SUMMARY REPORT 175 GARDENIA DRIVE (FORMERLY 1057 GARDENIA 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 175 Gardenia Drive (Formerly 1057 Gardenia 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	
001	underground storage tank
VISL	underground storage tank 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 175 Gardenia Drive (Formerly 1057 Gardenia 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 175 Gardenia Drive (Formerly 1057 Gardenia Drive). Details regarding the soil investigation at this site are provided in the *SCDHEC UST Assessment Report – 1057 Gardenia Drive* (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* (PANDEY Environmental, LLC, 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 August 6, 2007, two 280 gallon heating oil USTs were removed at 175 Gardenia Drive (Formerly 1057 Gardenia Drive). Tank 1 was removed from the western portion of the front yard, adjacent to the house. Tank 2 was removed from the eastern portion of the front yard, adjacent to the house. The former UST locations are indicated in the figure of the UST



Assessment Report (Appendix B). The USTs were removed, cleaned, and shipped offsite for recycling. There was no visual evidence (i.e., staining or sheen) of petroleum impact at the time of the UST removal. According to the UST Assessment Report (Appendix B), the depths to the bases of the USTs were 4'0" (Tank 1) and 4'10" (Tank 2) bgs and a single soil sample was collected for each at that depth. An additional soil sample was collected at the side of the excavation for each tank at a depth of 3'0" (Tank 1) and 3'1" (Tank 2). 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 and side of each excavation and shipped to an offsite laboratory for analysis of the petroleum COPCs. Sampling was performed in accordance with applicable South Carolina regulation R.61-92, Part 280 (SCDHEC, 2017) and assessment guidelines.

# 2.2 Soil Analytical Results

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

The soil sample results were submitted by MCAS Beaufort to SCDHEC utilizing SCDHEC's UST Assessment Report form (Appendix B). The results of the soil sampling at the former UST locations (Tanks 1 and 2) were used by MCAS Beaufort, in consultation with SCDHEC, to determine a path forward (i.e., additional sampling or NFA) for the property. The soil results collected from the former UST locations (Tanks 1 and 2) at 175 Gardenia Drive (Formerly 1057 Gardenia Drive) were greater than the SCDHEC RBSLs, which indicated further investigation was required. In a letter dated August 20, 2008, SCDHEC requested IGWAs be conducted at the former UST locations (Tanks 1 and 2) at 175 Gardenia Drive (Formerly 1057 Gardenia Drive) 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 29, 2008, a temporary monitoring well was installed at 175 Gardenia Drive (Formerly 1057 Gardenia 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 well was



placed in the same general location as the former heating oil USTs (Tanks 1 and 2). The former UST locations are indicated in the figure of the UST Assessment Report (Appendix B). Further details are provided in the *Investigation of Ground Water at Leaking Heating Oil UST Sites Report* (PANDEY Environmental, LLC, 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* (PANDEY Environmental, LLC, 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 175 Gardenia Drive (Formerly 1057 Gardenia 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 175 Gardenia Drive (Formerly 1057 Gardenia Drive). This NFA determination was obtained in a letter dated December 17, 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 1057 Gardenia Drive, Laurel Bay Military Housing Area*, November 2008.
- PANDEY Environmental, LLC, 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*, November 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 1Laboratory Analytical Results - Soil175 Gardenia Drive (Formerly 1057 Gardenia Drive)Laurel Bay Military Housing AreaMarine Corps Air Station BeaufortBeaufort, South Carolina

		Results Samples Collected 08/16/07					
Constituent	SCDHEC RBSLs <sup>(1)</sup>	1057 Gardenia Bottom 01 (Tank 1)	1057 Gardenia Side 02 (Tank 1)	1057 Gardenia Bottom - 1 (Tank 2)	1057 Gardenia Side 02 (Tank 2)		
Volatile Organic Compounds Analyzed	by EPA Method 8260B (mg/kg)	•					
Benzene	0.003	ND	ND	0.000144	0.000123		
Ethylbenzene	1.15	0.0138	ND	0.000391	0.00222		
Naphthalene	0.036	0.0795	0.911	0.00182	0.0492		
Toluene	0.627	ND	ND	0.00983	0.000626		
Xylenes, Total	13.01	0.0162	0.0469	0.000998	ND		
Semivolatile Organic Compounds Analy	vzed by EPA Method 8270C (mg/kg	ı)					
Benzo(a)anthracene	0.66	0.440	0.908	0.0668	ND		
Benzo(b)fluoranthene	0.66	0.419	0.816	0.0919	0.0517		
Benzo(k)fluoranthene	0.66	0.156	0.183	ND	ND		
Chrysene	0.66	0.339	0.560	0.0778	ND		
Dibenz(a,h)anthracene	0.66	ND	ND	ND	ND		

### Notes:

<sup>(1)</sup> South Carolina Risk-Based Screening Levels from the Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 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 2Laboratory Analytical Results - Groundwater175 Gardenia Drive (Formerly 1057 Gardenia Drive)Laurel Bay Military Housing AreaMarine Corps Air Station BeaufortBeaufort, South Carolina

Constituent	SCDHEC RBSLs <sup>(1)</sup>	Site-Specific Groundwater VISLs	Results Sample Collected 07/28/08			
		(µg/L) <sup>(2)</sup>	1057 Gardenia A	1057 Gardenia E		
Volatile Organic Compounds Analyzed by EPA Method 8260B (µg/L)						
Benzene	5	16.24	ND	ND		
Ethylbenzene	700	45.95	ND	ND		
Naphthalene	25	29.33	ND	ND		
Toluene	1000	105,445	ND	ND		
Xylenes, Total	10,000	2,133	ND	ND		
Semivolatile Organic Compounds Ana	lyzed by EPA Method 827	0D (μg/L)	-			
Benzo(a)anthracene	10	NA	ND	ND		
Benzo(b)fluoranthene	10	NA	ND	ND		
Benzo(k)fluoranthene	10	NA	ND	ND		
Chrysene	10	NA	ND	ND		
Dibenz(a,h)anthracene	10	NA	ND	ND		

### Notes:

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

 $^{(2)}$  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  $1\times10^{-6}$ , 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

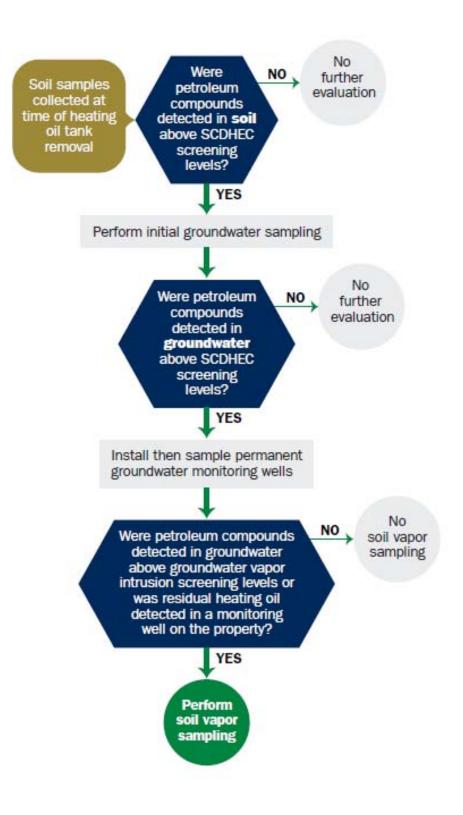
SCDHEC - South Carolina Department Of Health and Environmental Control

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 Report



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

)n

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

: :

<u> </u>	OWNERSHIP OF UST (S)
Benufox Owner Name (Co	+ Military Compley FAMILY Housing
1510 Mailing Address	LAURET BAY BRUD.
Beau City	Fort SC 29906 State Zip Code
843 Area Code	379-3305 Kyle BROADFOOT Telephone Number Contact Person

II.	SITE IDENT	FICATION AND LOCA	$\Delta TION 2$	TANKS	See	BACK SID
N/A Permit I.D. #	<u> </u>		······································	<u>.</u>		
	<u>ACTUS</u> or Company Site Id	END LEASE Con Ientifier_	NSTRUCTIO	<u>N</u>		<u> </u>
1057 G	<b>APDENIA</b> or State Road (as a	nnlicable)	· · ·			
BeAuf	ORT, SC	29906	Be	An fort		4. 6.
City	t	ZIP	C	ounty		

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Attachment 2
III. INSURANCE INFORMATION
Insurance Statement
The petroleum release reported to DHEC on $\underline{\nu/A}$ at Permit ID # <u>may</u> 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. <u>This</u> <u>section must be completed</u> .
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 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 INFORMATION		<del>;</del>		<del></del>		
		Tank I	Tar	Tank 3	Tank 4	Tank 5	Tank 6
А.	Product(ex. Gas, Kerosene)	#1 DIESEL	#2 D:E3d				
В.	Capacity(ex. 1k, 2k)	358g.					
C.	Age						
D.	Construction Material(ex. Steel, FRP)	Steel	STEL	-			
E.	Month/Year of Last Use						
F.	Depth (ft.) To Base of Tank	4811	5811		•		 
G.	Spill Prevention Equipment Y/N	N	μ				 •
H.	Overfill Prevention Equipment Y/N	N	N				
I.	Method of Closure Removed/Filled	Rejuoved	2000				———
J.	Date Tanks Removed/Filled	0,00					
K.	Visible Corrosion or Pitting Y/N	8-6-78	-6-4			<u> </u>	
L.	Visible Holes Y/N	NI		<u> </u>			
M.	Method of disposal for any USTs removed from the g	y   round (atta	r ich dispos	sal mani	fests)		
	Recycling - Scrap Stee	1					·

N. Method of disposal for any liquid petroleum, sludges, or wastewaters removed from the USTs (attach disposal manifests)

EPUBLIC - BROADHURST ANDFILL Solidification - SUBTITLE LAND FILL

O. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST  $\overline{AWK}$   $\overline{Was}$   $\overline{Files}$   $\overline{W/sils}$   $\overline{WATer}$ 

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# VI. PIPI INFORMATION

		Tank 1 .	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6
A.	Construction Material(ex. Steel, FRP)	Stee.	STeel				
B.	Distance from UST to Dispenser	NA					
C.	Number of Dispensers	-0-	NA				
D.	Type of System Pressure or Suction	Electric	_0-				
E.	Was Piping Removed from the Ground? Y/N	0	Electi Pump	[			
F.	Visible Corrosion or Pitting Y/N	N	N				
G.	Visible Holes Y/N	μ					
H.	Age		~		-		
•	•	$\mathcal{N}$	<u>~</u>				

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

.

# VII. BRIEF SITE DESCRIPTION AND HISTORY

Home Heating Oil TANK - RESIDENTIAL

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# VIII. SITE COP TIONS

	Yes	No	Unk
<ul> <li>A. Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells?</li> <li>If yes, indicate depth and location on the site map.</li> </ul>		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,		×	
C. Was water present in the UST excavation, soil borings, or trenches?			
If yes, how far below land surface (indicate location and depth)?		x	
D. Did contaminated soils remain stockpiled on site after closure?			
If yes, indicate the stockpile location on the site map.		ł	ľ
Name of DHEC representative authorizing soil removal:			
		X	
E. Was a petroleum sheen or free product detected on any excavation or boring waters?			
If yes, indicate location and thickness.		~	

IX. SAM E INFORMATION

A:

1

SCDHEC Lab Certification Number DW: 54009002

	<u>B.</u>	<u></u>						
	Sample #	Location	Sample Type (Soil/Water)	Soil Type (Sand/Clay)	Depth*	Date/Time of Collection	Collected by	OVA #
							M.Jowa	1
/AW		BOTTON SIDE	5 5	SAND SAND	48" 36"		A. MANUCY	
1 m	2	Side	5	SAND	36"		A-MANKCY	ND
	3							
	42							
AW	11 5	BOTTOM	5	SAUd	58″	8-6-7.	M.Too	
	6	S:DE	5	SANd	37"	8-6-7.	M. Jones	ND
	7			_				L.
	8					· .		
	9							
	10							
i	11'							
	12							
	13							
	14							
	15							
	16							
ļ	17							
	18				·			
	19				 		· .	
	20							

\* = Depth Below the Surrounding Land Surface

# SAMPLING METHODOLC

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

Volatile ORGANic Compounds PA Method 8260 B Reservative: 24 Sodium Bisulfate leA 8270 Poly Aromatic Hydro CARBONS EPA METHOD PRESERVATIVE No

DNe 5 And IDEWAL ONE Bottom well Scence from tANK evention AND Shipped 1.3020 j.J Stoned An) Cooler ts d INSU w ICE\_

# XI. RECEPTC

		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.		1
B.	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.		
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.		V
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.		2
<u>Е</u> .	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								
TPH (EPA 3550)								

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

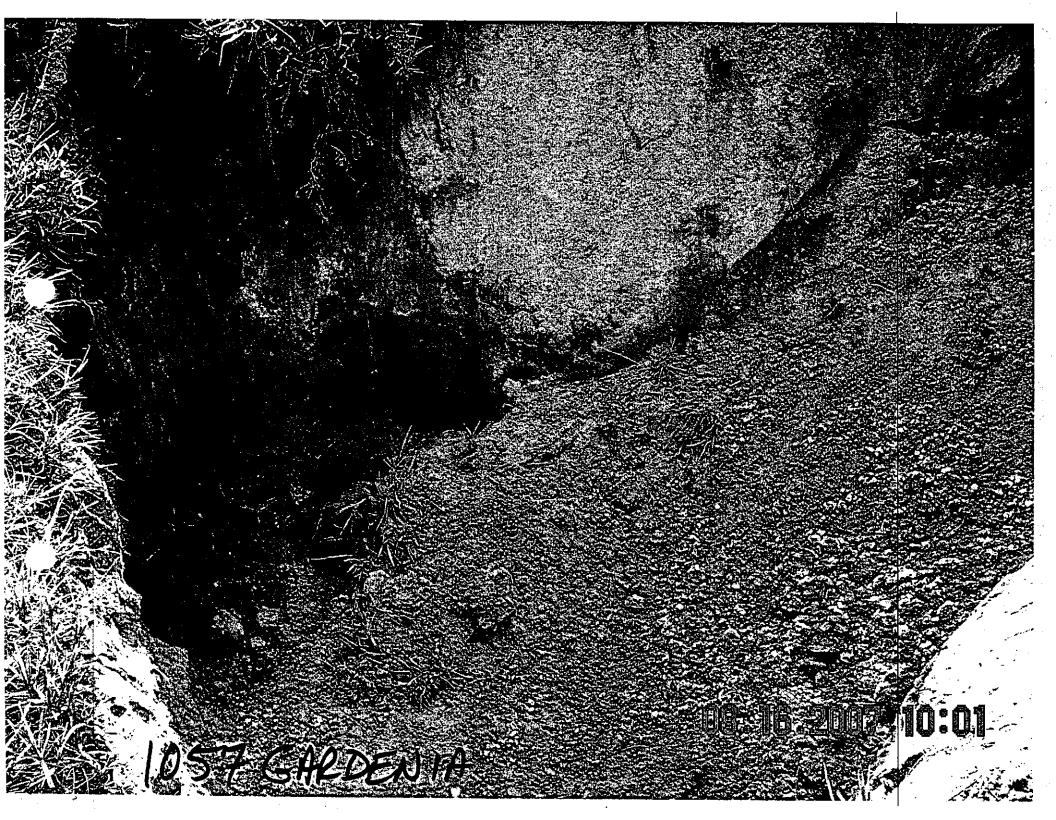
SUMMARY OF ANALYSIS RESULTS (cont'd)

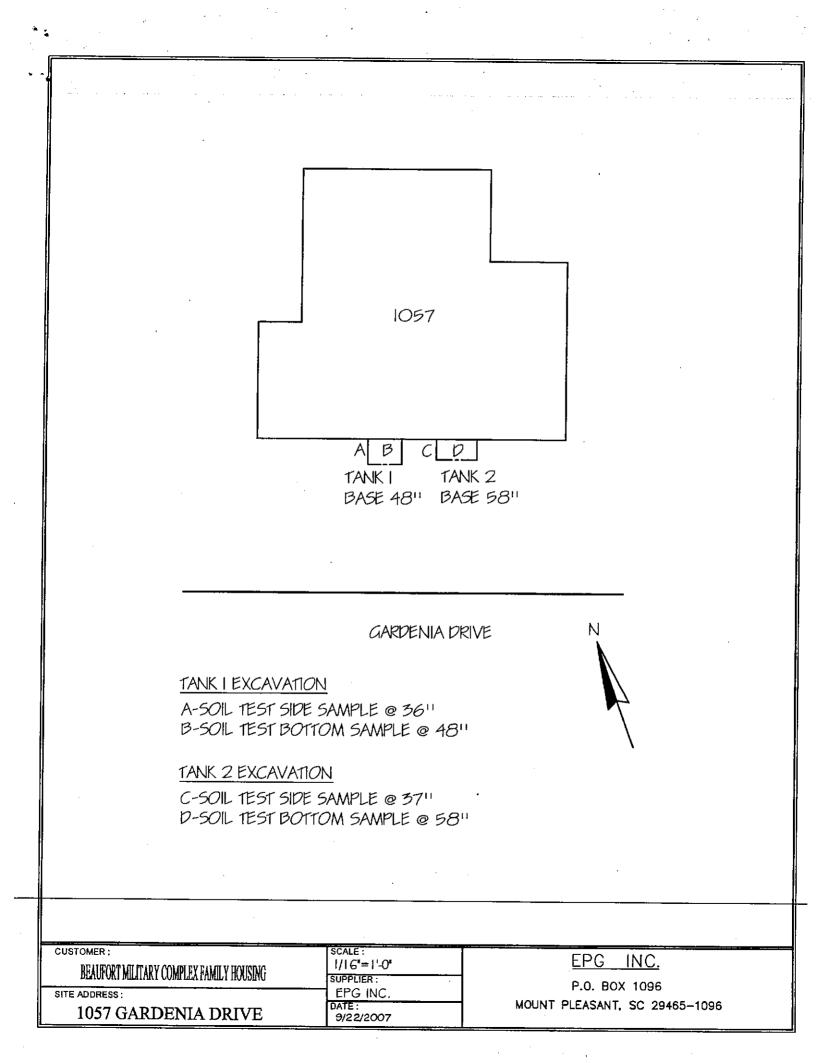
NA

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	<sup>.</sup> 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				







# 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)



· 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 JOHN MAHONEY Attn:

Work Order: Project: Project Number: EP-2362

OQH0569 LAUREL BAY Sampled: 08/16/07-08/18/07 Received: 08/23/07

### LABORATORY REPORT

Sample ID: 1057 GARDENIA BOTTOM-01 (TANK 1) - Lab Number: OQH0569-01 - Matrix: Solid/Soil

CAS # Anal	lyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
	stry Parameters										
NA %So		78.0		%.	0.100	0.100	1	08/22/07 16:45	RRP	EPA 160.3	7H23023
	ic Compounds by EPA M			un ten dare	E ()	15.2	60	00/20/07 16.17	TWL	CD 4 9340D	7H27020
1-43-2 Benze		5.60	RL2,U	ug/kg dry	5.60	15.3	50 50	08/29/07 16:17	JWT	EPA 8260B	7H27020 7H27020
•	lbenzene	13.8	RL2,I	ug/kg dry	6.47	15.3	50	08/29/07 16:17		EPA 8260B	
-	othalene	79.5	RL2	ug/kg dry	8.45	15.3	50	08/29/07 16:17	JWT	EPA 8260B	7H27020
08-88-3 Tolue		13.2	RL2 U	ug/kg dry	13.2	15.3	50	08/29/07 16:17	JWT	EPA 8260B	7H27020
-	nes, total	16.2	RL2	ug/kg dry	7.94	15.3	50	08/29/07 16:17	JWT	EPA 8260B	7H27020
•	loroethane-d4 (73-137%)	105 %									
•	fluorobenzene (59-118%)	103 %									
-	fluoromethane (55-145%)	98 %									
rrogate: Toluene-a		97 %	1 1 0 0 7	•							
•	omatic Hydrocarbons by aphthene	2 EPA Me 137	nod 827 I	U ug/kg dry	94.9	214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
	aphthylene	137	U	ug/kg dry	125	214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
	aphinyiene racene	261	U	ug/kg dry ug/kg dry	68.3	214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
	o (a) anthracene	440		ug/kg dry	23.2	214 214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
	o (b) fluoranthene	419			22.5	214 214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
	o (b) fluoranthene	41 <i>5</i> 156		ug∕kg dry ug∕kg d⊐u	22.5	214 214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
			I 	ug/kg dry			-				7H27033
	o (g,h,i) perylene	22.2	U	ug/kg dry	22.2	214	1	09/01/07 03:28	JLS	EPA 8270C EPA 8270C	7H27033 7H27033
	o (a) pyrene	232		ug/kg dry	26.3	214	1	09/01/07 03:28	JLS		7H27033 7H27033
	thylnaphthalene	107	ប	ug/kg dry	107	214	1	09/01/07 03:28	JLS	EPA 8270C	
8-01-9 Chry:		339		ug/kg dry	25.6	214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
	12 (a,h) anthracene	28.1	U	ug/kg dry	28.1	214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
	anthene	30.8	ប 	ug/kg dry	30.8	214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033 7H27033
		83.8	U	ug/kg dry	83.8	214	1	09/01/07 03:28	JLS	EPA 8270C	
	o (1,2,3-cd) pyrene	27.7	U	ug/kg dry	27.7	214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
	thyInaphthalene	139	1	ug/kg dry	91.3	214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
	thalene	86.0	U	ug/kg dry	86.0	214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
	anthrene	181	I	ug/kg dry	50.5	214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
9-00-0 Pyren		550		ug/kg dry	43.5	214	1	09/01/07 03:28	JLS	EPA 8270C	7H27033
	biphenyl (24-121%) ====================================	5 a c 16 m m m m m m				1997 - 1997 BALLER 1	r	a an ang a sa at			. 12.75A22
rrogate: Nitrobenz		49 %									
rrogate: Terphenyl	l-d14 (44-171%)	104 %									

### LABORATORY REPORT

### Sample ID: 1057 GARDENIA SIDE-02 (TANK 1) - Lab Number: OQH0569-02 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
General C	Chemistry Parameters % Solids	76.5		%.	0.100	0.100	1	08/22/07 16:45	RRP	EPA 160.3	7H23023
√olatile C	Organic Compounds by E	PA Method 8260B	;								
1 <b>-43-2</b>	Benzene		RL2,U	ug/kg dry	13.6	37.2	100	08/29/07 17:25	JWT	EPA 8260B	7H27020
00-41-4	Ethylbenzene	15.7	RL2,U	ug/kg dry	15.7	37.2	100	08/29/07 17:25	JWT	EPA 8260B	7H27020

TestAmerica - Orlando, FL Enid Ortiz For Shali Brown

Project Manager



· THE LEADER IN ENVIRONMENTAL TESTING

Client: EPG, INC.

PO BOX 1096 MT PLEASANT, SC 29465

JOHN MAHONEY Attn:

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

ć

Work Order: Project: Project Number:

OQH0569 LAUREL BAY EP-2362

Sampled: 08/16/07-08/18/07 Received: 08/23/07

### LABORATORY REPORT

Sample ID: 1057 GARDENIA SIDE-02 (TANK 1) - Lab Number: OQH0569-02 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
	Organic Compounds by EPA				20.7	77.0	100	00/20/02 17 05	111/7	EDA 8360D	7112702/
91-20-3	Naphthalene	911	RL2	ug/kg dry	20.6	37.2	100	08/29/07 17:25	JWT	EPA 8260B	7H27020
108-88-3	Toluene	32.1	RL2,U	ug/kg dry	32.1	37.2	100	08/29/07 17:25	JWT	EPA 8260B	7H27020
1330-20-7	Xylenes, total	46.9	RL2	ug/kg dry	19.3	37.2	100	08/29/07 17:25	JWT	EPA 8260B	7H27020
	1,2-Dichloroethane-d4 (73-137%)	97 %									
-	I-Bromofluorobenzene (59-118%)	105 %									
-	Dibromofluoromethane (55-145%)	99 % 00 %									
-	Coluene-d8 (80-117%)	98 %		•							
Polynucle 3-32-9	ear Aromatic Hydrocarbons l	oy EPA Met 96.7	100 827 U	U ug/kg dry	96.7	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
208-96-8	Acenaphthene Acenaphthylene	128	U	ug/kg dry	128	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
20-12-7	Anthracene	479	v	ug/kg dry	69.6	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
56-55-3	Benzo (a) anthracene	908		ug/kg dry	23.6	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
205-99-2	Benzo (b) fluoranthene	816		ug/kg dry	23.0	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
203-99-2	Benzo (k) fluoranthene	183	I	ug/kg dry	23.0	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
91-24-2		22.6	י ע	ug/kg dry	23.6	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
91-24-2 0-32-8	Benzo (g,h,i) perylene Benzo (a) pyrene	22.0 396	U	ug/kg dry ug/kg dry	22.0	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
0-12-0	1-Methylnaphthalene	110	U	ug/kg dry	110	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
18-01-9	Chrysene	560	U	ug/kg dry ug/kg dry	26.1	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
53-70-3	Dibenz (a,h) anthracene	28.7	U	ug/kg dry ug/kg dry	28.7	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
206-44-0	Fluoranthene	31,4	U	ug/kg dry	31.4	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
	Fluorene	85.4	U	ug/kg dry	85.4	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
93-39-5	Indeno (1,2,3-cd) pyrene	79.3	I	ug/kg dry	28.3	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
)1-57-6	2-Methylnaphthalene	93.1	י ע	ug/kg dry	23.5 93.1	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
1-20-3	Naphthalene	87.6	U U	ug/kg dry	87.6	218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
35-01-8	Phenanthrene	512	U	ug/kg dry	51.5	213 218	1	09/01/07 03:50	JLS	EPA 8270C	7H2703
29-00-0	Pyrene	1620		ug/kg dry	44.3	218	1	09/01/07 03:50	JLS	EPA 8270C	
	-Fluorobiphenyl (24-121%)	78 %		aftire art		210	1	05/01/07 05.50	9LQ	LINGLINC	1112703
_	-1110/001phenyt (24-121%) litrobenzene-d5 (19-111%)	52 %									
-	Terphenyl-d14 (44-171%)	118 %									
arrogate. 1	erpnenyi-u14 (44-171 %)	110 70									
	Sample ID: 1061 (	ADDENIA		ORATOR			560.03	Motriv: Sal	ia/Soi	ī .	. •••
	Sample ID: 1061 C	MRDENIA	-0011			. ovn	Dil	· · · · · · · · · · · · · · · · · · ·	10/301	1	
CAS #	Analyte	Result	Q	Units	MDL	PQL	Factor	Analyzed Date/Time	By	Method	Batch
	Chemistry Parameters										
A	% Solids	74.8		%.	0.100	0.100	1	08/24/07 16:05	RRP	EPA 160.3	7H2404

Volatile (	Organic Compounds by EPA M	Aethod 8260	0 <b>B</b>									
'1-43-2	Benzene	0.365	I	ug/kg dry	0.139	0.380	1	08/28/07 17:21	JWT	EPA 8260B	7H27020	
00-41-4	Ethylbenzene	0.365	I	ug/kg dry	0.161	0.380	1	08/28/07 17:21	JWT	EPA 8260B	7H27020	<u> </u>
)1-20-3	Naphthalene	5.18		ug/kg dry	0.210	0.380	1	08/28/07 17:21	JWT	EPA 8260B	7H27020	
08-88-3	Toluene	0.813	•	ug/kg dry	0.328	0.380	1	08/28/07 17:21	JWT	EPA 8260B	7H27020	
330-20-7	Xylenes, total	1.25		ug/kg dry	0.197	0.380	1	08/28/07 17:21	JWT	EPA 8260B	7H27020	
iurrogate: 1	.2-Dichloroethane-d4 (73-137%)	118 %										•

**TestAmerica - Orlando, FL** 

Enid Ortiz For Shali Brown Project Manager

- 1.31



THE LEADER IN ENVIRONMENTAL TESTING

Client: EPG, INC.

Attn:

PO BOX 1096

JOHN MAHONEY

MT PLEASANT, SC 29465

Work Order: Project: Project Number:

OQH0569 LAUREL BAY EP-2362

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

Sampled: 08/16/07-08/18/07 Received: 08/23/07

### LABORATORY REPORT

Sample ID: 1048-GARDENIA-SIDE-02 - Lab Number: OQH0569-10 - Matrix: Solid/Soil

CAS#	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
Polyaron	natic Hydrocarbons by EPA	8270C - Cont					· <u></u>				
218-01-9	Chrysene	0.563		mg/kg dry	0.0425	0.0730	1	08/31/07 05:44	RLB	SW846 827	0C7085613
53-70-3	Dibenz (a,h) anthracene	0.0283	U	mg/kg dry	0.0283	0.0730	1	08/31/07 05:44	RLB	SW846 827	0C7085613
206-44-0	Fluoranthene	0.352		mg/kg dry	0.0458	0.0730	1	08/31/07 05:44	RLB	SW846 827	0C7085613
36-73-7	Fluorene	0.0469	U	mg/kg dry	0.0469	0.0730	ł	08/31/07 05:44	RLB	SW846 827	0C7085613
193-39-5	Indeno (1,2,3-cd) pyrene	0.188		mg/kg dry	0.0371	0.0730	1	08/31/07 05:44	RLB	SW846 827	0C7085613
91-20-3	Naphthalene	0.0436	U	mg/kg dry	0.0436	0.0730	1	08/31/07 05:44	RLB	SW846 827	0C7085613
35-01-8	Phenanthrene	0.0436	U	mg/kg dry	0.0436	0.0730	1	08/31/07 05:44	RLB	SW846 827	0C7085613
129-00-0	Pyrene	0.381		mg/kg dry	0.0512	0.0730	1	08/31/07 05:44	RLB	SW846 827	0C7085613
0-12-0	l-Methylnaphthalene	0.0392	U	mg/kg dry	0.0392	0.0730	1	08/31/07 05:44	RLB	SW846 827	0C7085613
91-57-6	2-Methylnaphthalene	0.0392	υ	mg/kg dry	0.0392	0.0730	1	08/31/07 05:44	RLB	SW846 827	0C7085613
Surrogate: 1	Terphenyl-d14 (49-123%)	83 %									
Surrogate: 2	?-Fluorobiphenyl (30-93%)	72 %									
Surrogate: 1	Vitrobenzene-d5 (34-87%)	84 %									

### LABORATORY REPORT

### Sample ID: TANK 2 1057 GARDENIA BOTTOM-1 - Lab Number: OQH0569-11 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
General	Chemistry Parameters		-			_					
NA	% Solids	83.3		%.	0.100	0.100	1	08/22/07 16:45	RRP	EPA 160.3	7H23023
Volatile (	Organic Compounds by EPA	Method 8260	)B								
/1-43-2	Benzene	0.144	I	ug/kg dry	0.0942	0.257	1	08/28/07 19:22	JWT	EPA 8260B	7H27020
100-41-4	Ethylbenzene	0.391		ug/kg dry	0.109	0.257	1	08/28/07 19:22	JWT	EPA 8260B	7H27020
1-20-3	Naphthalene	1.82		ug/kg dry	0.142	0.257	I	08/28/07 19:22	JWT	EPA 8260B	7H27020
.08-88-3	Toluene	9.83		ug/kg dry	0.222	0.257	1	08/28/07 19:22	JWT	EPA 8260B	7H27020
330-20-7	Xylenes, total	0.998		ug/kg dry	0.134	0.257	1	08/28/07 19:22	JWT	EPA 8260B	7H27020
lurrogate: )	1,2-Dichloroethane-d4 (73-137%)	117 %									
lurrogate: 4	4-Bromofluorobenzene (59-118%)	88 %									
lurrogate: I	Dibromofluoromethane (55-145%)	109 %									
lurrogate: 1	Toluene-d8 (80-117%)	93 %									
General	Chemistry Parameters		• <del>•••</del> ••				· · · ·	- 000 - 11 - 1	1 - E - E		
olids	% Dry Solids	83.3	SPS	%	0.500	0.500	1	08/22/07 16:45	AEB	SW-846	7085830
Polyaron	natic Hydrocarbons by EPA 8	270C									
3-32-9	Acenaphthene	0.0424	U	mg/kg dry	0.0424	0.0789	ſ	08/31/07 06:07	RLB	SW846 8270	C7085613
.08-96 <b>-</b> 8	Acenaphthylene	0.0518	U	mg/kg dry	0.0518	0.0789	I	08/31/07 06:07	RLB	SW846 8270	C7085613
20-12-7	Anthracene	0.0471	U.	mg/kg dry	0.0471	0.0789	1	08/31/07 06:07	RLB	SW846 8270	C7085613
6-55-3.	Benzo (a) anthracene	0.0668	I	mg/kg dry	0.0436	0.0789	1	08/31/07 06:07	RLB	SW846 8270	C7085613
0-32-8	Benzo (a) pyrene	0.0695	I	mg/kg dry	0.0471	0.0789	1	08/31/07 06:07	RLB	SW846 8270	C7085613
<del>05-99-2</del>	Benzo (b) fluoranthene	0.0919		nig/kg dry	0.0448	0.0789	1	08/31/07 06:07	RLB	SW846 8270	<del>C7085613</del>
91-24-2	Benzo (g,h,i) perylene	0.0318	U	mg/kg dгy	0.0318	0.0789	1	08/31/07 06:07	RLB	SW846 8270	C7085613
07-08-9	Benzo (k) fluoranthene	0.0542	U	mg/kg dry	0.0542	0.0789	1	08/31/07 06:07	RLB	SW846 8270	C7085613
18-01-9	Chrysene	0.0778	I	mg/kg dry	0.0459	0.0789	1	08/31/07 06:07	RLB	SW846 8270	C7085613
3-70-3	Dibenz (a,h) anthracene	0.0306	U	mg/kg dry	0.0306	0.0789	÷ 1	08/31/07 06:07	RLB	SW846 8270	C7085613
					•						

**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

Client: EPG, INC. PO BOX 1096 MT PLEASANT, SC 29465 Attn:

JOHN MAHONEY

Work Order: Project: Project Number: EP-2362

OQH0569 LAUREL BAY Sampled: 08/16/07-08/18/07 Received: 08/23/07

LABORATORY REPORT

Sample ID: TANK 2 1057 GARDENIA BOTTOM-1 - Lab Number: OQH0569-11 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
Polyaron	natic Hydrocarbons by EPA	A 8270C - Cont	•		-			-			
206-44-0	Fluoranthene	0.0495	υ	mg/kg dry	0.0495	0.0789	1	08/31/07 06:07	RLB	SW846 8270C	7085613
36-73-7	Fluorene	0.0507	U	mg/kg dry	0.0507	0.0789	1	08/31/07 06:07	RLB	SW846 8270C	7085613
193-39-5	Indeno (1,2,3-cd) pyrene	0.0401	U	mg/kg dry	0.0401	0.0789	1	08/31/07 06:07	RLB	SW846 8270C	7085613
91 <b>-20-3</b>	Naphthalene	0.0471	U	mg/kg dry	0.0471	0.0789	1	08/31/07 06:07	RLB	SW846 8270C	7085613
35-01-8	Phenanthrene	0.0471	U	mg/kg dry	0.0471	0.0789	1	08/31/07 06:07	RLB	SW846 8270C	7085613
129-00-0	Pyrene	0.0974		mg/kg dry	0.0554	0.0789	1	08/31/07 06:07	RLB	SW846 8270C	7085613
90-12-0	1-Methylnaphthalene	0.0424	U	mg/kg dry	0.0424	0.0789	1	08/31/07 06:07	RLB	SW846 8270C	7085613
91-57-6	2-Methylnaphthalene	0.0424	U	mg/kg dry	0.0424	0.0789	1	08/31/07 06:07	RLB	SW846 8270C	7085613
Surrogate:	Terphenyl-d14 (49-123%)	80 %									
Surrogate:	2-Fluorobiphenyl (30-93%)	73 %									
Surrogate:	Nitrobenzene-d5 (34-87%)	82 %									

### LABORATORY REPORT

### Sample ID: TANK 2 1057 GARDENIA SIDE 02 - Lab Number: OQH0569-12 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
General (	Chemistry Parameters										
łA	% Solids	75.7		%.	0.100	0.100	1	08/22/07 16:45	RRP	EPA 160.3	7H23023
Volatile (	Organic Compounds by EPA 1	Method 826	0 <b>B</b>								
1-43-2	Benzene	0.123	I	ug/kg dry	0.112	0.307	1	08/28/07 19:39	JWT	EPA 8260B	7H27020
00-41-4	Ethylbenzene	2.22		ug/kg dry	0.130	0.307	1	08/28/07 19:39	JWT	EPA 8260B	7H27020
1-20-3	Naphthalene	49.2		ug/kg dry	0.169	0.307	1	08/28/07 19:39	JWT	EPA 8260B	7H27020
08-88-3	Toluene	0.626		ug/kg dry	0.265	0.307	1	08/28/07 19:39	JWT	EPA 8260B	7H27020
330-20-7	Xylenes, total	0.159	U	ug/kg dry	0.159	0.307	1	08/28/07 19:39	JWT	EPA 8260B	7H27020
urrogate: 1	,2-Dichloroethane-d4 (73-137%)	115 %									
urrogate: 4	-Bromofluorobenzene (59-118%),	49 %	J1					•			
urrogate: L	Dibromofluoromethane (55-145%)	105 %									
urrogate: I	Coluene-d8 (80-117%)	86 %									
General (	Chemistry Parameters										
olids	% Dry Solids	75.7	SPS	%	0.500	0.500	1	08/22/07 16:45	AEB	SW-846	7085830
	natic Hydrocarbons by EPA 8					-	usati i				
3-32-9	Acenaphthene	0.0469	U	mg/kg dry	0.0469	0.0873	. 1	08/31/07 06:31	RLB	SW846 8270	
08 <b>-96</b> -8	Acenaphthylene	0.0573	U	mg/kg dry	0.0573	0.0873	1	08/31/07 06:31	RLB	SW846 8270	
20-12-7	Anthracene	0.0521	U	mg/kg dry	0.0521	0.0873	1	08/31/07 06:31	RLB	SW846 8270	
6-55-3	Benzo (a) anthracene	0.0482	U	mg/kg dry	0.0482	0.0873	1	08/31/07 06:31	RLB	SW846 8270	
0-32-8	Benzo (a) pyrene	0.0521	U	mg/kg dry	0.0521	0.0873	1	08/31/07 06:31	RLB	SW846 8270	C7085613
05-99-2	Benzo (b) fluoranthene	0.0517	I	mg/kg dry	0.0495	0.0873	1	08/31/07 06:31	RLB	SW846 8270	C7085613
91-24-2	Benzo (g,h,i) perylene	0.0352	U	mg/kg dry	0.0352	0.0873	1	08/31/07 06:31	RLB	SW846 8270	C7085613
)7-08-9	-Benzo (k) fluoranthene	0.0599	U	mg/kg_dry	0.0599	0.0873		08/31/07 06:31	RLB	<u>SW846 8270</u>	C7085613
18-01-9	Chrysene	0.0508	U	mg/kg dry	0.0508	0.0873	1	08/31/07 06:31	RLB	SW846 8270	C7085613
3-70-3	Dibenz (a,h) anthracene	0.0339	U	mg/kg dry	0.0339	0.0873	1	08/31/07 06:31	RLB	SW846 8270	C7085613
6-44-0	Fluoranthene	0.0547	U	mg/kg dry	0.0547	0.0873	1	08/31/07 06:31	RLB	SW846 8270	C7085613
5-73-7	Fluorene	0.0560	ប	mg/kg dry	0.0560	0.0873	1	08/31/07 06:31	RLB	SW846 8270	C7085613

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

Client: EPG, INC.

PO BOX 1096

MT PLEASANT, SC 29465

Work Order: Project: Project Number:

OQH0569 LAUREL BAY EP-2362

Sampled: 08/16/07-08/18/07 Received: 08/23/07

Attn: JOHN MAHONEY

### LABORATORY REPORT

Sample ID: TANK 2 1057 GARDENIA SIDE 02 - Lab Number: OQH0569-12 - Matrix: Solid/Soil

CAS #	Analyte	Result	Q	Units	MDL	PQL	Dil Factor	Analyzed Date/Time	Ву	Method	Batch
Polyaron	natic Hydrocarbons by EPA	A 8270C - Cont									
193-39-5	Indeno (1,2,3-cd) pyrene	0.0443	U	mg/kg dry	0.0443	0.0873	1	08/31/07 06:31	RLB	SW846 827	0C7085613
91-20-3	Naphthalene	0.0521	U	mg/kg dry	0.0521	0.0873	1	08/31/07 06:31	RLB	SW846 827	0C7085613
85-01-8	Phenanthrene	0.0521	U	mg/kg dry	0.0521	0.0873	1	08/31/07 06:31	RLB	SW846 827	0C7085613
129-00-0	Pyrene	0.0612	υ	mg/kg dry	0.0612	0.0873	1	08/31/07 06:31	RLB	SW846 827	0C7085613
90-12-0	l-Methylnaphthalene	0.0469	ប	mg/kg dry	0.0469	0.0873	1	08/31/07 06:31	RLB	SW846 827	0C7085613
91-57-6	2-Methylnaphthalene	0.0469	U	mg/kg dry	0.0469	0.0873	1	08/31/07 06:31	RLB	SW846 827	0C7085613
Surrogate: 1	Terphenyl-d14 (49-123%)	76 %									
Surrogate: 2	2-Fluorobiphenyl (30-93%)	70 %									
Surrogate: i	Nitrobenzene-d5 (34-87%)	81 %									

TestAmeri ANALYTICAL TESTING CORE	PORAHON															is thi		being c pliance	onauci		gulato	ry purp	oses?	5
Client Name				-					С	lient	*						_							
Address:				<u> </u>		_								<u> </u>	Proj	ect Nam	e: <u>L</u>	JuRI	5.J	BA	٢			
City/State/Zip Code:														,		Project	⊭_ <u>€</u>	P- 7	236	2 '				
Project Manager:					•										Site/Lo	cation II	):		4			Sta		
Telephone Number:							F	ax:					<del></del>	_	l	Report To	، <u>ن</u>	ahi	<u>n</u> ľ	Mal	101	ne	U.	
Sampler Name: (Print Name)		<u> </u>	1	oN	وچ											nvoice To								•
Sampler Signature:	<u>_</u>															Quote #	<u>*</u>		!		_ POI	#:	-	
TAT			<u> </u>	<u>г</u>	Matrix	Prez	serva T	tion 8	k # of	Con	taine	_		9		Anal	yze For	:	= = = = = = = = = = = = = = = = = = =					•
Standard Rush (surcharges may apply) Date Needed:			Composite		- Drinking Wate - S - Soll/Solk Specify Other								ETU O.				/ /	/ /	 			/	$ \mathbf{x} $	Deliverables None Level 2 (Batch QC)
Fax Results: Y N	atta Sampled	ime Sampled	G ⊨ Grab, C = C	Field Filtered	L - Studge DW - W - Grounttweter W - Wastewater	HNO3		HOH	12504	None.	other (Specify)		BIEX-MALTU O.	PAH 8230	' /									Level 3 Level 4 G
1057 GARDENIA BOTTIM	846-7	0:30	6	<u>u</u>	<u></u>	Ŧ	Ĭ.	z¦:			-+			4		-{	<b>/</b>	<u> </u>	<u> </u>	<b>_</b>	<b>/</b>	<u> </u>	REM	ARKS
1057 GMADENIA SIDEAZ	SK2	8:30	G			┝─┼	-+			-+-	22	+-7	× ×					╂	-	<u> </u>		4'	-61	-
1061 GARDENIA BOTTOM	3-17-7	8:30	G				$\neg$		╎	+-	2	7					┼			<u> </u>	<u> </u>	<u> </u>		
1061 GARDEN: A-SIDE-02 E	377.7	8:30	G		× · · · · ·		╈	╘	j					-+	+-		+	<u> </u>				╉───	<u> </u>	
1065 GAPDENIN-BOTTAN	1007	10:00	G					ļ	1		-	X	X	╡╌ᅳ			┼───			+		┨────	<u>-t</u>	Ж
1045 GARDENIA - SIDE OL									1	2	2	x	1		-			1	┦───	+	<u> </u>	╬╌━┙		<u>Un</u>
1141 IRis - BOTTOM-01	8-18-7	9:00	G						1	2	2	×	×	ŀ	-		1			<u> </u>		╂──		07
	8-18-7		_	_[						2	2	×	×			1	<u> </u>	-				┢──		07
1048 - GARDENIA BOTTON 8	3-18-7	1:00	<u> </u>	$ \rightarrow $					1	2	2	×	×					†						ra
1048-GARDER. S:DE-02 8	282	1:00	6	Ļ					lı	12	2 2	×	×					·	1					-10 -10
1057 GARDENIA		<u> </u>	Ś	50		≶_ ₹6. γ		S f	200	np'	res A	5 <sub>1</sub>							nit Lab	RY COM Temp:				
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Reingelige Breelt K()			01	ine/	-30	Recei		<u>*</u> -	_	_				Date	23/0	Time?	30	Bottle	s Supj	NS: YZ Diled by 仏Zコ	Test A	meric 71	Y	N
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LESTAMETIANALYTICAL TESTING CORP	ORATION	<u> </u>														HO UNO			nducte Nonitor			, baib	
Client Name	ΕŸ	<u> </u>							Cli	enta	#:			-	<b>.</b> .		1			}	2		
Address:														-	Projec	t Name roject#	:	<u>an</u>	<u>re</u>		30	4-	
City/State/Zip Code: Project Manager:					·									 -		noject #: ation ID:			250	02		Star	· · · · · · · · · · · · · · · · · · ·
Telephone Number							L L							-		port To:		1	N	221			
Sampler Name: (Print Name)	:400	cV	, ,	a.	NPC		F	ах. <u>—</u>						-		oice To:		••	• •• •• •• == •		RΨ		{
Sampler Signature:	<u></u>			<u>,                                    </u>		<u> </u>										Quote #		· · · ·	····		PO	<u>.</u>	
					Matrix	Pres	ervat	tion &	#of	Con	tainera			Ş			ze For						<b>†</b> ]
TAT Standard Rush (surcharges may apply) Date Needed: Fax Results: Y N SAMPLE ID Tank Z IDST Garacterine Tank Z IDST Garacterine Tank Z IDST Garacterine	Data Sampled	C Time Sampled	G = Grab, C = Composite	Field Fittered	SL - Studge DW - Drinking Water GW - Grounthwater S - Solt/Solid WW - Wastewater Specify Other	FONH	HC			2	2 (2 Other (Specify)	7	XX ON WELLBZ										QC Deliverable         None         Level 2         (Batch QC)         Level 3         Level 4         Other:         REMARKS
						-			+	+	+		 	 		<b> </b>	<b> </b>	<b></b>	<b> </b>	<u> </u>	<b> </b>		
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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 SAMPLING 7/28/08

Pace Project No.: 9224472

Sample: 1115 IRIS A	Lab ID: 92244	72002	Collected: 07/28/0	8 17:15	Received: 07	7/30/08 17:00	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM SPE	Analytical Metho	d: EPA 8	270 by SIM Preparati	ion Meth	od: EPA 3535			
Benzo(g,h,i)perylene	ND ug/L		0.40	1	07/31/08 00:00	08/12/08 05:5	5 191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.40	1	07/31/08 00:00	08/12/08 05:5	5 207-08-9	
Chrysene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 05:5	5 218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.40	1	07/31/08 00:00	08/12/08 05:5	5 53-70-3	
Fluoranthene	ND ug/L		0.60	1	07/31/08 00:00	08/12/08 05:5	5 206-44-0	
Fluorene	ND ug/L		0.62	1	07/31/08 00:00	08/12/08 05:5	5 86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.40	1	07/31/08 00:00	08/12/08 05:5	5 193-39-5	
1-Methylnaphthalene	ND ug/L		4.0	1	07/31/08 00:00			
2-Methylnaphthalene	ND ug/L		4.0	1	07/31/08 00:00			
Naphthalene	ND ug/L		3.0	1	07/31/08 00:00			
Phenanthrene	ND ug/L		0.40	1	07/31/08 00:00			
Pyrene	ND ug/L		0.20	1	07/31/08 00:00			
Nitrobenzene-d5 (S)	50 %		50-150	1	07/31/08 00:00			
2-Fluorobiphenyl (S)	50 % 60 %		50-150	1	07/31/08 00:00			
Terphenyl-d14 (S)	65 %		50-150 50-150	1	07/31/08 00:00			
				1	07731708 00.00	00/12/00 03.5	5 1710-51-0	
3260 MSV Low Level	Analytical Metho							
Benzene	ND ug/L		1.0	1		08/01/08 05:5	3 71-43-2	
Ethylbenzene	ND ug/L		1.0	1		08/01/08 05:5	3 100-41-4	
Naphthalene	ND ug/L		1.0	1		08/01/08 05:5	3 91-20-3	
Toluene	ND ug/L		1.0	1		08/01/08 05:5	3 108-88-3	
m&p-Xylene	ND ug/L		2.0	1		08/01/08 05:5	3 1330-20-7	
o-Xylene	ND ug/L		1.0	1		08/01/08 05:5	3 95-47-6	
4-Bromofluorobenzene (S)	96 %		87-109	1		08/01/08 05:5	3 460-00-4	
Dibromofluoromethane (S)	103 %		85-115	1		08/01/08 05:5	3 1868-53-7	
1,2-Dichloroethane-d4 (S)	104 %		79-120	1		08/01/08 05:5	3 17060-07-0	
Toluene-d8 (S)	100 %		70-120	1		08/01/08 05:5	3 2037-26-5	
Sample: 1057 GARDENIA E	Lab 10, 02244	70000	O-ll	0.40.00	Dessived: 0	7/20/09 17:00	Mathin Mater	
	Lab ID: 92244		Collected: 07/28/0				Matrix: Water	
Parameters	Results	Units	Report Limit	_DF	Prepared	Analyzed	CAS No.	Qua
3270 MSSV PAH by SIM SPE	Analytical Metho	d: EPA 82	270 by SIM Preparati	ion Meth	od: EPA 3535			
Acenaphthene	ND ug/L		2.0	1	07/31/08 00:00	08/12/08 06:1	9 83-32-9	
Acenaphthylene	ND ug/L		1.5	1	07/31/08 00:00	08/12/08 06:1	9 208-96-8	
Anthracene	ND ug/L		0.050	1	07/31/08 00:00	08/12/08 06:1	9 120-12-7	
Benzo(a)anthracene	ND ug/L		0.10	1	07/31/08 00:00	08/12/08 06:1	9 56-55-3	
Benzo(a)pyrene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 06:1	9 50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.30	1	07/31/08 00:00	08/12/08 06:1	9 205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 06:1	9 191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.20	1	07/31/08 00:00	08/12/08 06:1	9 207-08-9	
Chrysene	ND ug/L		0.10	1	07/31/08 00:00			
Dibenz(a,h)anthracene	ND ug/L		0.20	1	07/31/08 00:00			
· · · · · · · · · · · · · · · · · · ·	-							
Fluoranthene	ND ug/L		0.30	1	07/31/08 00:00	08/12/08 06:1	9 206-44-0	

Date: 08/13/2008 05:36 PM

### **REPORT OF LABORATORY ANALYSIS**

Page 6 of 38

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1

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 SAMPLING 7/28/08

Pace Project No.: 9224472

Sample: 1057 GARDENIA E	Lab ID: 9224472003	Collected: 07/28/0	8 10:20	Received: 07	/30/08 17:00	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
8270 MSSV PAH by SIM SPE	Analytical Method: EPA	8270 by SIM Preparati	on Meth	od: EPA 3535			
Indeno(1,2,3-cd)pyrene	ND ug/L	0.20	1	07/31/08 00:00	08/12/08 06:19	9 193-39-5	
1-Methylnaphthalene	ND ug/L	2.0	1	07/31/08 00:00	08/12/08 06:19	90-12-0	
2-Methylnaphthalene	ND ug/L	2.0	1	07/31/08 00:00	08/12/08 06:19	91-57-6	
Naphthalene	ND ug/L	1.5	1	07/31/08 00:00	08/12/08 06:19	91-20-3	
Phenanthrene	ND ug/L	0.20	1	07/31/08 00:00	08/12/08 06:19	85-01-8	
Pyrene	ND ug/L	0.10	1	07/31/08 00:00	08/12/08 06:19	129-00-0	
Nitrobenzene-d5 (S)	46 %	50-150	1	07/31/08 00:00			1g
2-Fluorobiphenyl (S)	65 %	50-150	1	07/31/08 00:00			. 3
Terphenyl-d14 (S)	63 %	50-150	1		08/12/08 06:19		
8260 MSV Low Level	Analytical Method: EPA	8260					
Benzene	ND ug/L	1.0	1		08/01/08 06:17	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		08/01/08 06:17		
Naphthalene	ND ug/L	1.0	1		08/01/08 06:17		
Toluene	1.3 ug/L	1.0	1		08/01/08 06:17		
m&p-Xylene	ND ug/L		1		08/01/08 06:17		
o-Xylene	ND ug/L	2.0					
4-Bromofluorobenzene (S)	94 %	1.0	1		08/01/08 06:17		
		87-109	1		08/01/08 06:17		
Dibromofluoromethane (S)	101 %	85-115	1		08/01/08 06:17		
1,2-Dichloroethane-d4 (S)	103 %	79-120	1		08/01/08 06:17		
Toluene-d8 (S)	101 %	70-120	. 1		08/01/08 06:17	2037-26-5	
Sample: 1057 GARDENIA A	Lab ID: 9224472004	Collected: 07/28/0	8 10:50	Received: 07	/30/08 17:00	Matrix: Water	
Derrot							~
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
	Analytical Method: EPA		-	·	Analyzed	CAS No.	Qua
8270 MSSV PAH by SIM SPE	Analytical Method: EPA		-	·			Qua
8270 MSSV PAH by SIM SPE Acenaphthene	Analytical Method: EPA ND ug/L	8270 by SIM Preparati 4.0	on Meth	od: EPA 3535 07/31/08 00:00	08/12/08 06:42	2 83-32-9	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene	Analytical Method: EPA ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0	on Meth 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42	2 83-32-9 2 208-96-8	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene	Analytical Method: EPA ND ug/L ND ug/L ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10	on Meth 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42 08/12/08 06:42	2 83-32-9 2 208-96-8 2 120-12-7	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene	Analytical Method: EPA ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20	on Meth 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42	2 83-32-9 2 208-96-8 2 120-12-7 2 56-55-3	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene	Analytical Method: EPA ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40	on Meth 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42	83-32-9 208-96-8 120-12-7 56-55-3 50-32-8	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene	Analytical Method: EPA ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60	on Meth 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42	<ol> <li>83-32-9</li> <li>208-96-8</li> <li>120-12-7</li> <li>56-55-3</li> <li>50-32-8</li> <li>205-99-2</li> </ol>	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene	Analytical Method: EPA ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60 0.40	on Meth 1 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42	<ul> <li>83-32-9</li> <li>208-96-8</li> <li>120-12-7</li> <li>56-55-3</li> <li>50-32-8</li> <li>205-99-2</li> <li>191-24-2</li> </ul>	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene	Analytical Method: EPA ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60 0.40 0.40 0.40	on Meth 1 1 1 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42	<ul> <li>83-32-9</li> <li>208-96-8</li> <li>120-12-7</li> <li>56-55-3</li> <li>50-32-8</li> <li>205-99-2</li> <li>191-24-2</li> <li>207-08-9</li> </ul>	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	Analytical Method: EPA ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60 0.40 0.40 0.40 0.20	on Meth 1 1 1 1 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42	<ul> <li>83-32-9</li> <li>208-96-8</li> <li>120-12-7</li> <li>56-55-3</li> <li>50-32-8</li> <li>205-99-2</li> <li>191-24-2</li> <li>207-08-9</li> <li>218-01-9</li> </ul>	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene	Analytical Method: EPA ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60 0.40 0.40 0.20 0.40	on Meth 1 1 1 1 1 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42 08/12/08 06:42	<ul> <li>83-32-9</li> <li>208-96-8</li> <li>120-12-7</li> <li>56-55-3</li> <li>50-32-8</li> <li>205-99-2</li> <li>191-24-2</li> <li>207-08-9</li> <li>218-01-9</li> <li>53-70-3</li> </ul>	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene	Analytical Method: EPA ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60 0.40 0.40 0.20 0.40 0.20 0.40 0.60	on Meth 1 1 1 1 1 1 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42	<ul> <li>83-32-9</li> <li>208-96-8</li> <li>120-12-7</li> <li>56-55-3</li> <li>50-32-8</li> <li>205-99-2</li> <li>191-24-2</li> <li>207-08-9</li> <li>218-01-9</li> <li>53-70-3</li> <li>206-44-0</li> </ul>	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene	Analytical Method: EPA ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60 0.40 0.20 0.40 0.20 0.40 0.60 0.60 0.62	on Meth 1 1 1 1 1 1 1 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42	<ul> <li>83-32-9</li> <li>208-96-8</li> <li>120-12-7</li> <li>56-55-3</li> <li>50-32-8</li> <li>205-99-2</li> <li>191-24-2</li> <li>207-08-9</li> <li>218-01-9</li> <li>53-70-3</li> <li>206-44-0</li> <li>86-73-7</li> </ul>	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene 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	Analytical Method: EPA ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60 0.40 0.40 0.20 0.40 0.60 0.60 0.62 0.40	on Meth 1 1 1 1 1 1 1 1 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42	<ul> <li>83-32-9</li> <li>208-96-8</li> <li>120-12-7</li> <li>56-55-3</li> <li>50-32-8</li> <li>205-99-2</li> <li>191-24-2</li> <li>207-08-9</li> <li>218-01-9</li> <li>53-70-3</li> <li>206-44-0</li> <li>86-73-7</li> <li>193-39-5</li> </ul>	
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene 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	Analytical Method: EPA ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60 0.40 0.40 0.20 0.40 0.60 0.62 0.40 4.0	on Meth 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42	<ul> <li>83-32-9</li> <li>208-96-8</li> <li>120-12-7</li> <li>56-55-3</li> <li>50-32-8</li> <li>205-99-2</li> <li>191-24-2</li> <li>207-08-9</li> <li>218-01-9</li> <li>53-70-3</li> <li>206-44-0</li> <li>86-73-7</li> <li>193-39-5</li> <li>90-12-0</li> </ul>	
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene 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	Analytical Method: EPA ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60 0.40 0.40 0.20 0.40 0.60 0.62 0.40 4.0 4.0	on Meth 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42	2 83-32-9 2 208-96-8 120-12-7 56-55-3 2 50-32-8 2 205-99-2 191-24-2 2 207-08-9 2 218-01-9 53-70-3 2 206-44-0 86-73-7 193-39-5 90-12-0 91-57-6	
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene 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	Analytical Method: EPA ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60 0.40 0.40 0.20 0.40 0.60 0.62 0.40 4.0 4.0 4.0 3.0	on Meth 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42	2 83-32-9 2 208-96-8 120-12-7 56-55-3 2 50-32-8 2 205-99-2 2 191-24-2 2 207-08-9 2 218-01-9 53-70-3 2 206-44-0 8 66-73-7 1 93-39-5 2 90-12-0 9 91-27-6 9 91-20-3	Qua
8270 MSSV PAH by SIM SPE Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene 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	Analytical Method: EPA ND ug/L ND ug/L	8270 by SIM Preparati 4.0 3.0 0.10 0.20 0.40 0.60 0.40 0.40 0.20 0.40 0.60 0.62 0.40 4.0 4.0	on Meth 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	od: EPA 3535 07/31/08 00:00 07/31/08 00:00	08/12/08 06:42 08/12/08 06:42	2 83-32-9 2 08-96-8 120-12-7 56-55-3 2 50-32-8 2 05-99-2 191-24-2 2 07-08-9 2 18-01-9 53-70-3 2 06-44-0 8 6-73-7 193-39-5 9 0-12-0 9 1-57-6 9 1-20-3 8 5-01-8	Qua

Date: 08/13/2008 05:36 PM

### **REPORT OF LABORATORY ANALYSIS**

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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

Project: LAUREL BAY SAMPLING 7/28/08 Pace Project No.: 9224472

Sample: 1057 GARDENIA A Received: 07/30/08 17:00 Lab ID: 9224472004 Collected: 07/28/08 10:50 Matrix: Water CAS No. Parameters Results Units Report Limit DF Prepared Analyzed Qual 8270 MSSV PAH by SIM SPE Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3535 Nitrobenzene-d5 (S) 56 % 50-150 07/31/08 00:00 08/12/08 06:42 4165-60-0 1 07/31/08 00:00 08/12/08 06:42 321-60-8 2-Fluorobiphenyl (S) 64 % 50-150 1 Terphenyl-d14 (S) 99 % 50-150 1 07/31/08 00:00 08/12/08 06:42 1718-51-0 8260 MSV Low Level Analytical Method: EPA 8260 Benzene 08/01/08 06:41 71-43-2 ND ug/L 1.0 1 08/01/08 06:41 100-41-4 Ethylbenzene ND ug/L 1.0 1 Naphthalene 08/01/08 06:41 91-20-3 ND ug/L 10 1 Toluene ND ug/L 08/01/08 06:41 108-88-3 1.0 1 m&p-Xylene ND ug/L 2.0 08/01/08 06:41 1330-20-7 1 o-Xylene ND ug/L 08/01/08 06:41 95-47-6 1.0 1 4-Bromofluorobenzene (S) 95 % 87-109 08/01/08 06:41 460-00-4 1 Dibromofluoromethane (S) 103 % 85-115 08/01/08 06:41 1868-53-7 1 1,2-Dichloroethane-d4 (S) 102 % 79-120 08/01/08 06:41 17060-07-0 1 Toluene-d8 (S) 08/01/08 06:41 2037-26-5 101 % 70-120 1 Sample: 1061 GARDENIA A Lab ID: 9224472005 Collected: 07/28/08 11:00 Received: 07/30/08 17:00 Matrix: Water Parameters Results Units DF CAS No. Report Limit Prepared Analyzed Qual 8270 MSSV PAH by SIM SPE 3510 Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510 Acenaphthene ND ug/L 2.0 07/31/08 00:00 08/12/08 07:05 83-32-9 1 Acenaphthylene ND ug/L 1.5 07/31/08 00:00 08/12/08 07:05 208-96-8 1 Anthracene ND ug/L 0.050 07/31/08 00:00 08/12/08 07:05 120-12-7 1 Benzo(a)anthracene ND ug/L 0.10 1 07/31/08 00:00 08/12/08 07:05 56-55-3 Benzo(a)pyrene ND ug/L 07/31/08 00:00 08/12/08 07:05 50-32-8 0.20 1 Benzo(b)fluoranthene ND ug/L 07/31/08 00:00 08/12/08 07:05 205-99-2 0.30 1 Benzo(g,h,i)perylene ND ug/L 0.20 1 07/31/08 00:00 08/12/08 07:05 191-24-2 Benzo(k)fluoranthene ND ug/L 0.20 1 07/31/08 00:00 08/12/08 07:05 207-08-9

ND ug/L

ND ua/L

66 %

73 %

99 %

ND ug/L

Analytical Method: EPA 8260

8260 MSV Low Level

Date: 08/13/2008 05:36 PM

Benzene

Chrysene

Fluorene

Fluoranthene

Naphthalene

Pyrene

Phenanthrene

Dibenz(a,h)anthracene

Indeno(1,2,3-cd)pyrene

1-Methylnaphthalene

2-Methylnaphthalene

Nitrobenzene-d5 (S)

2-Fluorobiphenyl (S)

Terphenyl-d14 (S)

**REPORT OF LABORATORY ANALYSIS** 

0.10

0.20

0.30

0.31

0.20

2.0

2.0

15

0.20

0.10

50-150

50-150

50-150

1.0

1

1

1

1

1

1

1

1

1

1

1

1

1

1

07/31/08 00:00 08/12/08 07:05 218-01-9

07/31/08 00:00 08/12/08 07:05 53-70-3

07/31/08 00:00 08/12/08 07:05 206-44-0

07/31/08 00:00 08/12/08 07:05 86-73-7

07/31/08 00:00 08/12/08 07:05 193-39-5

07/31/08 00:00 08/12/08 07:05 90-12-0

07/31/08 00:00 08/12/08 07:05 91-57-6

07/31/08 00:00 08/12/08 07:05 91-20-3

07/31/08 00:00 08/12/08 07:05 85-01-8

07/31/08 00:00 08/12/08 07:05 129-00-0

07/31/08 00:00 08/12/08 07:05 4165-60-0

07/31/08 00:00 08/12/08 07:05 321-60-8

07/31/08 00:00 08/12/08 07:05 1718-51-0

08/01/08 07:04 71-43-2

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Appendix D Regulatory Correspondence



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Steven G. Kisner Secretary



BOARD: Henry C. Scott

M. David Mitchell, MD

Glenn A. McCall

Coleman F. Buckhouse, MD

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

20 August 2008

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

Re: MCAS – Laurel Bay Housing – 1057 Gardenia Site ID # 04011 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 Biskop, 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.

### 17 December 2008

Commanding Officer ATTN: S-4 NREAO (Craig Ehde) MCAS PO Box 55001 Beaufort, SC 29904-5001

Re: MCAS – Laurel Bay Housing – 1057 Gardenia **Site ID # 04011** Groundwater Sampling Results received 6 November 2008 Beaufort County

Dear Mr. Ehde:

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

I Cooke

Jan T. Cooke, Hydrogeologist

B. Thomas Knight, Manager

cc: Region 8 District EQC Tri-Command Communities; Attn: Mr. Robert Bible; 600 Laurel Bay Road Beaufort, SC 29906 Technical File