SUMMARY REPORT
107 BEECH STREET (FORMERLY 262 BEECH STREET)
LAUREL BAY MILITARY HOUSING AREA
MARINE CORPS AIR STATION BEAUFORT
BEAUFORT, SC

Revision: 0 Prepared for:

Department of the Navy
Naval Facilities Engineering Command, Mid-Atlantic
9324 Virginia Avenue
Norfolk, Virginia 23511-3095

and



Naval Facilities Engineering Command Atlantic 9324 Virginia Avenue Norfolk, Virginia 23511-3095 SUMMARY REPORT
107 BEECH STREET (FORMERLY 262 BEECH STREET)
LAUREL BAY MILITARY HOUSING AREA
MARINE CORPS AIR STATION BEAUFORT
BEAUFORT, SC

Revision: 0 Prepared for:

Department of the Navy
Naval Facilities Engineering Command, Mid- Atlantic
9324 Virginia Avenue
Norfolk, Virginia 23511-3095

and



Naval Facilities Engineering Command Atlantic

9324 Virginia Avenue Norfolk, Virginia 23511-3095

Prepared by:



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

Contract Number: N62470-14-D-9016

CTO WE52

JUNE 2021



Table of Contents

1.0	INTRODUCTION	
1.1 1.2		
2.0	SAMPLING ACTIVITIES AND RESULTS	3
2.1 2.2 2.3 2.4	2 SOIL ANALYTICAL RESULTS	4
3.0	PROPERTY STATUS	5
4.0	REFERENCES	5
Table Table	, , , , , , , , , , , , , , , , , , ,	
	Appendice	es
Appen Appen	endix A Multi-Media Selection Process for I endix B UST Assessment Report endix C Laboratory Analytical Report - Gro endix D Regulatory Correspondence	





List of Acronyms

bgs below ground surface

BTEX benzene, toluene, ethylbenzene, and xylenes

CTO Contract Task Order

COPC constituents of potential concern

ft feet

IDIQ Indefinite Delivery, Indefinite Quantity

IGWA Initial Groundwater Assessment

JV Joint Venture

LBMH Laurel Bay Military Housing MCAS Marine Corps Air Station

NAVFAC Mid-Lant Naval Facilities Engineering Command Mid-Atlantic

NFA No Further Action

PAH polynuclear aromatic hydrocarbon

QAPP Quality Assurance Program Plan

RBSL risk-based screening level

SCDHEC South Carolina Department of Health and Environmental Control

Site LBMH area at MCAS Beaufort, South Carolina

UST underground storage tank
VISL vapor intrusion screening level



1.0 INTRODUCTION

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

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

This report summarizes the results the environmental investigation activities associated with the storage of home heating oil and the potential release of petroleum constituents at the referenced property. Based on the results of the investigation, a No Further Action (NFA) determination has been made by the South Carolina Department of Health and Environmental Control (SCDHEC) for 107 Beech Street (Formerly 262 Beech Street). This NFA determination indicates that there are no unacceptable risks to human health or the environment for the petroleum constituents associated with the home heating oil USTs. The following information is included in this report:

- Background information;
- Sampling activities and results; and
- A determination of the property status.

1.1 Background Information

The LBMH area is located approximately 3.5 miles west of MCAS Beaufort. The area is approximately 970 acres in size and serves as an enlisted and officer family housing area. The area is configured with single family and duplex residential structures, and includes recreation, open space, and community facilities. The community includes approximately 1,300 housing units, including legacy Capehart style homes and newer duplex style homes. The housing area





is bordered on the west by salt marshes and the Broad River, and to the north, east and south by uplands. Forested areas lie along the northern and northeastern borders.

Capehart style homes within the LBMH area were formerly heated using heating oil stored in USTs at each residence. There were 1,100 Capehart style housing units in the LBMH area. The newer duplex homes within the LBMH area never utilized heating oil tanks. Heating oil has not been used at Laurel Bay since the mid-1980s. As was the accepted practice at the time, USTs were drained, filled with dirt, capped, and left in place when they were removed from service. Residential USTs are not regulated in the State of South Carolina (i.e., there are no federal or state laws governing installation, management, or removal).

In 2007, MCAS Beaufort began a voluntary program to remove the unregulated, residential USTs and conduct sampling activities to determine if, and to what extent, petroleum constituents may have impacted the surrounding environment. MCAS Beaufort coordinated with SCDHEC to develop removal procedures that were consistent with procedural requirements for regulated USTs. All tank removal activities and follow-on actions are conducted in coordination with SCDHEC. To date, all known USTs have been removed from all residential properties within the LBMH area.

1.2 UST Removal and Assessment Process

During the UST removal process, a soil sample was collected from beneath the UST excavations (approximately 4 to 6 feet [ft] below ground surface [bgs]) and analyzed for a predetermined list of constituents of potential concern (COPCs) associated with the petroleum compounds found in home heating oil. These COPCs, derived from the *Quality Assurance Program Plan* (QAPP) for the Underground Storage Tank Management Division, Revision 3.1 (SCDHEC, 2016) and the Underground Storage Tank Assessment Instructions for Permanent Closure and Change-In-Service, (SCDHEC, 2018), are as follows:

- benzene, toluene, ethylbenzene, and xylenes (BTEX),
- naphthalene, and
- five select polynuclear aromatic hydrocarbon (PAHs): benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and dibenz(a,h)anthracene.

Soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form. In accordance with SCDHEC's *QAPP for the UST Management*



Division (SCDHEC, 2016), the soil screening levels consists of SCDHEC risk-based screening levels (RBSLs). It should be noted that the RBSLs for select PAHs were revised in Revision 2.0 of the QAPP (SCDHEC, 2013) and were revised again in Revision 3.0 (SCDHEC, 2015). The screening levels used for evaluation at each site were those levels that were in effect at the time of reporting and review by SCDHEC.

The results of the soil sampling at each former UST location were used to determine if a potential for groundwater contamination exists (i.e., soil results greater than RBSLs) and subsequently to select properties for follow-up initial groundwater assessment (IGWA) sampling. The results of the IGWA sampling (if necessary) are used to determine the presence or absence of the aforementioned COPCs in groundwater and identify whether former UST locations will require additional delineation of COPCs in groundwater. In order to delineate the extent of impact to groundwater, permanent wells are installed and a sampling program is established for those former UST locations where IGWA sampling has indicated the presence of COPCs in excess of the SCDHEC RBSLs for groundwater. Groundwater analytical results are also compared to the site specific groundwater vapor intrusion screening levels (VISLs) to evaluate the potential for vapor intrusion and the necessity for an investigation associated with this media. A multi-media investigation selection process tree, applicable to the LBMH UST investigations, is presented as Appendix A.

2.0 SAMPLING ACTIVITIES AND RESULTS

The following section presents the sampling activities and associated results for 107 Beech Street (Formerly 262 Beech Street). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 262 Beech Street* (MCAS Beaufort, 2008). The UST Assessment Report is 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). 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

On July 13, 2007, a single 350 gallon heating oil UST was removed from the front landscaped bed area adjacent to the driveway at 107 Beech Street (Formerly 262 Beech Street). The former UST location is indicated on the figures of the UST Assessment Report (Appendix B). The UST was removed, cleaned, and shipped offsite for recycling. There was no visual evidence (i.e.,



staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depth to the base of the UST was 4'7" bgs and a single soil sample was collected from that depth. An additional soil sample was collected at the side of the excavation at a depth of 3'7". The sample was 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 and side of the excavation and shipped to an offsite laboratory for analysis of the petroleum COPCs. Sampling was performed in accordance with applicable South Carolina regulation R.61-92, Part 280 (SCDHEC, 2017) and assessment guidelines.

2.2 Soil Analytical Results

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

The soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form (Appendix B). The results of the soil sampling at the former UST location were used by MCAS Beaufort, in consultation with SCDHEC, to determine a path forward (i.e., additional sampling or NFA) for the property. The soil results collected from 107 Beech Street (Formerly 262 Beech Street) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated September 3, 2008, SCDHEC requested an IGWA for 107 Beech Street (Formerly 262 Beech Street) to determine if the groundwater was impacted by petroleum COPCs. SCDHEC's request letter is provided in Appendix D.

2.3 Groundwater Sampling

On July 30, 2008, a temporary monitoring well was installed at 107 Beech Street (Formerly 262 Beech Street), in accordance with the South Carolina Well Standards and Regulations (R.61-71.H-I, updated June 24, 2016). In order to provide data that can be used to determine whether COPCs are migrating to underlying groundwater, the monitoring well was placed in the same general location as the former heating oil UST. The former UST location is indicated on the figures of the UST Assessment Report (Appendix B). Further details are



provided in the Investigation of Ground Water at Leaking Heating Oil UST Sites Report (Resolution Consultants, 2008).

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

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 107 Beech Street (Formerly 262 Beech Street) were less than the SCDHEC RBSLs and the site specific groundwater VISLs (Table 2), which indicated that the groundwater was not impacted by COPCs associated with the former UST at concentrations that present a potential risk to human health and the environment.

3.0 PROPERTY STATUS

Based on the analytical results for groundwater, SCDHEC made the determination that NFA was required for 107 Beech Street (Formerly 262 Beech Street). This NFA determination was obtained in a letter dated November 20, 2008. SCDHEC's NFA letter is 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 – 262

Beech Street, Laurel Bay Military Housing Area, January 2008.

Resolution Consultants, 2008. *Initial Groundwater 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*, September 2008.





- 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 107 Beech Street (Formerly 262 Beech Street) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort

Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Results Samples Collected 07/13/0		
Constituent	SCOHEC RBSLS	262 Beech Bottom 01	262 Beech Side 02	
Volatile Organic Compounds Analyzed	by EPA Method 8260B (mg/kg)			
Benzene	0.003	ND	0.000141	
Ethylbenzene	1.15	0.000692	0.00105	
Naphthalene	0.036	0.0118	0.0134	
Toluene	0.627	ND	0.000485	
Xylenes, Total	13.01	ND	ND	
Semivolatile Organic Compounds Ana	lyzed by EPA Method 8270D (mg/kg)			
Benzo(a)anthracene	0.66	0.09	ND	
Benzo(b)fluoranthene	0.66	0.045	ND	
Benzo(k)fluoranthene	0.66	ND	ND	
Chrysene	0.66	0.0843	0.051	
Dibenz(a,h)anthracene	0.66	ND	ND	

Notes:

⁽¹⁾ South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 1.0 and 1.1 (SCDHEC, May 2001 and SCDHEC, February 2011) and the Underground Storage Tank Assessment Guidelines (SCDHEC, February 2006).

Bold font indicates the analyte was detected.

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

EPA - United States Environmental Protection Agency

mg/kg - 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 107 Beech Street (Formerly 262 Beech Street) Laurel Bay Military Housing Area Marine Corps Air Station Beaufort Beaufort, South Carolina

Constituent	SCDHEC RBSLs (1)	Site-Specific Groundwater VISLs (µg/L) ⁽²⁾	Results Sample Collected 07/30/08						
Volatile Organic Compounds Analyzed by EPA Method 8260B (μg/L)									
Benzene	5	16.24	ND						
Ethylbenzene	700	45.95	ND						
Naphthalene	25	29.33	ND						
Toluene	1000	105,445	ND						
Xylenes, Total	10,000	2,133	ND						
Semivolatile Organic Compounds Ana	lyzed by EPA Method 82700) (μg/L)							
Benzo(a)anthracene	10	NA	ND						
Benzo(b)fluoranthene	10	NA	ND						
Benzo(k)fluoranthene	10	NA	ND						
Chrysene	10	NA	ND						
Dibenz(a,h)anthracene	10	NA	ND						

Notes:

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

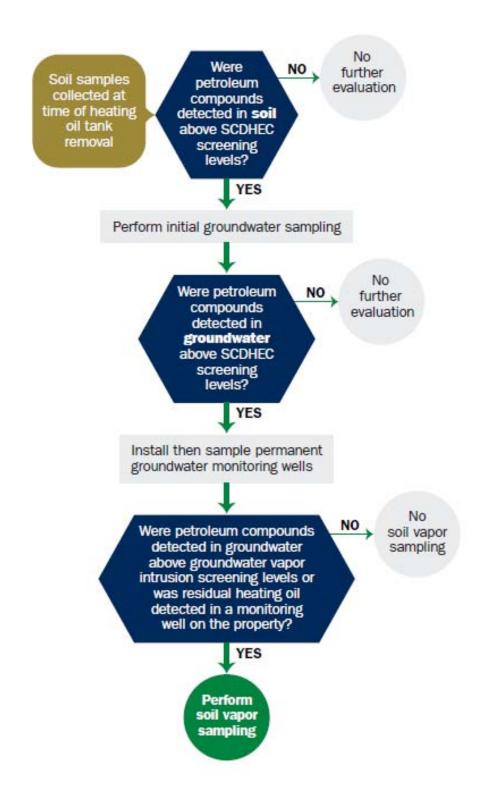
VISL - Vapor Intrusion Screening Level

⁽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.

Appendix A Multi-Media Selection Process for LBMH





Appendix A - Multi-Media Selection Process for LBMH

Appendix B UST Assessment Report



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



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 Compley Family Housing Owner Name (Corporation, Individual Public Agency Other)
Mailing Address BAY BLVD.
Beaufort SC 29906
843 Area Code State 379-3305 Zip Code Kyle Broad F007 Contact Person

II. SITE IDENTIFICATION AND LOCATION

N/A

Permit I.D. # Actus Lend Lense Construction

Facility Name or Company Site Identifier

262 BEECH

Street Address or State Road (as applicable)

Beaufort, SC 29906

City

Beaufort

County

Attachment 2 III. INSURANCE INFORMATION

	Insu	rance Stateme	nt ·	*	
The petroleum release monies to pay for appropriate fund, written confirmation of section must be completed.					
Is there now, or has th UST release? YES_	ere ever been an ins NO (chec	urance policy or o k one)	ther financia	l mechanism t	hat covers this
If you answered	d YES to the above	question, please co	omplete the f	following info	rmation:
	My policy provider	ie			
•	The policy deductib	le ic			
	The policy deductib			•	
	1.				
If you have this type of	finsurance, please in	nclude a copy of th	e policy wit	h this report.	
		And			
	~	•			
l do/do	not (circle one) wis	h to participate in	the Superb F	rogram.	
			•	<u> </u>	i
				_	
D/ CEDUTERO	. 				· · · · · · · · · · · · · · · · · · ·
IV. CERTIFIC	ATION (To be signal	gned by the UST	owner/oper	ator.)	
certify that I have personall ttached documents; and that aformation, I believe that the	er omanistic i i i	— •••			in this and all aining this
ame (Type or print.)				9	
() Proposition					
ignature				-	
o be completed by Not	ary Publica			3	į
and sompleted by 110t.	ary rubiic:				
worn before me this	day of	, 20			
(Name)	· · · · · · · · · · · · · · · · · · ·				Ţ.
otary Public for the state of					ı
otary Public for the state of ease affix State seal if you are	commissioned out-	da Court C		•	
JJ = ===== g you are	commissioned OUISI	ue Douin Carolina			
the second secon					

A. Product(ex. Gas, Kerosene)		ODI LOMMATION		Tank 1	1-	T		, -	
A. Product(ex. Gas, Kerosene) B. Capacity(ex. 1k, 2k)				lank l	Tan	Tank 3	Tank 4	Tank 5	Tank
D. Construction Material(ex. Steel, FRP)	A.	Product(ex. Gas, Kerosene)		Ш					
D. Construction Material(ex. Steel, FRP)	B.	Capacity(ex. 1k, 2k)		358g.					
E. Month/Year of Last Use	C.	Age							
F. Depth (ft.) To Base of Tank	D.	Construction Material(ex. Steel, FRP)		Steel					
G. Spill Prevention Equipment Y/N	E.	Month/Year of Last Use							
H. Overfill Prevention Equipment Y/N	F.	Depth (ft.) To Base of Tank		551					
H. Overfill Prevention Equipment Y/N	G.	Spill Prevention Equipment Y/N							
J. Date Tanks Removed/Filled	H.	Overfill Prevention Equipment Y/N		N					
Date Tanks Removed/Filled	I.	Method of Closure Removed Filled		Pin oved					
Visible Holes Y/N	J.	Date Tanks Removed/Filled		-		_	<u> </u>		
Method of disposal for any USTs removed from the ground (attach disposal manifests) Recycling - Scanp Steel Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests)	K.	Visible Corrosion or Pitting Y/N	7-	13-07					
Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests)	Ĺ.	- Mar	1	<u>u</u>					
Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests)	Л	Method of dia		1					
Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach	1.	remod of disposal for any USTs removed from the	ne gro	und (atta	ch dispo	sal manif	ests)	-	
Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests) Broadlangest Landfull Scleven, G. Solidification 4 Silitation		Recycling - SCRAP Ste	rel						
BROAdlusest Landfill Schere, G. Solidification 4 Silitation	•	Method of disposal for any liquid petroleum, sludge	es or	Wro otover	4				
Solidification + Sift + 1. D. 1.	-	Bandlement Bandlement	-c, or / n	wasicwa	lers remo	oved from	n the US	Ts (attaci	h •
Soudification + (), fit to)		80.0:1	_ K	nce g	142	<u> </u>	leve	wi (9A
Day July CANA		Dolidificatio.	<u>ک '</u>	4 U	261	the	: D	LAN	Af.
	_	NO CORPOSION HAD OCCUPSED	<u>. The</u>	TAN	uon and ≝_i_('Y'	extent fo ンとぞう(r each U	ST. "	ري در
If any corrosion, pitting, or holes were observed, describe the location and extent for each UST NO CORPOSION HAD OCCUPRED. THE TANK LYDKED GOOD. SIX INC. HOLE IN THE TOP OF THE TANK I TOP GOOD.	•	HOLE IN THE TOP OF THE TANK	.Tp	INK ,	NAS	<u></u>	06 L arkrit1.	<u>いいへ</u> 1ロー	<u> </u>

O.

VI. PII GINFORMATION

		Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank
	Construction Material(ex. Steel, FRP)	Steel					
	Distance from UST to Dispenser	NIA					
	Number of Dispensers	N)#					
	Type of System Pressure or Suction	-0-					
	Was Piping Removed from the Ground? Y/N	Electric Pump					
	Visible Corrosion or Pitting Y/N	4					
	Visible Holes Y/N						
	Age	7					
	·	2					
	If any corrosion, pitting, or holes were observed, des File Pipe And Vent Cokhoded -	DIP.	e l	sere	- M	e left	<u> </u>
	VII. BRIEF SITE DESCRIPTION AND F	HISTOR	Y				
	Home Heating Oil TAN)K -	Res	IDEN	 571A2		
			· -				
	•						
_							
_							
_							

VIII. SITE CC DITIONS

	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.		*	
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.)		*	
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:		7	
E. Was a petroleum sheen or free product detected on any excavation or boring waters? If yes, indicate location and thickness.		*	

SCDHEC Lab Certification Number DW: 84009002

Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of		OVA#
			(Suite City)	<u></u>	Collection	by	<u>. </u>
1	BOTTOM	5	MIX	55"	1 12.0	ELHEVARAYA AMANUCY	ND
2	SIDE	5	MIX	43"	41	PLANTER CO	ND
3					1.0	1 KIN WAY	100
4							
_ 5							
6							
7 .							
8							
9					· · ·		
10				-			 -
11							<u> </u>
12				 ∦			· · · · · · · · · · · · · · · · · · ·
13							—— <u> </u>
14							
15							
16							
17							
18							
19		•					
20							

* = Depth Below the Surrounding Land Surface

X.

SAMPLING METHODO OGY

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.

XI. RECEP RS

	Are there and 1.1	Yes	No
-	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.		メ
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.		1
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.		1
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	1	T GD a
Веплепе	- 	 		00-4	36-3	3B-0	SB-7	SB-8
Toluene				 	 		+	<u> </u>
Ethylbenzene	-	-	 	 	 			
Xylenes		 -	 	 		 -		
Naphthalene			 			 		
Benzo(a)anthracene			<u>. </u>					
Benzo(b)flouranthene		<u>. </u>	 					
Benzo(k)flouranthene				<u> </u>				
Chrysene			<u> </u>					
Dibenz(a,h)anthracene						<u></u>		
TPH (EPA 3550)					<u> </u>			
	<u> </u>					<u></u> <u>_</u>		·

CoC	SB-9	SB-10	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16
Benzene							05 15	OD-10
Toluene								
Ethylbenzene								
Xylenes								
Naphthalene								<u> </u>
Benzo(a)anthracene								
Benzo(b)flouranthene								
Benzo(k)flouranthene					.			<u> </u>
Chrysene							-	
Dibenz(a,h)anthracene								
TPH (EPA 3550)							.	

SUMMARY OF ANALYSIS RESULTS (cont'd)

NLA

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.

	d unckness to	o die nealest (7.01 1661.		<u>#* </u>
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	,			1
Total BTEX	N/A				
MTBE	40				<u> </u>
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				
_ead	Site specific				

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)

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

Client: EPG, INC.

PO BOX 1096

MT PLEASANT, SC 29465

JOHN MAHONEY Attn:

Work Order:

OQG0323

Project: Project Number: LAUREL BAY

EP2362

Sampled: 07/12/07-07/13/07

Received: 07/17/07

LABORATORY REPORT

Sample ID: 226 CYPRESS SIDE 02 - Lab Number: OQG0323-04 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
Polynucle	ar Aromatic Hydrocarbons	by EPA Method 82	70	•••••••						-	
83-32-9	Acenaphthene	82,6	U	ug/kg dry	82.6	186					•
208-96-8	Acenaphthylene	109	Ū	ug/kg dry	109		1	07/24/07 10:02	ЛS	EPA 8270C	7G19004
120-12-7	Anthracene	59.4	U	ug/kg dry		186	1	07/24/07 10:02	JLS	EPA 8270C	7G19004
56-55-3	Benzo (a) anthracene	20,2	U		59,4	186	1	07/24/07 10:02	ЛS	EPA 8270C	7G19004
205-99-2	Benzo (b) fluoranthene	19.6		ug/kg dry	20.2	186	1	07/24/07 10:02	ЛS	EPA 8270C	7G19004
207-08-9	Benzo (k) fluoranthene	19.6	U 	ug/kg dry	19.6	186	1	07/24/07 10:02	JLS	EPA 8270C	7G19004
191-24-2	Benzo (g,h,i) perylene	19.3	U	ug/kg dry	19.6	1 8 6	1	07/24/07 10:02	ЛS	EPA 8270C	7G19004
50-32-8	Benzo (a) pyrene	22.9	v	ug/kg dry	19.3	186	1	07/24/07 10:02	ЛS	EPA 8270C	7G19004
90-12-0	1-Methylnaphthalene		U	ug/kg dry	22.9	186	1	07/24/07 10:02	JLS	EPA 8270C	7G19004
218-01-9	Chrysene	93.5	U	ug/kg dry	93.5	186	1	07/24/07 10:02	JLS	EPA 8270C	7G19004
53-70-3	Dibenz (a,h) anthracene	22.3	บ	ug/kg dry	22.3	186	1	07/24/07 10:02	JLS	EPA 8270C	7G19004
206-44-0	Fluoranthene	24.5	U	ug/kg dry	24.5	186	1	07/24/07 10:02	JLS	EPA 8270C	7G19004
86-73-7	Fluorene	26 R	ū	ಗಡಿ∤¢ತಿ ಫಾಸಿ	26.8	185	2	07/24/07 10:02	II.S	EPA 8270C	7G19004
193-39-5	=-	72.9	U	ug/kg dry	72.9	186	1 -	07/24/07 10:02	JLS	EPA 8270C	7G19004
91-57-6	Indeno (1,2,3-cd) pyrene	24.1	U	ug/kg dry	24.1	186		07/24/07 10:02	ILS	EPA 8270C	
•	2-Methylnaphthalene	79.4	υ	ug/kg dry	79.4	186		07/24/07 10:02	ЛS		7G19004
91-20-3	Naphthal cne	74.8	ប	ug/kg dry	74.8	186		07/24/07 10:02	лs	EPA 8270C	7G19004
85-01-8	Phenanthrene	43.9	บ	ug/kg dry	43.9	186		07/24/07 10:02	-	EPA 8270C	7G19004
129-00-0	Pyrene	37.9	ប	ug/kg dry	37.9	186			n.s	EPA 8270C	7G19004
	luorobiphenyl (24-121%)	60 %		- U J	51.5	160	٠,	07/24/07 10:02	ЛS	EPA 8270C	7G19004
	obenzene-d5 (19-111%)	60 %			•						
Surrogate: Terp	ohenyl-d14 (44-171%)	109 %									

LABORATORY REPORT

Sample ID: 262 BEECH BOTTOM 01 - Lab Number: OQG0323-05 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch	-
General (Chemistry Parameters			•		• • • •		······				
NA	% Solids	76,3		%.	0.100							-
Volatile (Organic Compounds by EPA M	fethod 8260B		/u,	0.100	0.100	1	07/18/07 16:50	RRP	EPA 160.3	7G18042	
71-43-2	Benzene	0.0982	บ	ug/kg dry	0.0000	4-4-						
100-41-4	Ethylbenzene	0.692	Ü		0.0982	0.268	1	07/17/07 18:11	JWT	EPA 8260B	7G17048	
91-20-3	Naphthalene	11.8		ug/kg dry	0.113	0.268	1	07/17/07 18:11	ŢWŢ	EPA 8260B	7G17048	
108-88-3	Toluene	, , , , ,	TWW.	ug/kg dry	0.148	0.268	1	07/17/07 18:11	JWT	EPA 8260B	7G17043	٠
1330-20-7	Xylenes, total	0.232	U	ug/kg dry	0.232	0.268	1	07/17/07 18:11	JWT	EPA 8260B	7G17048	
		0.139	U	⊔g/kg dry	0.139	0.268	1	07/17/07 18:11	ıwı	EPA 8260B	7G17048	
	2-Dichloroethane-d4 (73-137%)	112 %								74 N 0200D	7017048	
	Bromofluorobenzene (59-118%)	96 %										
	ibromofluoromethane (55-145%)	107 %										
Surrogate: To	luene-d8 (80-117%)	100 %										
Polynucles	ar Aromatic Hydrocarbons by	EPA Method 827	n						÷			
83-32-9	Acenaphthene	173	٠,	nades des	04.0				-			
208-96-8	Acenaphthylene	128	 -	ug/kg dry	96.9	219	<u>I</u> _	07/24/07 10:25	ns_	EPA 8270C	7G19004	
120-12-7	Anthracene		U	ug/kg dry	128	219	I	07/24/07 10:25	JLS	EPA 8270C	7G19004	
56-55-3	Benzo (a) anthracene	214	, I	ug/kg dry	69.8	219	1	07/24/07 10:25	ЛS	EPA 8270C	7G19004	
5	Serve (2) antitacede	90.0	I	ug/kg dry	23.7	219	1	07/24/07 10:25	ILS	FPA 8270C	7010004	

TestAmerica - Orlando, FL

Shali Brown

Project Manager

ANALYTICAL TESTING CORPORATION

4310 East Anderson Road Orlando, FL 32612 * 800-851-2560 * Fax 407-856-0886

Client: EPG, INC.

PO BOX 1096

MT PLEASANT, SC 29465

Attn: JOHN MAHONEY Work Order:

OQG0323

Project: Project Number:

LAUREL BAY

EP2362

Sampled:

07/12/07-07/13/07

Received: 07/1*7/*07

LABORATORY REPORT

Sample ID: 262 BEECH BOTTOM 01 - Lab Number: OQG0323-05 - Matrix: Solid/Soil

Polynuclear Aromatic Hydrocarbons by EPA Method 8270 - Cont.	MDI, 23.0 23.0	PQL 	Factor	Analyzed Date/Time	Ву		
207-08-9 Benzo (k) fluoranthene 23.0 U ug/kg dry 191-24-2 Benzo (g,h,i) perylene 22.7 U ug/kg dry 50-32-8 Benzo (a) pyrene 26.9 U ug/kg dry 90-12-0 I-Methylnaphthalene 551 ug/kg dry 218-01-9 Chryseue 84.3 I ug/kg dry 53-70-3 Dibenz (a,h) anthracene 28.7 U ug/kg dry 206-44-0 Fluoranthene 159 I ug/kg dry 86-73-7 Fluorene 85.6 U ug/kg dry 193-39-5 Indeno (1,2,3-cd) pyrene 28.3 U ug/kg dry 91-57-6 2-Methylnaphthalene 732 ug/kg dry 91-57-6 2-Methylnaphthalene 732 ug/kg dry 91-50-3 Nathablese 25.0 U ug/kg dry 91-20-3 Nathablese 556 ug/kg dry 91-20-0 Pyrene 556 ug/kg dry 92-00-0 Pyrene 251 ug/kg dry	23.0	219				Method	Batch
207-08-9 Benzo (k) fluoranthene 23.0 U ug/kg dry 191-24-2 Benzo (g,h,i) perylene 22.7 U ug/kg dry 50-32-8 Benzo (a) pyrene 26.9 U ug/kg dry 90-12-0 I-Methylnaphthalene 551 ug/kg dry 218-01-9 Chrysene 84.3 I ug/kg dry 53-70-3 Dibenz (a,h) anthracene 28.7 U ug/kg dry 206-44-0 Fluoranthene 159 I ug/kg dry 159 I ug/kg dry 193-39-5 Indeno (1,2,3-cd) pyrene 28.3 U ug/kg dry 191-57-6 2-Methylnaphthalene 732 ug/kg dry 218-01-8 Phenanthrene 556 ug/kg dry 25-01-8 Phenanthrene 556 ug/kg dry 25-00-0 Pyrene 251 ug/kg dry 25-00-0 Pyrene 251 ug/kg dry 25-00-0 Pyrene 251 ug/kg dry	23.0	219			• • • • • •		
191-24-2 Benzo (g,h,i) perylene 22.7 U ug/kg dry 50-32-8 Benzo (a) pyrene 26.9 U ug/kg dry 90-12-0 I-Methylnaphthalene 551 ug/kg dry 218-01-9 Chrysene 84.3 I ug/kg dry 53-70-3 Dibenz (a,h) anthracene 28.7 U ug/kg dry 206-44-0 Fluoranthene 159 I ug/kg dry 159-37-7 Fluorene 85.6 U ug/kg dry 193-39-5 Indeno (1,2,3-cd) pyrene 28.3 U ug/kg dry 191-57-6 2-Methylnaphthalene 732 ug/kg dry 191-57-6 2-Methylnaphthalene 732 ug/kg dry 191-57-6 Phenanthrene 556 ug/kg dry 192-20-3 Neptithelene 556 ug/kg dry 192-20-0 Pyrene 556 ug/kg dry 192-20-0 Pyrene 556 ug/kg dry 192-20-0 Pyrene 251 ug/kg dry 192-20-0 ug/kg dry 193-39-5 ug/kg dry			ı	07/24/07 10:25			
50-32-8 Benzo (a) pyrene 26.9 U ug/kg dry 90-12-0 I-Methyinaphthalene 551 ug/kg dry 218-01-9 Chrysene 84.3 I ug/kg dry 53-70-3 Dibenz (a,h) anthracene 28.7 U ug/kg dry 206-44-0 Fluoranthene 159 I ug/kg dry 86-73-7 Fluorene 85.6 U ug/kg dry 193-39-5 Indeno (1,2,3-cd) pyrene 28.3 U ug/kg dry 10-57-6 2-Methylnaphthalene 732 ug/kg dry 10-20-3 Narthalene 732 ug/kg dry 10-20-3 Narthalene 556 ug/kg dry 10-00-0 Pyrene 556 ug/kg dry 10-10-00 Pyrene 251 ug/kg dry 10-10-00 Ug/kg dry 10-10-10 Ug		219	. 1		ЛLS	EPA 8270C	7G19004
90-12-0 I-Methylnaphthalene 551 ug/kg dry 218-01-9 Chrysene 84.3 I ug/kg dry 53-70-3 Dibenz (a,h) anthracene 28.7 U ug/kg dry 206-44-0 Fluoranthene 159 I ug/kg dry 86-73-7 Fluorene 85.6 U ug/kg dry 193-39-5 Indeno (1,2,3-cd) pyrene 28.3 U ug/kg dry 21-57-6 2-Methylnaphthalene 732 ug/kg dry 21-20-3 Natholene 556 ug/kg dry 25-01-8 Phenanthrene 556 ug/kg dry 29-00-0 Pyrene 251 ug/kg dry 25-01-0 Pyrene 251 ug/kg dry	22.7	219		07/24/07 10:25	л.s	EPA 8270C	7G19004
218-01-9 Chrysene 84.3 I ug/kg dry 218-01-9 Dibenz (a,h) anthracene 28.7 U ug/kg dry 206-44-0 Fluoranthene 159 I ug/kg dry 26-73-7 Fluorene 85.6 U ug/kg dry 293-39-5 Indeno (1,2,3-cd) pyrene 28.3 U ug/kg dry 21-57-6 2-Methylnaphthalene 732 ug/kg dry 2-20-3 Naphthalene 732 ug/kg dry 2-01-8 Phenanthrene 556 ug/kg dry 29-00-0 Pyrene 251 ug/kg dry 25-01-8 Presentations 556 ug/kg dry 25-01-8 Phenanthrene 556 ug/kg dry 25-00-0 Pyrene 251 ug/kg dry	26,9	219	1	07/24/07 10:25	JLS	EPA 8270C	7G19004
Sacrops	110		1	07/24/07 10:25	ЛS	EPA 8270C	7G19004
28.7 U ug/kg dry 206-44-0 Fluoranthene 159 I ug/kg dry 26-73-7 Fluorene 85.6 U ug/kg dry 293-39-5 Indeno (1,2,3-cd) pyrene 28.3 U ug/kg dry 21-57-6 2-Methylnaphthalene 732 ug/kg dry 21-20-3 Naphthalene 732 ug/kg dry 25-01-8 Phenanthrene 556 ug/kg dry 29-00-0 Pyrene 251 ug/kg dry 25-01-25-1-25-1-25-1-25-1-25-1-25-1-25-1		219	I	07/24/07 10:25	ЛS	EPA 8270C	7G19004
Fluoranthene 159 I ug/kg dry 16-73-7 Fluorene 85.6 U ug/kg dry 193-39-5 Indeno (1,2,3-cd) pyrene 28.3 U ug/kg dry 1-57-6 2-Methylnaphthalene 732 ug/kg dry 1-20-3 Nachthalene 27.0 Ug/kg dry 1-20-3 Phenanthrene 556 ug/kg dry 19-00-0 Pyrene 251 ug/kg dry 19-00-0 Ug/kg dry 10-00-0 Ug/k	26.2	. 219	1	07/24/07 10:25	ЛS	EPA 8270C	7G19004
1	28.7	219	1	07/24/07 10:25	JLS	EPA 8270C	
193-39-5 Indeno (1,2,3-cd) pyrene 28.3 U ug/kg dry 1-57-6 2-Methylnaphthalene 732 ug/kg dry 1-20-3 Naphthalene 27.0 Ug/kg dry 5-01-8 Phenanthrene 556 ug/kg dry 29-00-0 Pyrene 251 ug/kg dry 251 ug/kg dry	31.5	219	I	07/24/07 10:25	л.s	EPA 8270C	7G19004
1-57-6 2-Methylnaphthalene 732 ug/kg dry 1-20-3 Northalene 732 ug/kg dry 5-01-8 Phenanthrene 556 ug/kg dry 29-00-0 Pyrene 251 ug/kg dry 251 ug/kg dry	85.6	219		07/24/07 10:25	ЛS		7G19004
1-20-3 Naphthal 27.0 U ug/kg dry 5-01-8 Phenanthrene 556 ug/kg dry 19-00-0 Pyrene 251 ug/kg dry 19-00-0 U ug/kg dry 19-00-0 U ug/kg dry	28,3	219		07/24/07 10:25	ЛS	EPA 8270C	7G19004
75-01-8 Phenanthrene 556 ug/kg dry 29-00-0 Pyrene 251 ug/kg dry 251 ug/kg dry	93.3	219		07/24/07 [0:25	_	EPA 8270C	7G19004
29-00-0 Pyrene 556 ug/kg dry urrogate: 2-Fluorobinhem/ (24-12194) ug/kg dry	G7.9	219			JLS	EPA 8270C	7G19004
17TOgate: 2-Fluorobinhemil (24.1314)	51.6	219		77/24/07 10:23	īLā	EPA 8270C	7619004
	44.5			7/24/07 10:25	ЛS	EPA 8270C	7G19004
2700000 Nine I	7 1.5	219	1 0	7/24/07 10:25	ЛS	EPA 8270C	7G19004
progate: Nitrobenzene-d5 (19-111%) 64 %							
rrogate: Terphenyl-dl 4 (44-171%) 107 %						٠	

LABORATORY REPORT

Sample ID: 262 BEECH SIDE 02 - Lab Number: OQG0323-06 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	'MDL	PQL	Dil	Analyzed			
General NA	Chemistry Parameters % Solids						Facto	Date/Time	By	Method	Batch
Volatile (71-43-2	Organic Compounds by EPA N			%.	0.100	0.100	1	07/19/07 17:20	RRP	EPA 160.3	7G19063
100-41-4 91-20-3 108-88-3 1330-20-7	Ethylbenzene Naphthalene Toluene Xylenes, total 2-Dichloroethane-d4 (73-137%)	0.141 1.05 13.4 0.485 0.135	1 14 U	ug/kg dry ug/kg dry ug/kg dry ug/kg dry ug/kg dry	0.0954 0.110 0.144 0.225 0.135	0.261 0.261 0.261 0.261	1 1 f 1	07/18/07 11:39 07/18/07 11:39 07/18/07 11:39 07/18/07 11:39	TWI TWI TWI	EPA 8260B EPA 8260B EPA 8260B EPA 8260B	7G17048 7G17048 7G17048 7G17048
urrogate: 4- urrogate: Di urrogate: To	Bromofluorobenzene (59-118%) bromofluoromethane (55-145%) luene-d8 (80-117%) tr Aromatic Hydrocarbons by	108 %		To Autority of the	tra ja	Smawn e.s.	1	07/18/07 11:39	·	EPA \$260B	7G17048
08-96-8 0-12-7 -55-3 5-99-2	Acenaphthylene Authracene Benzo (a) anthracene Benzo (b) fluoranthene Benzo (k) fluoranthene	141 124 245 23.0 	ր Մ Մ	ug/kg dry	94.3 124 67.9 23.0	213 213 213 213 213	1 1 . 1	07/24/07 10:47 07/24/07 10:47 07/24/07 10:47 07/24/07 10:47	ILS ILS ILS ILS	EPA 8270C EPA 8270C EPA 8270C EPA 8270C EPA 8270C	7G19004 7G19004 7G19004 7G19004
7-24-2 7-8 TestA	Benzo (g,h,i) perylene Benzo (a) pyrene .merica - Orlando, FL	22.1 26.2	υ U	ug/kg dry ug/kg dry	22.4 22.1 26.2	213 213 213	1 (07/24/07 10:47 07/24/07 10:47 07/24/07 10:47	jls jls	EPA 8270C EPA 8270C EPA 8270C	7G19004 7G19004 7G19004

Shali Brown

Project Manager

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

Client: EPG, INC.

PO BOX 1096

MT PLEASANT, SC 29465

Attn: JOHN MAHONEY Work Order:

OQG0323

Project:

LAUREL BAY

Project Number: EP2362 Sampled:

07/12/07-07/13/07

Received: 07/17/07

LABORATORY REPORT

Sample ID: 262 BEECH SIDE 02 - Lab Number: OQG0323-06 - Matrix: Solid/Soil

040#							TO 3				
CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
Polynucle	ar Aromatic Hydrocarbons l	v EPA Method 82	70 . Con	• • • • • • • • • • • • • • • • • • •		· - • • · • •					
90-12-0	1-Methylnaphthalene	124	70 - COH	ug/kg dry	107	212					
218-01-9	Chrysene	51.0	•	- • •		213	1	07/24/07 10:47	ЛS	EPA 8270C	7G19004
53-70-3	Dibenz (a,h) anthracene	27.9	**	ug/kg dry	25.5	213	1	07/24/07 10:47	JLS	EPA 8270C	7G19004
206-44-0	Fluorauthene	166	U	ug/kg dry	27.9	213	1	07/24/07 10:47	JLS .	EPA 8270C	7G19004
86-73-7	Fluorene		I	ug/kg dry	30.6	213	1	07/24/07 10:47	ЛS	EPA 8270C	7G19004
193-39-5		83.3	U	ug/kg dry	83.3	213	1	07/24/07 10:47	ЛS	EPA 8270C	7G19004
91-57-6	Indeno (1,2,3-cd) pyrene	27.6	U	ug/kg dry	27.6	213	ı	07/24/07 10:47	ЛS	EPA 8270C	7G19004
	2-Methyinaphthalene	161	I	ug/kg dry	90.7	213	1	07/24/07 10:47	JLS	EPA 8270C	7G19004
91-20-3	Naphthalene	85,5	υ	ug/kg dry	85.5	213	1	07/24/07 10:47	ЛS	EPA 8270C	
85-01-8	Phenauthrene	895	•	ug/kg dry	50.2	213		07/24/07 10:47	ЛS	-	7G19004
129-00-0	Pyrene	220		ug/kg dry	43.2	213				EPA 8270C	7G19004
Surrogate: 2-F	luorobiphenyl (24-121%)	59 %		<i>3</i> 3 – 3		413		07/24/07 10:47	ЛS	EPA 8270C	7G19004
Surrogate: Nit.	rohenzene-d5 (10 11196)	59.76									
Surrogate: Ter	phenyl-d14 (44-171%)	99 %									

LABORATORY REPORT

Sample ID: 258 BEECH BOTTOM 01 - Lab Number: OQG0323-07 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
General	Chemistry Parameters					• • • • • • • • • •	• • •		• • • • • • •	• • • • • • • • • • • • • • • • • • • •	·····
NA	% Solids	86.8		%.	0.100	0.100	,	07/10/17 17 00			
Volatile (Organic Compounds by EPA N	fethod 8260B			0.100	0.100	1	07/19/07 17:20	RRP	EPA 160.3	7G19063
71-43-2	Benzene	0.121	U	ug/kg dry	0.121	0.330	1	0711707 1000			
100-41-4	Ethylbenzene	3.31		ug/kg dry	0.139	0.330		07/17/07 18:28	1ML	EPA 8260B	7G17048
91-20-3	Naphthalene	6.46		ug/kg dry	0.182	0.330	1	07/17/07 18:28	JWT	EPA 8260B	7G17048
108-88-3	Toluene	0.285	U	ug/kg dry	0.182		l	07/17/07 18:28	JWT	EPA 8260B	7G17048
13 30 -20 - 7	Xylenes, total	0.251	ı,v	ug/kg dry		0.330	ì	07/17/07 18:28	TWL	EPA 8260B	7G17048
Surrogate: 1,	2-Dichloroethane-d4 (73-137%)	117%	Ψ,μ	may a go or y	0.171	0.330	1	07/17/07 18:28	JWT	EPA 8260B	7G17048
	Bromofluorobenzene (59-118%)	100 %									
	ibromofluoromethane (55-145%)	109 %									
	oluene-d8 (80-117%)	101 %									
Polynucle	ar Aromatic Hydrocarbons by		70								
33-32 <u>-</u> 9	Acenaphthene Acenaphthene	77. 71. 11. 185 3 ····	. / U 	- ug/kg dry	06.2						
08-96 -8	Acenaphthylene	113	U	-	85.3	192	Ī	07/24/07 11:09	JLS	EPA 8270C	7G19004
20-12-7	Anthracene	61.4	บ	ug/kg dry	113	192	1	07/24/07 11:09	ЛLS	EPA 8270C	7G19004
6-55-3	Benzo (a) anthracene	20.8	บ	ug/kg dry	61.4	192	1	07/24/07 11:09	JLS	EPA 8270C	7G19004
05-99-2	Benzo (b) fluoranthene	20.3		ug/kg dry	20.8	192	1	07/24/07 11:09	JLS	EPA 8270C	7G19004
07-08-9	Benzo (k) fluoranthene	20.3	u 	ug/kg dry	20.3	192	1	07/24/07 11:09	ЛS	EPA 8270C	7G19004
91-24-2	Benzo (g,h,i) perylene	20.0	U	ug/kg dry	20.3	192	1	07/24/07 11:09	JLS	EPA 8270C	7G19004
0-32 -8	Benzo (a) pyrene		U	ug/kg dry	20.0	192	1	07/24/07 11:09	ЛLS	EPA 8270C	7G19004
)-12 -0	I-Methylnaphthalene	23.7	U	ug/kg dry	23.7	192	1	07/24/07 11:09	ЛS	EPA 8270C	7G19004
8-01-9	Chrysene	96.6	U	ug/kg dry	96.6	192	_ 1	<u>07/24/07_11-09</u>	11.5	EPA 8270C	7G19004
-70-3	Dibenz (a,h) anthracene	23.0	v	ug/kg dry	23.0	192	1	07/24/07 11:09	JLS	EPA 8270C	7G19004
6-44-0	Fluoranthene	25.3	ช	ug/kg dry	25.3	192	l	07/24/07 11:09	ЛS	EPA 8270C	7G19004
11.0	, radiantiche	27.7	U	ug/kg dry	27.7	192	1	07/24/07 11:09	ЛS	EPA 8270C	7G19004

TestAmerica - Orlando, FL

Shali Brown

Project Manager

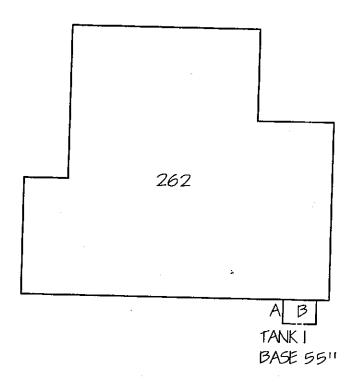
Test/America

0Q6-0323

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?

Client Name	EPG				•		Client	t#: <u>2</u>	24	11				Co	mpliano	• Moni	itoring			proces:	
Address						₩.				<u></u>		D		}	٠ <i>د</i>		13				
City/State/Zip Code:												Proj	ect Nam	e: _ <u></u> _	-1-J()	7.7	DA	7			
Project Manager:	JOHN !	MAH	ひんがく									0: -	Project	تا_:*	ر در	36	<u>عد</u>	·.			
Telephone Number:					Fax					···	- .		ocation (-					Sta	ate:	
Sampler Name: (Print Name)	WIRS E	CHEN	inga	A	1 600			 .					Report To								
Sampler Signature:	Miles	01.0	1 11-11-6	. 4							-	ir	tvoice To			:	···				
		- 		rix Pres		_					\mathcal{A}		Quote #	‡:				_ PO	#:		
XAT Standard			<u>\$</u> ₹	y Pies	ervation	***	of Con	tainera	├	1-8	3	7	Anai	yze Fo	er;				-		
Rush (surcharges may apply)		g.	king Water Soil/Soild	₹						TANA.	7	[Ι.		<i>[</i>	/		T^{-}	7	QC Deliverab None	108
Date Needed:		Composite	Drinkin S - S	20						1 4		/	/ /	'	/ /	٠.	/ /	/ ,	/	Level 2	
	77	Ö	ۇ خا	<u>.</u> ا		}	1.			3	12.23 22.20	- 1					' /			(Batch QC)	ĺ
Fax Results: Y N	Date Sampled	0		ic.				<u>\$</u>	/	7	Üď								_ /	Level 3	
	e Sa	Grad.	Field Filtered SL - Studge D GW - Groundw	\$		_	ᅙ	Other (Specify)	/	XIII (=							- /		Other:	_
SAMPLE ID		1 11 1	SI. S	နှီ နှ	- j	7054	Methanol	ē	/ α	7 8	₹		/		1 -				/		
225 CYPRESS BOTTOM OI	7-12-07 1050	ં હે					1 2		*	7 -	7-	+		/		 	/	<i></i>		REMARKS	
1570 CASKERY JUNE 42 1	-12-07/1040) 2	2	'Ж	1	╁	 	 -		 			ļ			01
226 CYPRESS BOTTON OI	1-12-07 1140)G		\prod		- i	2	2	~	<u>*</u>	 	 	-	 	 -	<u> </u>		<u> </u>	<u> </u>		02
226Cypress Side 62 7	12-07 1150	121					1/2	2	<u> </u>	* · *	 		 		-		 -	ļ	<u> </u>		
262 BEECH BOTTOM OI	1507 900	<u>डि</u>					2	7	<i>*</i>	*	┼	 	╀──┤		 		 	<u> </u>	 		04
262 BEECH SIDE 02	13.07910	C					12	7	<u>``</u>	Х 	 	 	┾╼╌┤		 -	:	 -]05
258 BEECH BOTTOM DI	1307/100	G				1	7	2	<u>.r. </u>	*	<u> </u>	 -	-	 -]96
A	13-07 11:0	C			7-1-	1	2		<u>↓.</u>	<i>T</i> ×	-		 								70
	1307 1240	G			 	1	2		*	<i>y</i> .			}						 		30
258 REECH SIDE OY 7. Special Instructions:	13-07 250				T		$\overline{}$	2		· · · · · · · · · · · · · · · · · · ·			 						<u> </u>		109
				· · · · · · · · · · · · · · · · · · ·									L		LABOR	A TO		1			61 <u>[</u>
·					. •						١		4		ini 😌	t Lab	RY COM	MENTS	3 :		7
Relinquished By: UOV 14 (VQ	2/10	100	D(1) 9	7	illo -		 ,	n -	-//	<u> </u>	/	<i>i</i>		l	F 37	1 .	Temp:		_ 		1
	- I , -	07		Receive	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		44	d	K,	<u>_</u> }	Date:	6	Tight /	1	11 3 114	· · · ·					1
regriguished By well (8)	Date: 6	10 trin	1-4-4-1	Receive		7	1/1/2	17	11			7			Custod	y Seal	8: Y	N	N/A	A	
Relinquished By:	Date:	7-				1		VV	vuc		Date://	17	Time: 1	00	Bottles 86Z	Suppl スプ	Z_SG	iest An `/	nerica:	Y N	1
		Tin	10:	Receive	od By:	V				!	Date:	_	Time:		Method	of Shi	omen•	I En		To TA-01	1/
																J. 4711	-Functif	166		70 (#-1/)	Mar no





BEECH STREET

TANK I EXCAVATION

A-SOIL TEST SIDE SAMPLE @ 43'' B-SOIL TEST BOTTOM SAMPLE @ 55''



CUSTOMER:

BEAUFORT MILITARY COMPLEX FAMILY HOUSING
SITE ADDRESS:

262 BEECH STREET

| SCALE: | 1/16"=1'-0" | SUPPLIER: | EPG INC. | DATE: | 9/22/2007

EPG INC.
P.O. BOX 1096
MOUNT PLEASANT, SC 29465-1096

262 BEECH 7-13-07

52"

BASE DEPTH 55"

Appendix C Laboratory Analytical Report - Groundwater





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

Project:

LAUREL BAY 7/30/08

Pace Project No.:

9224584

Sample: 262 BEECH A	Lab ID: 9224584015	Collected: 07/30/0	08 09:30	Received: 08	3/01/08 07:55 N	latrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM SPE	Analytical Method: EPA	8270 by SIM Preparat	ion Meth	nod: EPA 3535			
Acenaphthene	ND ug/L	2.0	1	08/05/08 00:00	08/13/08 17:09	83-32-9	
Acenaphthylene	ND ug/L	1.5	1	08/05/08 00:00	08/13/08 17:09	208-96-8	
Anthracene	ND ug/L	0.050	1	08/05/08 00:00	08/13/08 17:09	120-12-7	
Benzo(a)anthracene	ND ug/L	0.10	1	08/05/08 00:00	08/13/08 17:09	56-55-3	
Benzo(a)pyrene	ND ug/L	0.20	1	08/05/08 00:00	08/13/08 17:09	50-32-8	
Benzo(b)fluoranthene	ND ug/L	0.30	1		08/13/08 17:09		
Benzo(g,h,i)perylene	ND ug/L	0.20	1		08/13/08 17:09		
Benzo(k)fluoranthene	ND ug/L	0.20	1	08/05/08 00:00	08/13/08 17:09	207-08-9	
Chrysene	ND ug/L	0.10	1		08/13/08 17:09		
Dibenz(a,h)anthracene	ND ug/L	0.20	1		08/13/08 17:09		
Fluoranthene	ND ug/L	0.30	1		08/13/08 17:09		
Fluorene	ND ug/L	0.31	1		08/13/08 17:09		
Indeno(1,2,3-cd)pyrene	ND ug/L	0.20	1		08/13/08 17:09		
1-Methylnaphthalene	ND ug/L	2.0	1		08/13/08 17:09		
2-Methylnaphthalene	ND ug/L	2.0	1		08/13/08 17:09		
Naphthalene	ND ug/L	1.5	1		08/13/08 17:09		
Phenanthrene	ND ug/L	0.20	1		08/13/08 17:09		
Pyrene	ND ug/L	0.20	1		08/13/08 17:09		
Nitrobenzene-d5 (S)	51 %	50-150	1		08/13/08 17:09		
2-Fluorobiphenyl (S)	53 %	50-150	1		08/13/08 17:09		
Terphenyl-d14 (S)	62 %	50-150	1		08/13/08 17:09		
8260 MSV Low Level	Analytical Method: EPA		,	00/00/00 00:00	00, 10,00 17.00	1710010	
Benzene	ND ug/L	1.0	1		08/09/08 15:26	74 42 2	
Ethylbenzene	ND ug/L	1.0	1		08/09/08 15:26		
Naphthalene	ND ug/L	1.0	1		08/09/08 15:26		
Toluene	ND ug/L		1		08/09/08 15:26		
m&p-Xylene	ND ug/L	1.0 2.0	1		08/09/08 15:26		
o-Xylene							
4-Bromofluorobenzene (S)	ND ug/L	1.0	1		08/09/08 15:26		
Dibromofluoromethane (S)	98 %	87-109	1		08/09/08 15:26		
` '	98 %	85-115	1		08/09/08 15:26		
1,2-Dichloroethane-d4 (S) Toluene-d8 (S)	98 % 99 %	79-120 70-120	1 1		08/09/08 15:26 08/09/08 15:26		
Sample: TCLP A	Lab ID: 9224584016	Collected: 07/30/0	08 17:20	Received: 08	/01/08 07:55 N	latrix: Solid	
Results reported on a "wet-weigh	t" basis						
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV TCLP Sep Funnel	Analytical Method: EPA	8270 Preparation Met	hod: EPA	A 3510			
1,4-Dichlorobenzene	ND ug/L	50.0	1	08/09/08 00:00	08/13/08 00:55	106-46-7	
	ND ug/L	50.0	1	08/09/08 00:00			
2.4-Dinitrotoluene				20,00,00	00,10,00 00.00		
*	•			08/09/08 00:00	08/13/08 00:55		
2,4-Dinitrotoluene Hexachloro-1,3-butadiene Hexachlorobenzene	ND ug/L ND ug/L	50.0 50.0	1 1	08/09/08 00:00 08/09/08 00:00	08/13/08 00:55 08/13/08 00:55	87-68-3	

Date: 08/14/2008 04:21 PM

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,

Page 16 of 29





Appendix D Regulatory Correspondence



BOARD: Paul C. Aughtry, III Chairman Edwin H. Cooper, III

Vice Chairman

Steven G. Kisner Secretary



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

Coleman E Buckhouse, MD

M. David Mitchell, MD

BOARD:

Henry C. Scott

Glenn A. McCall

3 September 2008

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

Re:

MCAS - Laurel Bay Housing - 262 Beech

Site ID # 04027

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, 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 (via pdf)



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 - 262 Beech

Site ID # 04027

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

Jah T. Cooke, Hydrogeologist

B. Thomas Kanight, 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