene Pyrene Nitrobenzene-d5 (S) 2-Fluorobiphenyl (S) Terphenyl-d14 (S)	ND u ND u ND u ND u ND u ND u ND u ND u	g/L g/L g/L g/L g/L g/L g/L g/L g/L g/L	0.050 0.10 0.20 0.30 0.20 0.20 0.10 0.20 0.30 0.31 0.20 2.0 2.0 2.0 1.5 0.20 0.10 50-150 50-150 50-150	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	08/05/08 00:00 08/05/08 00:00	08/13/08 16:05 08/13/08 16:05	208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 193-39-5 90-12-0 91-57-6 91-20-3 85-01-8 129-00-0 4165-60-0 321-60-8 1718-51-0	

Date: 08/14/2008 04:21 PM

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc. 2225 Riverside Dr. Asheville, NC 28804 (828)254-7176

03943

Pace Analytical Services, Inc. 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 (704)875-9092

ANALYTICAL RESULTS

Project: LAUREL BAY 7/30/08

Pace Project No.: 9224584

Sample: 1177 BOBWHITE D	Lab ID: 9224	584012	Collected: 07/30/	08 15:00	Received: 08	B/01/08 07:55	Aatrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Metho	od: EPA 82	260					
Ethylbenzene	ND ug/L	-	1.0	1		08/07/08 23:22	100-41-4	
Naphthalene	ND ug/L	-	2.0	1		08/07/08 23:22	91-20-3	
Toluene	ND ug/L	_	1.0	1		08/07/08 23:22	108-88-3	
m&p-Xylene	ND ug/L	-	2.0	1		08/07/08 23:22	1330-20-7	
o-Xylene	ND ug/L	-	1.0	1		08/07/08 23:22	95-47-6	
4-Bromofluorobenzene (S)	99 %		87-109	1		08/07/08 23:22	460-00-4	
Dibromofluoromethane (S)	97 %		85-115	1		08/07/08 23:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		79-120	1		08/07/08 23:22	17060-07-0	
Toluene-d8 (S)	100 %		70-120	1		08/07/08 23:22	2037-26-5	
Sample: 256 BEECH A	Lab ID: 9224	584013	Collected: 07/30/	08 10:15	Received: 08	3/01/08 07:55 N	/atrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM SPE	Analytical Metho	d FPA 82	270 by SIM Preparat	tion Meth	od: EPA 3535			
1 Construction (Construction)								
Acenaphthene	ND ug/L		2.0	1	08/05/08 00:00			
Acenaphthylene Anthracene	ND ug/L		1.5	1	08/05/08 00:00			
Benzo(a)anthracene	0.13 ug/L		0.050	1	08/05/08 00:00			
Benzo(a)pyrene	ND ug/L		0.10	1		08/13/08 16:26		
Benzo(b)fluoranthene	ND ug/L		0.20	1		08/13/08 16:26		
	ND ug/L		0.30	1	08/05/08 00:00			
Benzo(g,h,i)perylene Benzo(k)fluoranthene	ND ug/L		0.20	1		08/13/08 16:26		
	ND ug/L		0.20	1		08/13/08 16:26		
Chrysene Dibenz(a,h)anthracene	ND ug/L		0.10	1		08/13/08 16:26		
Fluoranthene	ND ug/L		0.20	1		08/13/08 16:26		
Fluorene	ND ug/L		0.30	1		08/13/08 16:26		
Indeno(1,2,3-cd)pyrene	1.7 ug/L		0.31	1		08/13/08 16:26		
	ND ug/L		0.20	1		08/13/08 16:26		
1-Methylnaphthalene 2-Methylnaphthalene	7.7 ug/L		2.0	1		08/13/08 16:26		
Naphthalene	3.2 ug/L		2.0	1		08/13/08 16:26		
Phenanthrene	3.4 ug/L		1.5	1		08/13/08 16:26		
Pyrene	2.3 ug/L		0.20	1		08/13/08 16:26		
Nitrobenzene-d5 (S)	ND ug/L 56 %		0.10	1		08/13/08 16:26		
2-Fluorobiphenyl (S)			50-150	1		08/13/08 16:26		
Terphenyl-d14 (S)	61 %		50-150	1		08/13/08 16:26		
8260 MSV Low Level	71 %	d. EDA 02	50-150	1	08/05/08 00:00	08/13/08 16:26	1718-51-0	
	Analytical Metho		:00					
Benzene	ND ug/L		1.0	1		08/07/08 05:55		
Ethylbenzene	ND ug/L		1.0	1		08/07/08 05:55		
Naphthalene	4.3 ug/L		2.0	1		08/07/08 05:55		
Toluene	ND ug/L		1.0	1		08/07/08 05:55		
m&p-Xylene	ND ug/L		2.0	1		08/07/08 05:55		
o-Xylene	ND ug/L		1.0	1		08/07/08 05:55		
4-Bromofluorobenzene (S)	98 %		87-109	1		08/07/08 05:55	460-00-4	

Date: 08/14/2008 04:21 PM

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Pace Analytical Services, Inc. 2225 Riverside Dr. Asheville, NC 28804 (828)254-7176 Pace Analytical Services, Inc. 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 (704)875-9092

ANALYTICAL RESULTS

03943

Project: LAUREL BAY 7/30/08

Pace Project No.: 9224584

٢

Parameters 8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene	Results Analytical Metho ND ug/ ND ug/		Report Limit 270 by SIM Preparat 2.0 1.5 0.050 0.10 0.20 0.30 0.20	1 1 1 1	08/04/08 00:00 08/04/08 00:00 08/04/08 00:00 08/04/08 00:00	Analyzed 08/13/08 10:18 08/13/08 10:18 08/13/08 10:18 08/13/08 10:18	208-96-8 120-12-7	Qual
Acenaphthene Acenaphthylene	ND ug/ ND ug/ ND ug/ ND ug/ ND ug/ ND ug/ ND ug/ ND ug/		2.0 1.5 0.050 0.10 0.20 0.30	1 1 1 1	08/04/08 00:00 08/04/08 00:00 08/04/08 00:00 08/04/08 00:00	08/13/08 10:18 08/13/08 10:18 08/13/08 10:18	208-96-8 120-12-7	
Acenaphthylene	ND ug/ ND ug/ ND ug/ ND ug/ ND ug/ ND ug/ ND ug/ ND ug/	-	1.5 0.050 0.10 0.20 0.30	1 1 1 1	08/04/08 00:00 08/04/08 00:00 08/04/08 00:00	08/13/08 10:18 08/13/08 10:18 08/13/08 10:18	208-96-8 120-12-7	
	ND ug/l ND ug/l ND ug/l ND ug/l ND ug/l ND ug/l		0.050 0.10 0.20 0.30	1 1 1	08/04/08 00:00 08/04/08 00:00	08/13/08 10:18 08/13/08 10:18	120-12-7	
Anthracene	ND ug/ ND ug/ ND ug/ ND ug/ ND ug/		0.10 0.20 0.30	1 1	08/04/08 00:00	08/13/08 10:18		
	ND ug/l ND ug/l ND ug/l ND ug/l		0.20 0.30	1			56-55-3	
Benzo(a)anthracene	ND ug/l ND ug/l ND ug/l	_	0.30		08/04/08 00.00		00000	
Benzo(a)pyrene	ND ug/l ND ug/l	<u>_</u>			00.04/00 00.00	08/13/08 10:18	50-32-8	
Benzo(b)fluoranthene	ND ug/		0.20	1	08/04/08 00:00	08/13/08 10:18	205-99-2	
Benzo(g,h,i)perylene			0.20	1	08/04/08 00:00	08/13/08 10:18	191-24-2	
Benzo(k)fluoranthene		_	0.20	1	08/04/08 00:00	08/13/08 10:18	207-08-9	
Chrysene			0.10	1	08/04/08 00:00	08/13/08 10:18	218-01-9	
Dibenz(a,h)anthracene	ND ug/l	_	0.20	1	08/04/08 00:00	08/13/08 10:18	53-70-3	
Fluoranthene	ND ug/l		0.30	1		08/13/08 10:18		
Fluorene	ND ug/l		0.31	1		08/13/08 10:18		
Indeno(1,2,3-cd)pyrene	ND ug/l		0.20	1		08/13/08 10:18		
1-Methylnaphthalene	ND ug/l		2.0	1		08/13/08 10:18		
2-Methylnaphthalene	ND ug/l		2.0	1		08/13/08 10:18		
Naphthalene	ND ug/l		1.5	1		08/13/08 10:18		
Phenanthrene	0.23 ug/l		0.20	1		08/13/08 10:18		
Pyrene	ND ug/l		0.10	1		08/13/08 10:18		
Nitrobenzene-d5 (S)	54 %		50-150	1		08/13/08 10:18		
2-Fluorobiphenyl (S)	50 %		50-150	1		08/13/08 10:18		
Terphenyl-d14 (S)	56 %		50-150	1		08/13/08 10:18		
3260 MSV Low Level	Analytical Metho	od: EPA 82	260					
Benzene	ND ug/l		1.0	1		08/06/08 17:39	71-43-2	
Ethylbenzene	ND ug/l		1.0	1		08/06/08 17:39		
Naphthalene	ND ug/l		2.0	1		08/06/08 17:39		
Toluene	ND ug/l		1.0	1		08/06/08 17:39		
m&p-Xylene	ND ug/l		2.0	1		08/06/08 17:39		
o-Xylene	ND ug/l		1.0	1		08/06/08 17:39		
4-Bromofluorobenzene (S)	99 %	-	87-109	1		08/06/08 17:39		
Dibromofluoromethane (S)	93 %		85-115	1		08/06/08 17:39		
1,2-Dichloroethane-d4 (S)	95 %		79-120	1		08/06/08 17:39		
Toluene-d8 (S)	102 %		70-120	1		08/06/08 17:39		
Sample: 1483 CARDINAL A	Lab ID: 9224	584009	Collected: 07/30/0	8 15:45	Received: 08	/01/08 07:55 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM SPE	Analytical Metho	od: EPA 82	270 by SIM Preparati	on Meth	od: EPA 3535			
Acenaphthene	ND ug/L		2.0	1	08/05/08 00:00	08/13/08 14:11	83-32-9	
Acenaphthylene	ND ug/L		1.5	1	08/05/08 00:00	08/13/08 14:11	208-96-8	

ND	ugre	1.5		00/03/00 00.00	00/15/00 14.11	200-30-0
ND	ug/L	0.050	1	08/05/08 00:00	08/13/08 14:11	120-12-7
ND	ug/L	0.10	1	08/05/08 00:00	08/13/08 14:11	56-55-3
ND	ug/L	0.20	1	08/05/08 00:00	08/13/08 14:11	50-32-8
ND	ug/L	0.30	1	08/05/08 00:00	08/13/08 14:11	205-99-2

Date: 08/14/2008 04:21 PM

Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene

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Volatile Organic Compounds by GC/MS

Client: AECOM - Resolu	tion Consultants						Laboratory ID	: SC11009	-011		
Description: BEALB1177TW0	2WG20170309						Matrix	Aqueous			
Date Sampled:03/09/2017 1700											
Date Received: 03/11/2017											
Run Prep Method 1 5030B	Analytical Method 8260B	Dilution 1	5	sis Date Analyst 2017 1530 PMV	Prep	Date	Batch 37143				
Parameter			CAS nber	Analytical Method	Result	Q	LOQ	LOD	DL	Units	Run
Benzene		71-	43-2	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Ethylbenzene		100-4	41-4	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Naphthalene		91-	20-3	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Toluene		108-8	88-3	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Xylenes (total)		1330-	20-7	8260B	0.80	U	1.0	0.80	0.40	ug/L	1
Surrogate		Run 1 Recovery	Accepta Lim								
Bromofluorobenzene		105	85-1	14							
Dibromofluoromethane		92	80-1	19							
1,2-Dichloroethane-d4		102	81-1	18							
Toluene-d8		92	89-1	12							

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

Client: AECOM - Resolution Consultants

Description: BEALB1177TW02WG20170309

Date Sampled:03/09/2017 1700

Laboratory ID: SC11009-011 Matrix: Aqueous

Date Received: 03/11/2017

Run Prep Method 1 3520C	Analytical Method Dilutio 8270D 1	5	sis Date Analyst 2017 0032 RBH			Batch 20 37108				
Parameter	N	CAS umber	Analytical	Result	0	LOQ	LOD	DL	Units	Run
Benzo(a)anthracene		6-55-3	Method 8270D		U	0.20	0.10	0.040	ug/L	1
Benzo(b)fluoranthene		5-99-2	8270D		U	0.20	0.10	0.040	ug/L	1
Benzo(k)fluoranthene	20	7-08-9	8270D	0.10	U	0.20	0.10	0.040	ug/L	1
Chrysene	21	8-01-9	8270D	0.10	U	0.20	0.10	0.040	ug/L	1
Dibenzo(a,h)anthracene	5	3-70-3	8270D	0.10	U	0.20	0.10	0.040	ug/L	1
Surrogate	Run 1 Q % Recover	Accepta y Lim								
Nitrobenzene-d5	60	44-12	20							
2-Fluorobiphenyl	53	44-17	19							
Terphenyl-d14	74	50-13	34							

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

Appendix D Regulatory Correspondence



BOARD: Elizabeth M. Hagood Chairman

Mark B. Kent Vice Chairman

Howard L. Brilliant, MD Secretary



Carl L. Brazell Louisiana W. Wright L. Michael Blackmon Coleman F. Buckhouse, MD

BOARD

C. Earl Hunter, Commissioner Promoting and protecting the health of the public and the environment.

16 July 2008

Beaufort Military Complex Family Housing ATTN: Kyle Broadfoot 1510 Laurel Bay Blvd. Beaufort, SC 29906

Re: MCAS – Laurel Bay Housing – 1177 Bobwhite Drive Site ID # 03943 UST Closure Reports received 31 January 2008 Beaufort County

Dear Mr. Broadfoot:

The purpose of this letter is to verify a release of fuel oil at the referenced residence. According to information received by the Department, the source of the release is from past onsite use of fuel oil USTs. To date, initial activities by the facility have included tank removal and soil sampling. Based on the information contained in the closure report, a potential violation of the South Carolina Pollution Control Act has occurred in that there has been an unauthorized release of petroleum to the environment.

Additional assessment activities are required for this site. Specifically the Department requests that a groundwater sample be collected from this site. Please note, the Department approved a groundwater sampling proposal for Laurel Bay submitted by MCAS under separate cover dated 16 June 2008.

Should you have any questions, please contact me at 803-898-3553 (office phone), 803-898-2893 (fax) or bishopma@dhec.sc.gov.

Sincerely,

Michael Bishop,

Michael Bishop, Hydrogeologist Groundwater Quality Section Bureau of Water

cc:

Region 8 District EQC (via pdf) MCAS, Commanding Officer, Attention: S-4 NREAO (William Drawdy) (via pdf) Technical File

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL 2600 Bull Street • Columbia, SC 29201 • Phone: (803) 898-3432 • www.scdhec.net



August 1, 2016

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

RE: IGWA Laurel Bay Underground Tank Assessment Reports Dated July 2015, November 2015, March 2016

Dear Mr. Drawdy,

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

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

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

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

Sincerely,

Allt

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

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

Attachment to: Petrus to Drawdy, August 1, 2016 Subject: IGWA, Laurel Bay Underground Tank Assessment Reports Dated July 2015, November 2015, March 2016

Draft Final Initial Groundwater Investigation Report for (7 addresses/8 tanks)

465 Dogwood Tank 2	254 Beech Tank 2
1352 Cardinal Tank 2*	641 Dahlia Tank 2
121 Banyan	1346 Cardinal
254 Beech Tank 1	1177 Bobwhite

permanent wells and groundwater monitoring was approved 2/22/16



C. Earl Hunter, Commissioner Promoting and protecting the health of the public and the environment.

20 November 2008

Beaufort Military Complex Family Housing ATTN: Kyle Broadfoot 1510 Laurel Bay Blvd. Beaufort, SC 29906

Re: MCAS – Laurel Bay Housing – 1177 Bobwhite **Site ID # 03943** Groundwater Sampling Results received 6 November 2008 Beaufort County

Dear Mr. Broadfoot:

Per the Department's request, a groundwater sample was collected from the referenced site. The groundwater results were reported as non-detect. Based on the information and analytical data submitted, the Department recognizes that MCAS has adequately addressed the known environmental contamination identified on the property to date in accordance with the approved scope of work. Consequently, no further investigation is required at this time. Please note, this statement pertains only to the portion of the site addressed in the referenced report and does not apply to other areas of the site and/or any other potential regulatory violations. Further, the Department retains the right to request further investigation if deemed necessary.

Should you have any questions, please contact me at 803-896-4179 (office phone), 803-896-6245 (fax) or cookejt@dhec.sc.gov.

Sincerely,

AST Petroleum Restoration & Site Environmental Investigations Section Land Revitalization Division Bureau of Land and Waste Management SC Dept. of Health & Environmental Control

and. Coo

Jan T. Cooke, Hydrogeologist

B. Thomas Knight Manager

cc: Region 8 District EQC MCAS, Commanding Officer, Attention: S-4 NREAO (Craig Ehde), P.O. Box 55001, Beaufort, SC 29904-5001 Technical File



July 27, 2017

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

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

Dear Mr. Drawdy:

The South Carolina Department of Health and Environmental Control (DHEC) received groundwater data from temporary monitoring well installations in the Draft Final Groundwater Investigation Report, Laurel Bay Military Housing Area for the fifty two (52) addresses shown in the attachment. The regulatory authority for the investigation and cleanup of releases from these tank systems is the South Carolina Pollution Control Act (S.C. Code Ann. §48-1-10 et seq., as amended).

Per DHEC's request, groundwater samples were collected from the attached referenced addresses. DHEC reviewed the groundwater data and previous investigations and it agrees with the conclusions and recommendations included in the document. To further assess the impact to groundwater, permanent groundwater monitoring wells should be installed at the three (3) stated addresses. For the remaining forty nine (49) addresses, there is no indication of contamination on the property and therefore no further investigation is required at this time.

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

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

Sincerely,

Lalpt

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

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

Draft Final Initial Groundwater Investigation Report for (52 addresses)

Permanent Well Installation recommedation (3 Addresses):

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

No Further Action recommendation (49 addresses):

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