



**water & air**  
**RESEARCH, INC.**

August 1, 2012

Sam Bridges  
Land Rights Coordinator  
City of Gainesville  
PO Box 490  
Gainesville, FL 32602

Re: Soil and Groundwater Testing Report for Layton Army Reserve Center  
1125 NE 8<sup>th</sup> Avenue  
Gainesville, Florida  
Project No. 12-5373-04

Dear Mr. Bridges:

Water & Air Research, Inc. (Water & Air) is pleased to present this Limited Environmental Site Assessment Phase II Report summarizing results and findings of recent soil and groundwater testing completed at the Layton Army Reserve Center (LARC) site. The reported property uses included storage of fuels and maintaining an oil/water separator.

## **1 SITE BACKGROUND**

Based on documentation provided by The City of Gainesville (The City) and forwarded by the Army Reserve, the site was developed in the early 1950s as an Army Reserve base. Site operations included training of personnel, storage of equipment, vehicles, chemicals, and fuels. The facility maintained several underground storage tanks (USTs) and aboveground storage tanks (ASTs), operated an oil/water separator, and reportedly had some minor leaks and spills during operations. The documentation showed closure activities, including testing, were completed to show if any impacts such as a spill or leak had occurred for all potential impact areas, except for two areas.

An UST was discovered during the decommissioning of the oil/water separator. The tank was removed, and soil samples were screened for petroleum vapors. The screening showed that no contaminants had leaked from the tank; however, no groundwater sample had been collected, and no samples were taken down gradient from the former UST and oil water separator system.

A former heating oil AST was in use for the property on the south side of the structure. The tank had been removed, but no soil or shallow groundwater testing was found.

The following work scope was completed in the two areas identified with potential recognized environmental concerns (RECs).

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Gainesville, FL 32608  
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## **2 PHASE II ENVIRONMENTAL SITE ASSESSMENT ACTIVITIES**

Soil and groundwater testing was completed at the LARC site to determine if impacts from the former oil/water separator system and the former fuel oil tank used at the property had occurred.

The site assessment work scope included:

- Completing nine soil borings into the water table or refusal,
- collecting soil samples for field testing using an organic vapor meter (OVM),
- analyzing select soil samples for laboratory testing, and
- collecting groundwater samples for analytical laboratory testing.

### **2.1 Soil Sampling, Field Testing, and Analytical Methods**

On July 20, 2012, Water & Air completed nine soil borings at depths ranging between six and 13 feet below land surface (bls). Soil samples were collected in accordance with Florida Department of Environmental Protection (FDEP) Standard Operating Procedures (SOPs). Soil borings OSW-1 through OSW-4 were completed around the former oil/water separator system. Soil borings HO-1 through HO-5 were completed around the former aboveground heating oil tank pad.

Soil borings were advanced using a hand auger. Soil samples were collected at two-foot vertical intervals for field screening with an OVM equipped photo ionization detector (PID). The PID was calibrated in the field according to manufacturer specifications. Soil samples for OVM field screening were collected above the water table. The water table was encountered at approximately 8.5 to 10 feet bls.

Soil samples for laboratory analysis were collected from the sample interval with the highest recorded reading on the OVM or in the location most likely to have contamination.

None of the soil samples collected registered readings above background levels on the OVM. The soil sample from the area of the oil/water separator (OSW-3-8 was collected above the water table from the boring located in the center of the former UST.

The former heating oil AST location was identified on a map forwarded by The City. The soil sample from the heating oil AST was taken above the water table from the boring located in the expected down gradient south end of the former tank pad.

Soil boring locations OSW-1 through OSW-4 and HO-1 through HO-5 are shown on Figure 2.

Soil sample OSW-3-8 (boring 3 at eight feet bls) was analyzed by EPA Method 8260 (full list) for volatile organic aromatics (VOAs), EPA Method 8270 for semi-volatile organic carbons, FL-PRO for TRPH (total recoverable petroleum hydrocarbons), and EPA Method 6010 for arsenic, cadmium, chromium, and lead.

Soil sample HO-1-8 (boring 1 at eight feet bls) was analyzed for EPA Method 8260 for VOAs, EPA Method 8270 for semi volatile organic carbons, and FL-PRO for TRPH. The field notes, instrument calibration log, and boring logs are provided in Appendix A.

Soil borings OSW-1, OSW-3, HO-1, and HO-4 were further advanced into the water table to depths between 13 and 13.5 feet bls. Temporary monitoring wells were constructed using ten feet of two-inch diameter PVC screens (0.01-inch slot size) attached to 2-inch diameter PVC riser pipe extending to the surface. A 20/30 filter sand pack was placed in the annular space between the borehole and the well screen. The wells were developed using a peristaltic pump until clear.

## 2.2 Groundwater Sampling and Analytical Methods

On July 23, 2012, groundwater samples were collected from the four temporary monitoring wells. The oil water separator UST wells (OSW-1 and OSW-3) groundwater samples were analyzed by EPA Method 8260, EPA Method 8270, FL-PRO, and EPA Method 6010. The heating oil AST wells (HO-1 and HO-4) groundwater samples were analyzed by EPA Methods, 8270 and FL-PRO. The field notes, instrument calibration log, and groundwater sampling logs are provided in Appendix A.

## 3.0 SITE ASSESSMENT RESULTS AND FINDINGS

The following section summarizes the results and findings of the additional site assessment technical activities.

### 3.1 Soil Testing Results and Findings

Soil testing OVM results did not record any reading above background levels.

Soil analytical results from borings installed at the former oil water separator UST OSW-3-8, and heating oil AST HO-1-8 did not identify any parameters above the laboratory practical quantitation limits or the soil cleanup target levels (SCTLs) list in Florida Administrative Code (FAC) 62-777.

The soil analytical laboratory report and chain-of-custody form are provided in Appendix B.

### 3.2 Groundwater Results and Findings

Groundwater analytical results from oil water separator UST OSW-1, OSW-3, and the heating oil AST HO-1 and HO-4 were reported below the laboratory practical quantitation limits and the groundwater cleanup target levels (GCTLs) set forth in FAC 62-777 for the parameters analyzed.

The groundwater analytical laboratory report and chain-of-custody form are provided in Appendix C.

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the testing results of soil and groundwater in the REC areas of the former oil/water separator and the former fuel oil AST, no adverse impacts from these two areas were identified.

If you have any questions or need additional information, please contact myself or Simon Cordery.

Sincerely,  
Water & Air Research, Inc.

  
Simon Cordery  
Scientist II

Attachments:

#### Figures:

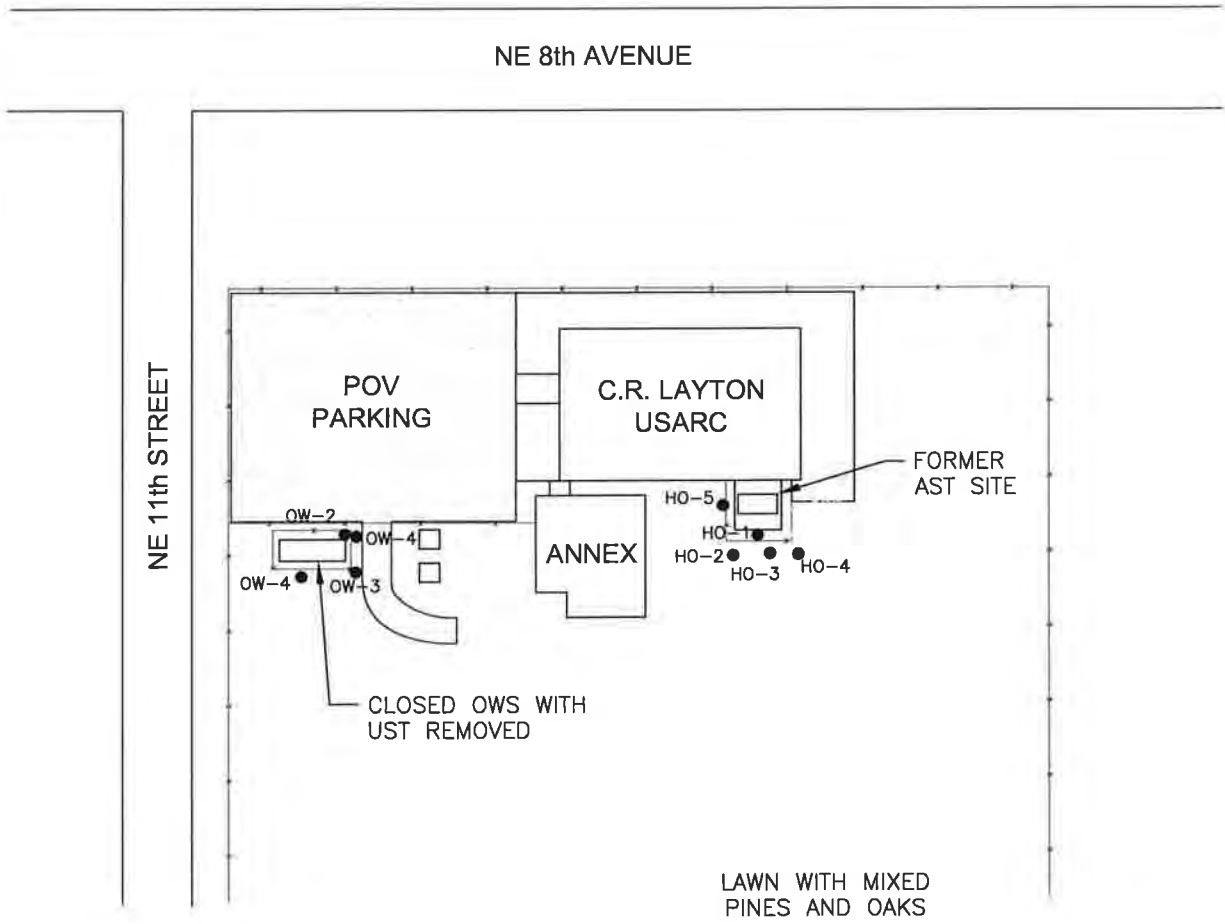
- 1 Site Layout Showing Soil Boring Locations

#### Appendices:

- A Field Notes, Instrument Calibration Logs, Boring Logs, and Groundwater Sampling Logs
- B Soil Laboratory Analytical Report and Chain-of-Custody
- C Groundwater Analytical Laboratory Report and Chain-of-Custody

**Figure**

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**LEGEND**  
HO-4 ● SAMPLING LOCATION

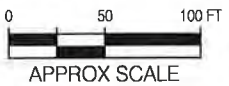


FIGURE 1.  
SITE LAYOUT SHOWING SAMPLING LOCATIONS  
C.R. LAYTON USARC  
GAINESVILLE, FLORIDA

Source: Water & Air Research, Inc., 2012.





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**Appendix A**  
**Field Notes, Instrument Calibration Logs, Boring Logs,**  
**and Groundwater Sampling Logs**

800 Arrive on site

815 SAC lays out areas for SB & TMW's

820 KRS sanitizes jars, calibrates equipment  
KRS SAC begins hand augering  
ARK

Hit refusal at 6' bls at proposed OSW-4. moved ~4-5' south & hit refusal at 5' bls. Moved 5' west & hit refusal again at 5' bls. Dark red hard rocky layer. ~~OSW-4~~ <sup>KRS</sup> OSW-4

well	depth	OVA	net OVA
OSW-1	2	0	0
	4	0	0
	6	0	0
	8	0	0

OSW-1 was hand-augered to 13 feet and well was installed.

OSW-3	2	0	0
	4	0	0
	6	0	0
	8	0	0

OSW-3 was hand-augered to 13 feet and well was installed.

Wells were installed using 5 feet of screen & 10 feet of riser (2-inch PVC)

1224 Began developing OSW-3

Hit <sup>KRS</sup> refusal at 5.5' bls at proposed OSW-2; moved 5' north and hit refusal at 5.5' bls again. Took OVA data up till refusal.

Installed well at OSW-1 because refusal was not found. Layer might've been broken at installation of oil/water separator.

Reviewed

AUG 02 2012

BTC

OSW-2	depth (ft)	0	Army Reserve	
			reading	net CVA (ppm)
	2	0	0	0
	4	0	0	0
	55			

1323 Stopped purging OSW-3

1329 Began purging OSW-1

1500 Finished purging OSW-1

1553 Began purging HO-4

well	depth (ft)		reading	net CVA (ppm)
HO-1	2	0	0	0
	4	0.7	0.7	0
	5.5	0.7	0.7	0
	8	0.7	0.7	0

HO-1 was hand-augered to 13ft & well was installed.

HO-2	2	0.7	0.7	0
	4	0.7	0.7	0
	6	0	0	0
	8	0	0	0

Reviewed by:

AUG 02 2012

BPZ

HO-3	2	0.7	0.7	0
	4	0.7	0.7	0
	6	0	0	0
	8	0.7	0.7	0

1635 Stopped purging HO-4, began purging HO-1

HO-4	2	0.7	0.7	0
	4	0.7	0.7	0
	6	0	0	0
	8	0.7	0.7	0

HO-4 was hand-augered to 13ft & well was installed.

HO-5	2	0.7	0.7	0
	4	0	0	0
	6	0.7	0.7	0
	8	0.7	0.7	0



1800 Verify equipment, load truck

1815 Leave site

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BFC

**Field Instrument Calibration Log**

PROJECT NAME: City of Gainesville, Army Reserve

PROJECT LOCATION: Gainesville, FL

INSTRUMENT # \_\_\_\_\_

TURBIDIMETER - SOP FT. 1600								
DATE	TIME	EXPIRATION DATE**	STD VALUE (NTU)	INSTRUMENT RESPONSE (NTU)	% DIFF	PASS (Y, N)***	SAMPLER INITIALS	COMMENTS
CCV*								
CCV*								

INSTRUMENT # PID #3

PID - PER MANUFACTURERS REQUEST									
DATE	TIME	EXPIRATION DATE***	STD VALUE (ppm)	INSTRUMENT RESPONSE (ppm)	% DIFF	PASS (Y, N)	RF = 1.8 (Y, N)	SAMPLER INITIALS	COMMENTS
IC*	7/20/12	824	0	230	0	Y	Y	WRS	
ICV*	↓	825	0	230	0	Y	Y	WRS	
CCV*	↓	1500	0	230	0	Y	Y	WRS	

INSTRUMENT # \_\_\_\_\_

FID - PER MANUFACTURERS REQUEST								
DATE	TIME	EXPIRATION DATE***	STD VALUE (ppm)	INSTRUMENT RESPONSE (ppm)	% DIFF	PASS (Y, N)	SAMPLER INITIALS	COMMENTS
IC*			0	98				
ICV*			0	98				
CCV*			0	98				

**Notes:**

- \* IC= Initial Calibration ICV= Initial Calibration Verification CCV= Continuing Calibration Verification
- \*\*Standard Purchased From Hach Company.
- \*\*\* Standard Purchased From Liquid Technology
- \*\*\*\* Acceptance Criteria: Turbidity: Theoretical value(NTU) of 0.1-10, within 10%; Theoretical value(NTU) of 11-40, within 8%; Theoretical value(NTU) of 41-100, within 6.5%; Theoretical value(NTU) of >100# within 5% PID: ±10% ppm FID: ±10% ppm

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# BORING LOG

Boring/Well Number: <b>HO-1</b>		Permit Number: <b>NA</b>		FDEP Facility Identification Number: <b>NA</b>	
Site Name: <b>City of Gainesville Army Reserve</b>		Borehole Start Date: <b>7/20/12</b>	Borehole Start Time: <b>1500</b> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		
		End Date:	End Time: <b>1600</b> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		
Environmental Contractor: <b>Water &amp; Air</b>		Geologist's Name: <b>NA</b>		Environmental Technician's Name: <b>Jcathy</b>	
Drilling Company: <b>NA</b>		Pavement Thickness (inches): <b>0</b>	Borehole Diameter (inches): <b>2</b>		Borehole Depth (feet): <b>13.5</b>
Drilling Method(s): <b>HA</b>	Apparent Borehole DTW (in feet from soil moisture content): <b>6.0</b>	Measured Well DTW (in feet after water recharges in well): <b>10.0</b>	OVA (list model and check type): <b>580B OVM</b> <input checked="" type="checkbox"/> FID <input checked="" type="checkbox"/> PID		
Disposition of Drill Cuttings [check method(s)]: <input type="checkbox"/> Drum <input checked="" type="checkbox"/> Spread <input type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other					
<i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): <input checked="" type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							1	dark sand	SP		
						0	2	dark sand	SP		
							3	dark sand	SP		
							4	tan sand	SP		
							5	clayey sand	SC		
						0	6	6' moist	SC		
							7	reddish clay rocks & sandy clay	CL		
<b>HA</b>	<b>8</b>					0	8				
							9				
							10				
							11				
							12				

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*[Signature]*

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings  
Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

# BORING LOG

Boring/Well Number: <b>HO-2</b>		Permit Number: <b>NA</b>		FDEP Facility Identification Number: <b>NA</b>	
Site Name: <b>City of Gainesville Army Reserve</b>		Borehole Start Date: <b>7/20/12</b>	Borehole Start Time: <b>1700</b> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		
		End Date: <b>7/20/12</b>	End Time: <b>1730</b> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		
Environmental Contractor: <b>water &amp; Air</b>		Geologist's Name: <b>NA</b>		Environmental Technician's Name: <b>Adam</b>	
Drilling Company: <b>NA</b>		Pavement Thickness (inches): <b>0</b>	Borehole Diameter (inches): <b>2</b>		Borehole Depth (feet): <b>8</b>
Drilling Method(s): <b>HA</b>	Apparent Borehole DTW (in feet from soil moisture content): <b>8</b>	Measured Well DTW (in feet after water recharges in well): <b>NA</b>		OVA (list model and check type): <input checked="" type="checkbox"/> FID <input checked="" type="checkbox"/> PID	
Disposition of Drill Cuttings [check method(s)]: <input type="checkbox"/> Drum <input checked="" type="checkbox"/> Spread <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other <i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): <input type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							1	sand	SP		
							2	sand	SP		
							3	sand	SP		
							4	tan silty sand	SM		
							5	clayey sand	SC		
							6	" "	SC		
							7	" "	SC		
							8	moist			
							9				
							10				
							11				
							12				

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*[Signature]*

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings  
Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

# BORING LOG

Boring/Well Number: <b>HO-3</b>		Permit Number: <b>NA</b>		FDEP Facility Identification Number: <b>NA</b>	
Site Name: <b>Army City of Gainesville Reserve</b>		Borehole Start Date: <b>7/20/12</b>	Borehole Start Time: <b>1200</b> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		
		End Date: <b>7/20/12</b>	End Time: <b>1630</b> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		
Environmental Contractor: <b>Water &amp; Air</b>		Geologist's Name: <b>NA</b>		Environmental Technician's Name: <b>Adam</b>	
Drilling Company: <b>NA</b>		Pavement Thickness (inches): <b>0</b>	Borehole Diameter (inches): <b>2</b>		Borehole Depth (feet): <b>8.5</b>
Drilling Method(s): <b>HA</b>	Apparent Borehole DTW (in feet from soil moisture content): <b>8</b>	Measured Well DTW (in feet after water recharges in well):		OVA (list model and check type): <input checked="" type="checkbox"/> FID <input checked="" type="checkbox"/> PID	
Disposition of Drill Cuttings [check method(s)]: <input type="checkbox"/> Drum <input type="checkbox"/> Spread <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other					
<i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): <input type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
	1						1	sand	SP		
	2					0	2	sand	SP		
	3						3		SM		
	4					0	4	silty sand			
	5					0	5	clayey sand	SC		
	6					0	6		CL		
	7						7	clay			
	8					0	8	clayey sand moist	SC		
	9						9				
	10						10				
	11						11				
	12						12				

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AUG 02 2012  
*[Signature]*

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings  
Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

# BORING LOG

Boring/Well Number: <b>HO-4</b>		Permit Number: <b>NA</b>		FDEP Facility Identification Number: <b>NA</b>	
Site Name: <b>City of Gainesville Reserve</b>		Borehole Start Date: <b>7/20/12</b>	Borehole Start Time: <b>1400</b> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		
		End Date:	End Time: <b>1500</b> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		
Environmental Contractor: <b>Water &amp; Air</b>		Geologist's Name: <b>NA</b>		Environmental Technician's Name: <b>Kathy</b>	
Drilling Company: <b>NA</b>	Pavement Thickness (inches): <b>0</b>	Borehole Diameter (inches): <b>2</b>		Borehole Depth (feet): <b>13</b>	
Drilling Method(s): <b>HA</b>	Apparent Borehole DTW (in feet from soil moisture content): <b>8.0</b>	Measured Well DTW (in feet after water recharges in well): <b>9.0</b>	OVA (list model and check type): <input checked="" type="checkbox"/> FID <input checked="" type="checkbox"/> PID		
Disposition of Drill Cuttings [check method(s)]: <input type="checkbox"/> Drum <input checked="" type="checkbox"/> Spread <input type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other <i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): <input checked="" type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							1	sand/dirt	SP		
						0	2	silty sand	SM		
							3		SC		
						0	4	& clayey sand			
							5		SC		
						0	6	clayey sand	SC		
							7	sandy clay	CL		
						0	8	clayey sand moist	SC		
							9	"			
							10	"			
							11	"			
							12	EOB at 13'			

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*[Signature]*

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings  
Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

# BORING LOG

Boring/Well Number: <b>OSW-1</b>		Permit Number: <b>NA</b>		FDEP Facility Identification Number: <b>NA</b>	
Site Name: <b>City of Gainesville Army Reserve</b>		Borehole Start Date: <b>7/20/12</b>	Borehole Start Time: <b>1100</b> <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM		
		End Date:	End Time: <b>1200</b> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM		
Environmental Contractor: <b>Water e Air</b>		Geologist's Name: <b>NA</b>		Environmental Technician's Name: <b>Katy</b>	
Drilling Company: <b>NA</b>		Pavement Thickness (inches): <b>0</b>	Borehole Diameter (inches): <b>2</b>		Borehole Depth (feet): <b>13</b>
Drilling Method(s): <b>HA</b>	Apparent Borehole DTW (in feet from soil moisture content): <b>8.5</b>	Measured Well DTW (in feet after water recharges in well): <b>8.5</b>		OVA (list model and check type): <input checked="" type="checkbox"/> FID <input checked="" type="checkbox"/> PID	
Disposition of Drill Cuttings [check method(s)]: <input type="checkbox"/> Drum <input checked="" type="checkbox"/> Spread <input type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other <i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): <input checked="" type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description <small>(include grain size based on USCS, odors, staining, and other remarks)</small>	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples <small>(list sample number and depth or temporary screen interval)</small>
							1	sand (silty)	SM		
						0	2				
						0	3	sand (beige)	SP		
						0	4	clayey sand	SC		
						0	5				
						0	6	clayey sand	SC		
						0	7	clay	CL		
						0	8	sandy clay	CL		
							9	8.5 wet			
							10				
							11				
							12				

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AUG 02 2012

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings  
 Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

# BORING LOG

Boring/Well Number: <b>BSW-2</b>		Permit Number: <b>NA</b>		FDEP Facility Identification Number: <b>NA</b>	
Site Name: <b>City of Gainesville Army Reserve</b>		Borehole Start Date: <b>7/20/12</b>	Borehole Start Time: <b>1000</b> <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM		
Environmental Contractor: <b>Water &amp; Air</b>		End Date:	End Time: <b>1100</b> <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM		
Geologist's Name: <b>NA</b>		Environmental Technician's Name: <b>Adam</b>			
Drilling Company: <b>NA</b>		Pavement Thickness (inches): <b>NA</b>	Borehole Diameter (inches): <b>2</b>		Borehole Depth (feet): <b>res 6</b>
Drilling Method(s): <b>HA</b>	Apparent Borehole DTW (in feet from soil moisture content): <b>NA</b>	Measured Well DTW (in feet after water recharges in well): <b>NA</b>	OVA (list model and check type): <input checked="" type="checkbox"/> FID <input checked="" type="checkbox"/> PID		
Disposition of Drill Cuttings [check method(s)]: <input type="checkbox"/> Drum <input type="checkbox"/> Spread <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other <i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): <input type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							1	Grey Dirt	SP		
						○	2	grey tan sand	SP		
							3	Brown & Tan sand	SP		
					○	4					
						○	5	Sand w/ red rock layer refusal at 6.0'			
					○	6					
						7					
							8				
							9				
							10				
							11				
							12				

Reviewed by:  
AUG 02 2012  
*BPE*

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings  
 Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated



# BORING LOG

Boring/Well Number: <i>OSW-3 OSW-3</i>		Permit Number: <i>NA</i>		FDEP Facility Identification Number: <i>Na</i>	
Site Name: <i>City of Gainesville Army Reser</i>		Borehole Start Date: <i>7/20/12</i>	Borehole Start Time: <i>900</i> <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	End Date: <i>7/20/12</i>	End Time: <i>1000</i> <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM
Environmental Contractor: <i>Water &amp; Air</i>		Geologist's Name: <i>NA</i>		Environmental Technician's Name: <i>Katy</i>	
Drilling Company: <i>NA</i>		Pavement Thickness (inches): <i>0</i>	Borehole Diameter (inches): <i>2</i>	Borehole Depth (feet): <i>13</i>	
Drilling Method(s): <i>Hand Auger</i>	Apparent Borehole DTW (in feet from soil moisture content): <i>8.5</i>	Measured Well DTW (in feet after water recharges in well): <i>8.5</i>	OVA (list model and check type): <input checked="" type="checkbox"/> FID <input checked="" type="checkbox"/> PID		
Disposition of Drill Cuttings [check method(s)]: <input type="checkbox"/> Drum <input checked="" type="checkbox"/> Spread <input type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other					
<i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): <input checked="" type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
HA							1	black sand	SM		
							2		SM		
							3	white sand			
							4	white sand w/ red clay rocks	SP		
							5	<del>sandy clay</del> clayey sand	SC		
							6	<del>clayey sand</del> sandy clay	CL		
							7	clay	CL		
							8	sandy clay	CL		
HA	8						9	8.5 moist sand Saturated	SM		
							10				
							11				
							12				

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings  
 Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

Reviewed by  
 AUG 02 2012  
*[Signature]*

3/2

# BORING LOG

Boring/Well Number: <b>OSW-4</b>		Permit Number: <b>NA</b>		FDEP Facility Identification Number: <b>NA</b>	
Site Name: <b>City of Gainesville Army Reserve</b>		Borehole Start Date: <b>7/23/12</b>	Borehole Start Time: <b>1100</b> <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM		
		End Date:	End Time: <b>1130</b> <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM		
Environmental Contractor: <b>Water &amp; Air</b>		Geologist's Name: <b>NA</b>		Environmental Technician's Name: <b>KRS</b>	
Drilling Company: <b>NA</b>		Pavement Thickness (inches): <b>0</b>	Borehole Diameter (inches): <b>2</b>		Borehole Depth (feet): <b>5.5</b>
Drilling Method(s): <b>HA</b>	Apparent Borehole DTW (in feet from soil moisture content): <b>NA</b>	Measured Well DTW (in feet after water recharges in well): <b>NA</b>	OVA (list model and check type): <input checked="" type="checkbox"/> FID <input checked="" type="checkbox"/> PID		
Disposition of Drill Cuttings [check method(s)]: <input type="checkbox"/> Drum <input type="checkbox"/> Spread <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other <i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): <input type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							1	Grey Dirt	SP		
						○	2	Grey Dark Brown sand	SP		
							3	Tan Light Brown sand	SP		
						○	4				
							5	Red Hard pan			
							6				
							7				
							8				
							9				
							10				
							11				
							12				

Reviewed by:

AUG 02 2012

*[Signature]*

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings  
 Moisture Content Codes: D = Dry; M = Moist; W = Wet; -S = Saturated



1025

City of Gainesville  
Army Reserve

#140274D  
7/23/12

- 900 Arrive on site
- 905 Calibrate equipment
- 906 Open wells to equilibrate

Well	DTW
OSW-3	8.29
OSW-1	8.30
HO-1	10.32
HO-4	7.86

929 Began purging first well to sample

OP	depth	reading	net OVA (ppm)
OSW-4	2	0.7	0
	4	0.7	0

- 1242 Finished sampling last well
- 1250 Verify equipment
- 1257 Load truck
- 1320 Leave site

Reviewed by

AUG 02 2012

BR

PROJECT LOCATION: Gainesville, FL

Field Instrument Calibration Log

PROJECT NAME: City of Gainesville

INSTRUMENT # YSI-SSOA-ARK

DISSOLVED OXYGEN - SOP FT 1500									
DATE	TIME	WATER-SATURATED AIR (Y, N)	STD VALUE (%)	STD VALUE (mg/L)	TEMP (°C)	THEORETICAL SATURATION (mg/L)	PASS (Y, N)***	SAMPLER INITIALS	COMMENTS
IC*	7/23/12	905	100	---	---	---	Y	KPS	
ICV*	905	Y	---	8.14	25.5	8.188	Y		
CCV*	1253	Y	---	7.23	32.6	7.21	Y		

INSTRUMENT # Combo-GW2

PH - SOP FT 1100									
DATE	TIME	EXPIRATION DATE**	LOT #	STD VALUE (SU)	INSTRUMENT RESPONSE (SU)	PASS (Y, N)***	SAMPLER INITIALS	COMMENTS	
IC*	7/23/12	906	110516B	7	7.01	Y	KPS		
ICV*	907	3/2013	120312C	4.01	4.00	Y			
CCV*	1254	3/2013	110915D	10	7.88	Y			
	1254	4/2012	110516B	7	7.08	Y			
	1255	3/2013	120312C	4.01	4.05	Y			

INSTRUMENT # Combo-GW2

SPECIFIC CONDUCTANCE - SOP FT 1200									
DATE	TIME	EXPIRATION DATE**	LOT #	STD VALUE (µmhos/cm)	INSTRUMENT RESPONSE (µmhos/cm)	% DIFF	PASS (Y, N)***	SAMPLER INITIALS	COMMENTS
IC*	7/23/12	908	120312A	718 / 1413	1443	<5	Y	KPS	
ICV*	909	3/2013	120312B	100	104	<5	Y		
CCV*	1256	3/2013	120312A	718 / 1413	1411	<5	Y		

Notes:

- \* IC= Initial Calibration ICV= Initial Calibration Verification CCV= Continuing Calibration Verification
- \*\* Standard Purchased From Exaxol Chemical Corporation
- \*\*\* Acceptance Criteria: Dissolved Oxygen: ± 0.3 mg/L pH: ± 0.2 units Specific Conductance: ± 5%

Reviewed by

AUG 02 2012

*[Signature]*

**Field Instrument Calibration Log**

PROJECT NAME: City of Gainesville

PROJECT LOCATION: Gainesville, FL

INSTRUMENT # IB #4

**TURBIDIMETER - SOP FT 1600**

DATE	TIME	EXPIRATION DATE**	STD VALUE (NTU)	INSTRUMENT RESPONSE (NTU)	% DIFF	PASS (Y, N)***	SAMPLER INITIALS	COMMENTS
7/23/12	910	10/10/12	5.68	5.66	<1.0	Y	PRS	
	910		55.0	55.0	<0.5	Y		
	911		509	507	<5	Y		
	1250		5.68	5.87	<10	Y		
	1251		55.0	55.6	<4.5	Y		
	1252		509	506	<5	Y		

INSTRUMENT # PID #4

**PID - PER MANUFACTURERS REQUEST**

DATE	TIME	EXPIRATION DATE***	STD VALUE (ppm)	INSTRUMENT RESPONSE (ppm)	% DIFF	PASS (Y, N)	RF = 1.8 (Y, N)	SAMPLER INITIALS	COMMENTS
7/23/12	912	10/20/14	0	395	<5	Y	Y	PRS	
	913		0	400	<5	Y	Y	PRS	
	1253		0	415	<5	Y	Y		

INSTRUMENT #

**FID - PER MANUFACTURERS REQUEST**

DATE	TIME	EXPIRATION DATE***	STD VALUE (ppm)	INSTRUMENT RESPONSE (ppm)	% DIFF	PASS (Y, N)	SAMPLER INITIALS	COMMENTS
			0	98				
			0	98				
			0	98				

**Notes:**

\* IC= Initial Calibration ICV= Initial Calibration Verification CCV= Continuing Calibration Verification

\*\*Standard Purchased From Hach Company.

\*\*\* Standard Purchased From Liquid Technology

\*\*\*\* Acceptance Criteria: Turbidity: Theoretical value(NTU) of 0.1-10, within 10%; Theoretical value(NTU) of 11-40, within 8%; Theoretical value(NTU) of 41-100, within 6.5%; Theoretical value(NTU) of > 100, within 5% PID: ±10% ppm FID: ±10% ppm

Reviewed by

306 02 2012



Form FD 9000-24  
GROUNDWATER SAMPLING LOG

SITE NAME: City of Gainesville Army Res. SITE LOCATION: Gainesville, FL  
WELL NO: OSW-3 SAMPLE ID: OSW-3 DATE: 7/23/12

PURGING DATA

WELL DIAMETER (inches): 2 TUBING DIAMETER (inches): 1/4 WELL SCREEN INTERVAL DEPTH: 8 feet to 13.15 feet STATIC DEPTH TO WATER (feet): 8.29 PURGE PUMP TYPE OR BAILER: P/P  
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY = 13.15 feet - 8.29 feet X 0.16 gallons/foot = 0.75 1.1 gallons  
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10.29 FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10.29 PURGING INITIATED AT: 929 PURGING ENDED AT: 942 TOTAL VOLUME PURGED (gallons): 1.84

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
936	1.0	1.0	0.14	9.49	6.17	25.3	262	4.22	16.3	clear	none
938	0.28	1.28	0.14	9.49	6.01	25.3	198	4.64	18.4	"	"
940	0.28	1.56	0.14	9.49	5.87	25.3	197	4.73	11.8	"	"
942	0.28	1.84	0.14	9.49	5.85	25.3	190	4.78	7.47	"	"

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88  
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Katy/WAR2 SAMPLER(S) SIGNATURE(S): [Signature] SAMPLING INITIATED AT: 943 SAMPLING ENDED AT: 948  
PUMP OR TUBING DEPTH IN WELL (feet): 10.29 TUBING MATERIAL CODE: HDPE FIELD-FILTERED: Y (N) FILTER SIZE: µm  
FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
OSW-3	3	CG	40mL	HCl	-	5.85	8260	KFPP	~100
OSW-3	2	AG	1L	TW	-	5.85	8270	PP	~500
OSW-3	2	AG	1L	H2SO4	-	5.85	KRPH	PP	~500
OSW-3	1	PE	250mL	HNO3	-	5.85	6010	PP	~500
OSW-3	1	AG	1L	TW	-	5.85	PCBs	PP	~500

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Reviewed by [Signature] Revision Date: February 12, 2009

AUG 02 2012

[Signature]





Form FD 9000-24  
GROUNDWATER SAMPLING LOG

SITE NAME: <u>City of Gainesville Reserve Army</u>		SITE LOCATION: <u>Gainesville, FL</u>	
WELL NO: <u>H0-4</u>	SAMPLE ID: <u>H0-4</u>	DATE: <u>7/23/12</u>	

PURGING DATA

WELL DIAMETER (inches): <u>2</u>	TUBING DIAMETER (inches): <u>1/4</u>	WELL SCREEN INTERVAL DEPTH: <u>10</u> feet to <u>15</u> feet	STATIC DEPTH TO WATER (feet): <u>9.86</u>	PURGE PUMP TYPE OR BAILER: <u>PP</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) <u>= 15</u> feet - <u>9.86</u> feet X <u>0.16</u> gallons/foot = <u>0.82</u> gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = gallons + (gallons/foot X feet) + gallons = gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <u>11.86</u>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <u>13.5</u>	PURGING INITIATED AT: <u>1205</u>	PURGING ENDED AT: <u>1231</u>	TOTAL VOLUME PURGED (gallons):							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) $\mu\text{mhos/cm}$ or $\text{S/cm}$	DISSOLVED OXYGEN (circle units) $\text{mg/L}$ or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
<u>1212</u>	<u>1.0</u>	<u>1.0</u>	<u>0.14</u>	<u>12.93</u>	<u>6.60</u>	<u>25.7</u>	<u>269</u>	<u>1.51</u>	<u>71000</u>	<u>cloudy</u>	<u>none</u>
<u>1227</u>	<u>0.714</u>	<u>2.4</u>	<u>0.14</u>	<u>12.93</u>	<u>6.62</u>	<u>25.6</u>	<u>229</u>	<u>4.98</u>	<u>20.0</u>	<u>"</u>	<u>"</u>
<u>1229</u>	<u>0.28</u>	<u>2.68</u>	<u>0.14</u>	<u>12.93</u>	<u>6.62</u>	<u>25.6</u>	<u>230</u>	<u>5.02</u>	<u>18.7</u>	<u>"</u>	<u>"</u>
<u>1231</u>	<u>0.28</u>	<u>2.96</u>	<u>0.14</u>	<u>12.93</u>	<u>6.63</u>	<u>25.5</u>	<u>230</u>	<u>5.12</u>	<u>18.3</u>	<u>"</u>	<u>"</u>

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88  
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016  
PURGING EQUIPMENT CODES: B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <u>Kody W Ar</u>		SAMPLER(S) SIGNATURE(S): <u>[Signature]</u>		SAMPLING INITIATED AT: <u>1232</u>	SAMPLING ENDED AT: <u>1242</u>				
PUMP OR TUBING DEPTH IN WELL (feet): <u>13.5</u>		TUBING MATERIAL CODE: <u>HDPE</u>		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FILTER SIZE: <u>    </u> $\mu\text{m}$				
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)		DUPLICATE: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>					
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
<u>H0-4</u>	<u>3</u>	<u>CG</u>	<u>40mL</u>	<u>HCl</u>	<u>-</u>	<u>6.63</u>	<u>8260</u>	<u>RFPP</u>	<u>~100</u>
<u>H0-4</u>	<u>2</u>	<u>AG</u>	<u>1L</u>	<u>Ice</u>	<u>-</u>	<u>6.63</u>	<u>8310</u>	<u>PP</u>	<u>~500</u>
<u>H0-4</u>	<u>2</u>	<u>AG</u>	<u>1L</u>	<u>H2SO4</u>	<u>-</u>	<u>6.63</u>	<u>FL-PRO</u>	<u>PP</u>	<u>~500</u>

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)  
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
pH:  $\pm 0.2$  units Temperature:  $\pm 0.2$  °C Specific Conductance:  $\pm 5\%$  Dissolved Oxygen: all readings  $\leq 20\%$  saturation (see Table FS 2200-2); optionally,  $\pm 0.2$  mg/L or  $\pm 10\%$  (whichever is greater) Turbidity: all readings  $\leq 20$  NTU; optionally  $\pm 5$  NTU or  $\pm 10\%$  (whichever is greater)

Revision Date: February 12, 2009

AUG 02 2012

[Signature]

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**Appendix B**  
**Soil Laboratory Analytical Report and**  
**Chain-of-Custody**



#140274D  
Pace Analytical Services, Inc.  
8 East Tower Circle  
Ormond Beach, FL 32174  
(386)672-5668

July 30, 2012

Tammie Gardner  
Water and Air Research  
6821 Southwest Archer Road  
, 35608

RE: Project: City of Gainesville Phase 2BSA  
Pace Project No.: 3562982

Dear Tammie Gardner:

Enclosed are the analytical results for sample(s) received by the laboratory on July 21, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero

martha.montero@pacelabs.com  
Project Manager

Enclosures

cc: Simon Cordery, Water and Air Research



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



### CERTIFICATIONS

Project: City of Gainesville Phase 2BSA  
Pace Project No.: 3562982

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#### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174  
Alabama Certification #: 41320  
Arizona Certification #: AZ0735  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH 0216  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maine Certification #: FL01264  
Massachusetts Certification #: M-FL1264  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236  
Montana Certification #: Cert 0074  
Nevada Certification: FL NELAC Reciprocity  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL765  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
U.S. Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Certification #: 00432  
Virginia Environmental Certificate #: 460165  
Washington Certification #: C955  
Wyoming Certification: FL NELAC Reciprocity  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### REPORT OF LABORATORY ANALYSIS



### SAMPLE SUMMARY

Project: City of Gainesville Phase 2BSA  
Pace Project No.: 3562982

Lab ID	Sample ID	Matrix	Date Collected	Date Received
3562982001	OSW-3-8	Solid	07/20/12 11:12	07/21/12 11:10
3562982002	HO-1-8	Solid	07/20/12 14:00	07/21/12 11:10

### REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3562982001	OSW-3-8	FL-PRO	JTT	3	PASI-O
		EPA 6010	IST	4	PASI-O
		EPA 8270	EAO	67	PASI-O
		EPA 8260	JBH	42	PASI-O
		ASTM D2974-87	WMW	1	PASI-O
3562982002	HO-1-8	FL-PRO	JTT	3	PASI-O
		EPA 8270	AJB	21	PASI-O
		EPA 8260	JBH	9	PASI-O
		ASTM D2974-87	WMW	1	PASI-O

**REPORT OF LABORATORY ANALYSIS**

### ANALYTICAL RESULTS

Project: City of Gainesville Phase 2BSA  
Pace Project No.: 3562982

Sample: OSW-3-8 Lab ID: 3562982001 Collected: 07/20/12 11:12 Received: 07/21/12 11:10 Matrix: Solid  
Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>FL-PRO Soil Microwave</b>									
Analytical Method: FL-PRO Preparation Method: EPA 3546									
Petroleum Range Organics	2.7U	mg/kg	4.3	2.7	1	07/25/12 16:00	07/26/12 15:35		
<b>Surrogates</b>									
o-Terphenyl (S)	87 %		62-109		1	07/25/12 16:00	07/26/12 15:35	84-15-1	
N-Pentatriacontane (S)	85 %		42-159		1	07/25/12 16:00	07/26/12 15:35	630-07-09	
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	0.26U	mg/kg	0.52	0.26	1	07/23/12 14:01	07/25/12 11:15	7440-38-2	
Cadmium	0.026U	mg/kg	0.052	0.026	1	07/23/12 14:01	07/25/12 11:15	7440-43-9	
Chromium	3.8	mg/kg	0.26	0.13	1	07/23/12 14:01	07/25/12 11:15	7440-47-3	
Lead	2.4	mg/kg	0.52	0.26	1	07/23/12 14:01	07/25/12 11:15	7439-92-1	
<b>8270 MSSV Full List Microwave</b>									
Analytical Method: EPA 8270 Preparation Method: EPA 3546									
Acenaphthene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	83-32-9	
Acenaphthylene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	208-96-8	
Anthracene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	120-12-7	
Benzidine	20.0U	ug/kg	891	20.0	1	07/25/12 12:30	07/26/12 18:43	92-87-5	
Benzo(a)anthracene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	56-55-3	
Benzo(a)pyrene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	50-32-8	
Benzo(b)fluoranthene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	205-99-2	
Benzo(g,h,i)perylene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	191-24-2	
Benzo(k)fluoranthene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	207-08-9	
4-Bromophenylphenyl ether	20.9U	ug/kg	182	20.9	1	07/25/12 12:30	07/26/12 18:43	101-55-3	
Butylbenzylphthalate	20.5U	ug/kg	182	20.5	1	07/25/12 12:30	07/26/12 18:43	85-68-7	
4-Chloro-3-methylphenol	22.1U	ug/kg	719	22.1	1	07/25/12 12:30	07/26/12 18:43	59-50-7	
4-Chloroaniline	29.8U	ug/kg	182	29.8	1	07/25/12 12:30	07/26/12 18:43	106-47-8	
bis(2-Chloroethoxy)methane	29.3U	ug/kg	182	29.3	1	07/25/12 12:30	07/26/12 18:43	111-91-1	
bis(2-Chloroethyl) ether	28.0U	ug/kg	182	28.0	1	07/25/12 12:30	07/26/12 18:43	111-44-4	
bis(2-Chloroisopropyl) ether	28.8U	ug/kg	182	28.8	1	07/25/12 12:30	07/26/12 18:43	108-60-1	
2-Chloronaphthalene	32.4U	ug/kg	182	32.4	1	07/25/12 12:30	07/26/12 18:43	91-58-7	
2-Chlorophenol	27.1U	ug/kg	182	27.1	1	07/25/12 12:30	07/26/12 18:43	95-57-8	
4-Chlorophenylphenyl ether	23.0U	ug/kg	182	23.0	1	07/25/12 12:30	07/26/12 18:43	7005-72-3	
Chrysene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	218-01-9	
Dibenz(a,h)anthracene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	53-70-3	
1,2-Dichlorobenzene	27.1U	ug/kg	182	27.1	1	07/25/12 12:30	07/26/12 18:43	95-50-1	
1,3-Dichlorobenzene	25.7U	ug/kg	182	25.7	1	07/25/12 12:30	07/26/12 18:43	541-73-1	
1,4-Dichlorobenzene	26.3U	ug/kg	182	26.3	1	07/25/12 12:30	07/26/12 18:43	106-46-7	
2,4-Dichlorophenol	24.7U	ug/kg	182	24.7	1	07/25/12 12:30	07/26/12 18:43	120-83-2	
Diethylphthalate	25.1U	ug/kg	182	25.1	1	07/25/12 12:30	07/26/12 18:43	84-66-2	
2,4-Dimethylphenol	32.8U	ug/kg	182	32.8	1	07/25/12 12:30	07/26/12 18:43	105-67-9	
Dimethylphthalate	19.2U	ug/kg	182	19.2	1	07/25/12 12:30	07/26/12 18:43	131-11-3	
Di-n-butylphthalate	23.3U	ug/kg	182	23.3	1	07/25/12 12:30	07/26/12 18:43	84-74-2	
4,6-Dinitro-2-methylphenol	20.2U	ug/kg	719	20.2	1	07/25/12 12:30	07/26/12 18:43	534-52-1	
2,4-Dinitrophenol	18.4U	ug/kg	719	18.4	1	07/25/12 12:30	07/26/12 18:43	51-28-5	
2,4-Dinitrotoluene	22.0U	ug/kg	182	22.0	1	07/25/12 12:30	07/26/12 18:43	121-14-2	
2,6-Dinitrotoluene	18.2U	ug/kg	182	18.2	1	07/25/12 12:30	07/26/12 18:43	606-20-2	



### ANALYTICAL RESULTS

Project: City of Gainesville Phase 2BSA  
Pace Project No.: 3562982

Sample: OSW-3-8 Lab ID: 3562982001 Collected: 07/20/12 11:12 Received: 07/21/12 11:10 Matrix: Solid  
Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Full List Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Di-n-octylphthalate	18.7U	ug/kg	182	18.7	1	07/25/12 12:30	07/26/12 18:43	117-84-0	
1,2-Diphenylhydrazine	19.0U	ug/kg	182	19.0	1	07/25/12 12:30	07/26/12 18:43	122-66-7	
bis(2-Ethylhexyl)phthalate	26.6U	ug/kg	182	26.6	1	07/25/12 12:30	07/26/12 18:43	117-81-7	
Fluoranthene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	206-44-0	
Fluorene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	86-73-7	
Hexachloro-1,3-butadiene	26.0U	ug/kg	182	26.0	1	07/25/12 12:30	07/26/12 18:43	87-68-3	
Hexachlorobenzene	20.6U	ug/kg	182	20.6	1	07/25/12 12:30	07/26/12 18:43	118-74-1	
Hexachlorocyclopentadiene	25.8U	ug/kg	719	25.8	1	07/25/12 12:30	07/26/12 18:43	77-47-4	
Hexachloroethane	33.2U	ug/kg	182	33.2	1	07/25/12 12:30	07/26/12 18:43	67-72-1	
Indeno(1,2,3-cd)pyrene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	193-39-5	
Isophorone	26.9U	ug/kg	182	26.9	1	07/25/12 12:30	07/26/12 18:43	78-59-1	
1-Methylnaphthalene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	90-12-0	
2-Methylnaphthalene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	91-57-6	
2-Methylphenol(o-Cresol)	26.6U	ug/kg	182	26.6	1	07/25/12 12:30	07/26/12 18:43	95-48-7	
3&4-Methylphenol(m&p Cresol)	54.7U	ug/kg	182	54.7	1	07/25/12 12:30	07/26/12 18:43		
Naphthalene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	91-20-3	
Nitrobenzene	28.8U	ug/kg	182	28.8	1	07/25/12 12:30	07/26/12 18:43	98-95-3	
2-Nitrophenol	29.5U	ug/kg	182	29.5	1	07/25/12 12:30	07/26/12 18:43	88-75-5	
4-Nitrophenol	27.2U	ug/kg	182	27.2	1	07/25/12 12:30	07/26/12 18:43	100-02-7	
N-Nitrosodimethylamine	27.3U	ug/kg	182	27.3	1	07/25/12 12:30	07/26/12 18:43	62-75-9	N2
N-Nitroso-di-n-propylamine	26.0U	ug/kg	182	26.0	1	07/25/12 12:30	07/26/12 18:43	621-64-7	
N-Nitrosodiphenylamine	22.1U	ug/kg	182	22.1	1	07/25/12 12:30	07/26/12 18:43	86-30-6	
Pentachlorophenol	23.1U	ug/kg	719	23.1	1	07/25/12 12:30	07/26/12 18:43	87-86-5	
Phenanthrene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	85-01-8	
Phenol	33.7U	ug/kg	182	33.7	1	07/25/12 12:30	07/26/12 18:43	108-95-2	
Pyrene	21.5U	ug/kg	182	21.5	1	07/25/12 12:30	07/26/12 18:43	129-00-0	
1,2,4-Trichlorobenzene	30.6U	ug/kg	182	30.6	1	07/25/12 12:30	07/26/12 18:43	120-82-1	
2,4,6-Trichlorophenol	27.1U	ug/kg	182	27.1	1	07/25/12 12:30	07/26/12 18:43	88-06-2	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	71 %		10-110		1	07/25/12 12:30	07/26/12 18:43	4165-60-0	
2-Fluorobiphenyl (S)	74 %		18-110		1	07/25/12 12:30	07/26/12 18:43	321-60-8	
Terphenyl-d14 (S)	88 %		10-123		1	07/25/12 12:30	07/26/12 18:43	1718-51-0	
Phenol-d6 (S)	65 %		10-110		1	07/25/12 12:30	07/26/12 18:43	13127-88-3	
2-Fluorophenol (S)	66 %		18-110		1	07/25/12 12:30	07/26/12 18:43	367-12-4	
2,4,6-Tribromophenol (S)	77 %		10-110		1	07/25/12 12:30	07/26/12 18:43	118-79-6	
<b>8260 MSV 5030 Low Level</b>		Analytical Method: EPA 8260							
Acrolein	38.0U	ug/kg	53.9	38.0	1		07/24/12 21:46	107-02-8	
Acrylonitrile	28.9U	ug/kg	53.9	28.9	1		07/24/12 21:46	107-13-1	
Benzene	2.8U	ug/kg	5.4	2.8	1		07/24/12 21:46	71-43-2	
Bromodichloromethane	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	75-27-4	
Bromoform	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	75-25-2	
Bromomethane	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	74-83-9	
Carbon tetrachloride	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	56-23-5	
Chlorobenzene	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	108-90-7	



**ANALYTICAL RESULTS**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

Sample: OSW-3-8 Lab ID: 3562982001 Collected: 07/20/12 11:12 Received: 07/21/12 11:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5030 Low Level</b>		Analytical Method: EPA 8260							
Chloroethane	3.9U	ug/kg	5.4	3.9	1		07/24/12 21:46	75-00-3	
2-Chloroethylvinyl ether	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	110-75-8	
Chloroform	3.2U	ug/kg	5.4	3.2	1		07/24/12 21:46	67-66-3	
Chloromethane	3.0U	ug/kg	5.4	3.0	1		07/24/12 21:46	74-87-3	
Dibromochloromethane	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	124-48-1	
1,2-Dichlorobenzene	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	95-50-1	
1,3-Dichlorobenzene	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	541-73-1	
1,4-Dichlorobenzene	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	106-46-7	
1,1-Dichloroethane	2.9U	ug/kg	5.4	2.9	1		07/24/12 21:46	75-34-3	
1,2-Dichloroethane	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	107-06-2	
1,2-Dichloroethene (Total)	3.3U	ug/kg	5.4	3.3	1		07/24/12 21:46	540-59-0	
1,1-Dichloroethene	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	75-35-4	
cis-1,2-Dichloroethene	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	156-59-2	
trans-1,2-Dichloroethene	3.3U	ug/kg	5.4	3.3	1		07/24/12 21:46	156-60-5	
1,2-Dichloropropane	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	78-87-5	
cis-1,3-Dichloropropene	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	10061-01-5	
trans-1,3-Dichloropropene	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	10061-02-6	
Ethylbenzene	3.0U	ug/kg	5.4	3.0	1		07/24/12 21:46	100-41-4	
Methylene Chloride	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	75-09-2	
1,1,2,2-Tetrachloroethane	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	79-34-5	
Tetrachloroethene	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	127-18-4	
Toluene	2.9U	ug/kg	5.4	2.9	1		07/24/12 21:46	108-88-3	
1,2,4-Trichlorobenzene	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	120-82-1	
1,1,1-Trichloroethane	3.0U	ug/kg	5.4	3.0	1		07/24/12 21:46	71-55-6	
1,1,2-Trichloroethane	2.7U	ug/kg	5.4	2.7	1		07/24/12 21:46	79-00-5	
Trichloroethene	3.0U	ug/kg	5.4	3.0	1		07/24/12 21:46	79-01-6	
Vinyl chloride	2.9U	ug/kg	5.4	2.9	1		07/24/12 21:46	75-01-4	
Xylene (Total)	5.5U	ug/kg	16.2	5.5	1		07/24/12 21:46	1330-20-7	
m&p-Xylene	5.5U	ug/kg	10.8	5.5	1		07/24/12 21:46	179601-23-1	
o-Xylene	2.8U	ug/kg	5.4	2.8	1		07/24/12 21:46	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	98 %		82-115		1		07/24/12 21:46	1868-53-7	
Toluene-d8 (S)	99 %		84-117		1		07/24/12 21:46	2037-26-5	
4-Bromofluorobenzene (S)	104 %		55-148		1		07/24/12 21:46	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		80-131		1		07/24/12 21:46	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87							
Percent Moisture	7.2 %		0.10	0.10	1		07/24/12 14:24		



**ANALYTICAL RESULTS**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

Sample: HO-1-8 Lab ID: 3562982002 Collected: 07/20/12 14:00 Received: 07/21/12 11:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>FL-PRO Soil Microwave</b>									
Analytical Method: FL-PRO Preparation Method: EPA 3546									
Petroleum Range Organics	2.7U	mg/kg	4.3	2.7	1	07/25/12 16:00	07/26/12 16:07		
<b>Surrogates</b>									
o-Terphenyl (S)	87 %		62-109		1	07/25/12 16:00	07/26/12 16:07	84-15-1	
N-Pentatriacontane (S)	85 %		42-159		1	07/25/12 16:00	07/26/12 16:07	630-07-09	
<b>8270 MSSV Short List Microwave</b>									
Analytical Method: EPA 8270 Preparation Method: EPA 3546									
Acenaphthene	21.3U	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	83-32-9	
Acenaphthylene	21.3U	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	208-96-8	
Anthracene	21.3U	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	120-12-7	
Benzo(a)anthracene	46.7 I	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	56-55-3	
Benzo(a)pyrene	61.7 I	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	50-32-8	
Benzo(b)fluoranthene	89.2 I	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	205-99-2	
Benzo(g,h,i)perylene	58.9 I	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	191-24-2	
Benzo(k)fluoranthene	21.3U	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	207-08-9	
Chrysene	45.8 I	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	218-01-9	
Dibenz(a,h)anthracene	24.9 I	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	53-70-3	
Fluoranthene	89.6 I	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	206-44-0	
Fluorene	21.3U	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	86-73-7	
Indeno(1,2,3-cd)pyrene	62.6 I	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	193-39-5	
1-Methylnaphthalene	21.3U	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	90-12-0	
2-Methylnaphthalene	21.3U	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	91-57-6	
Naphthalene	21.3U	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	91-20-3	
Phenanthrene	53.3 I	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	85-01-8	
Pyrene	63.3 I	ug/kg	181	21.3	1	07/26/12 01:00	07/26/12 22:22	129-00-0	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	81 %		10-110		1	07/26/12 01:00	07/26/12 22:22	4165-60-0	
2-Fluorobiphenyl (S)	83 %		18-110		1	07/26/12 01:00	07/26/12 22:22	321-60-8	
Terphenyl-d14 (S)	96 %		10-123		1	07/26/12 01:00	07/26/12 22:22	1718-51-0	
<b>8260 MSV 5030 Low Level</b>									
Analytical Method: EPA 8260									
Benzene	2.4U	ug/kg	4.7	2.4	1		07/24/12 22:14	71-43-2	
Ethylbenzene	2.7U	ug/kg	4.7	2.7	1		07/24/12 22:14	100-41-4	
Methyl-tert-butyl ether	2.3U	ug/kg	4.7	2.3	1		07/24/12 22:14	1634-04-4	
Toluene	2.5U	ug/kg	4.7	2.5	1		07/24/12 22:14	108-88-3	
Xylene (Total)	4.8U	ug/kg	14.1	4.8	1		07/24/12 22:14	1330-20-7	
<b>Surrogates</b>									
Dibromofluoromethane (S)	97 %		82-115		1		07/24/12 22:14	1868-53-7	
Toluene-d8 (S)	99 %		84-117		1		07/24/12 22:14	2037-26-5	
4-Bromofluorobenzene (S)	100 %		55-148		1		07/24/12 22:14	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		80-131		1		07/24/12 22:14	17060-07-0	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	7.2 %		0.10	0.10	1		07/24/12 14:24		

**QUALITY CONTROL DATA**

Project: City of Gainesville Phase 2BSA  
Pace Project No.: 3562982

QC Batch: MPRP/9526 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Associated Lab Samples: 3562982001

METHOD BLANK: 432054 Matrix: Solid  
Associated Lab Samples: 3562982001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	0.26U	0.52	07/25/12 09:22	
Cadmium	mg/kg	0.026U	0.052	07/25/12 09:22	
Chromium	mg/kg	0.13U	0.26	07/25/12 09:22	
Lead	mg/kg	0.26U	0.52	07/25/12 09:22	

LABORATORY CONTROL SAMPLE: 432055

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	12.9	12.8	99	80-120	
Cadmium	mg/kg	1.3	1.3	104	80-120	
Chromium	mg/kg	12.9	13.9	108	80-120	
Lead	mg/kg	12.9	13.2	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 432056 432057

Parameter	Units	3562868002		432056		432057		% Rec	% Rec	% Rec Limits	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS Result	MSD Result					
Arsenic	mg/kg	13.6	13.6	20.6	23.1	88	107	75-125	12	20		
Cadmium	mg/kg	1.4	1.4	157	188	-2740	-430	75-125	18	20	J(M1)	
Chromium	mg/kg	13.6	13.6	375	424	-750	-393	75-125	12	20	J(M1)	
Lead	mg/kg	13.6	13.6	32.2	23.0	82	14	75-125	33	20	J(D6), J(M1)	



**QUALITY CONTROL DATA**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

QC Batch: MSV/6068 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5030 Low  
 Associated Lab Samples: 3562982001, 3562982002

METHOD BLANK: 433131 Matrix: Solid

Associated Lab Samples: 3562982001, 3562982002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	2.8U	5.1	07/24/12 18:29	
1,1,2,2-Tetrachloroethane	ug/kg	2.5U	5.1	07/24/12 18:29	
1,1,2-Trichloroethane	ug/kg	2.5U	5.1	07/24/12 18:29	
1,1-Dichloroethane	ug/kg	2.8U	5.1	07/24/12 18:29	
1,1-Dichloroethene	ug/kg	2.5U	5.1	07/24/12 18:29	
1,2,4-Trichlorobenzene	ug/kg	2.5U	5.1	07/24/12 18:29	
1,2-Dichlorobenzene	ug/kg	2.5U	5.1	07/24/12 18:29	
1,2-Dichloroethane	ug/kg	2.5U	5.1	07/24/12 18:29	
1,2-Dichloroethene (Total)	ug/kg	3.1U	5.1	07/24/12 18:29	
1,2-Dichloropropane	ug/kg	2.5U	5.1	07/24/12 18:29	
1,3-Dichlorobenzene	ug/kg	2.5U	5.1	07/24/12 18:29	
1,4-Dichlorobenzene	ug/kg	2.5U	5.1	07/24/12 18:29	
2-Chloroethylvinyl ether	ug/kg	2.5U	5.1	07/24/12 18:29	
Acrolein	ug/kg	35.6U	50.5	07/24/12 18:29	
Acrylonitrile	ug/kg	27.1U	50.5	07/24/12 18:29	
Benzene	ug/kg	2.6U	5.1	07/24/12 18:29	
Bromodichloromethane	ug/kg	2.5U	5.1	07/24/12 18:29	
Bromoform	ug/kg	2.5U	5.1	07/24/12 18:29	
Bromomethane	ug/kg	2.5U	5.1	07/24/12 18:29	
Carbon tetrachloride	ug/kg	2.5U	5.1	07/24/12 18:29	
Chlorobenzene	ug/kg	2.5U	5.1	07/24/12 18:29	
Chloroethane	ug/kg	3.6U	5.1	07/24/12 18:29	
Chloroform	ug/kg	3.0U	5.1	07/24/12 18:29	
Chloromethane	ug/kg	2.8U	5.1	07/24/12 18:29	
cis-1,2-Dichloroethene	ug/kg	2.5U	5.1	07/24/12 18:29	
cis-1,3-Dichloropropene	ug/kg	2.5U	5.1	07/24/12 18:29	
Dibromochloromethane	ug/kg	2.5U	5.1	07/24/12 18:29	
Ethylbenzene	ug/kg	2.9U	5.1	07/24/12 18:29	
m&p-Xylene	ug/kg	5.2U	10.1	07/24/12 18:29	
Methyl-tert-butyl ether	ug/kg	2.5U	5.1	07/24/12 18:29	
Methylene Chloride	ug/kg	2.5U	5.1	07/24/12 18:29	
o-Xylene	ug/kg	2.6U	5.1	07/24/12 18:29	
Tetrachloroethene	ug/kg	2.5U	5.1	07/24/12 18:29	
Toluene	ug/kg	2.7U	5.1	07/24/12 18:29	
trans-1,2-Dichloroethene	ug/kg	3.1U	5.1	07/24/12 18:29	
trans-1,3-Dichloropropene	ug/kg	2.5U	5.1	07/24/12 18:29	
Trichloroethene	ug/kg	2.8U	5.1	07/24/12 18:29	
Vinyl chloride	ug/kg	2.7U	5.1	07/24/12 18:29	
Xylene (Total)	ug/kg	5.2U	15.2	07/24/12 18:29	
1,2-Dichloroethane-d4 (S)	%	100	80-131	07/24/12 18:29	
4-Bromofluorobenzene (S)	%	97	55-148	07/24/12 18:29	
Dibromofluoromethane (S)	%	98	82-115	07/24/12 18:29	
Toluene-d8 (S)	%	98	84-117	07/24/12 18:29	

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

LABORATORY CONTROL SAMPLE: 433132

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	19.8	20.9	106	68-130	
1,1,2,2-Tetrachloroethane	ug/kg	19.8	21.0	106	70-130	
1,1,2-Trichloroethane	ug/kg	19.8	20.1	101	70-130	
1,1-Dichloroethane	ug/kg	19.8	19.5	98	69-130	
1,1-Dichloroethene	ug/kg	19.8	20.0	101	67-130	
1,2,4-Trichlorobenzene	ug/kg	19.8	21.6	109	70-130	
1,2-Dichlorobenzene	ug/kg	19.8	20.9	106	70-130	
1,2-Dichloroethane	ug/kg	19.8	20.5	103	70-130	
1,2-Dichloroethene (Total)	ug/kg	39.6	38.6	97	70-130	
1,2-Dichloropropane	ug/kg	19.8	20.4	103	70-130	
1,3-Dichlorobenzene	ug/kg	19.8	20.5	103	70-130	
1,4-Dichlorobenzene	ug/kg	19.8	20.6	104	70-130	
2-Chloroethylvinyl ether	ug/kg	19.8	19.6	99	20-150	
Acrolein	ug/kg	198	208	105	37-163	
Acrylonitrile	ug/kg	198	215	109	70-130	
Benzene	ug/kg	19.8	20.9	106	70-130	
Bromodichloromethane	ug/kg	19.8	20.8	105	70-130	
Bromoform	ug/kg	19.8	19.0	96	70-130	
Bromomethane	ug/kg	19.8	25.0	126	42-156	
Carbon tetrachloride	ug/kg	19.8	20.7	105	65-132	
Chlorobenzene	ug/kg	19.8	20.5	103	70-130	
Chloroethane	ug/kg	19.8	19.6	99	56-146	
Chloroform	ug/kg	19.8	20.6	104	69-130	
Chloromethane	ug/kg	19.8	26.2	132	50-145	
cis-1,2-Dichloroethene	ug/kg	19.8	19.6	99	70-130	
cis-1,3-Dichloropropene	ug/kg	19.8	18.3	92	70-130	
Dibromochloromethane	ug/kg	19.8	19.6	99	70-130	
Ethylbenzene	ug/kg	19.8	20.2	102	70-130	
m&p-Xylene	ug/kg	39.6	41.4	104	70-130	
Methyl-tert-butyl ether	ug/kg	19.8	21.9	110	70-130	
Methylene Chloride	ug/kg	19.8	20.4	103	40-159	
o-Xylene	ug/kg	19.8	20.8	105	70-130	
Tetrachloroethene	ug/kg	19.8	15.7	79	63-130	
Toluene	ug/kg	19.8	20.1	101	70-130	
trans-1,2-Dichloroethene	ug/kg	19.8	19.0	96	70-130	
trans-1,3-Dichloropropene	ug/kg	19.8	21.5	109	70-130	
Trichloroethene	ug/kg	19.8	20.0	101	69-130	
Vinyl chloride	ug/kg	19.8	22.8	115	67-130	
Xylene (Total)	ug/kg	59.4	62.2	105	70-130	
1,2-Dichloroethane-d4 (S)	%			99	80-131	
4-Bromofluorobenzene (S)	%			98	55-148	
Dibromofluoromethane (S)	%			99	82-115	
Toluene-d8 (S)	%			99	84-117	

**QUALITY CONTROL DATA**

Project: City of Gainesville Phase 2BSA  
Pace Project No.: 3562982

Parameter	Units	3563013003		433206		433207		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
1,1,1-Trichloroethane	ug/kg	0.0013 U mg/kg	21.6	20.8	18.0	17.6	83	85	42-131	2	40	
1,1,2,2-Tetrachloroethane	ug/kg	0.0012 U mg/kg	21.6	20.8	18.1	17.7	84	85	50-130	2	40	
1,1,2-Trichloroethane	ug/kg	0.0012 U mg/kg	21.6	20.8	19.5	18.8	90	91	59-130	4	40	
1,1-Dichloroethane	ug/kg	0.0013 U mg/kg	21.6	20.8	16.7	17.7	77	85	50-130	6	40	
1,1-Dichloroethene	ug/kg	0.0012 U mg/kg	21.6	20.8	16.7	17.1	77	82	51-130	3	40	
1,2,4-Trichlorobenzene	ug/kg	0.0012 U mg/kg	21.6	20.8	14.7	14.6	68	70	20-142	4	40	
1,2-Dichlorobenzene	ug/kg	0.0012 U mg/kg	21.6	20.8	17.6	18.0	81	87	20-134	2	40	
1,2-Dichloroethane	ug/kg	0.0012 U mg/kg	21.6	20.8	17.2	17.3	79	82	57-130	6	40	
1,2-Dichloroethene (Total)	ug/kg	0.0014 U mg/kg	43.4	41.5	31.8	32.1	73	77	70-130	1	40	
1,2-Dichloropropane	ug/kg	0.0012 U mg/kg	21.6	20.8	18.4	18.3	85	88	52-130	3	40	
1,3-Dichlorobenzene	ug/kg	0.0012 U mg/kg	21.6	20.8	16.7	16.9	77	82	20-133	1	40	
1,4-Dichlorobenzene	ug/kg	0.0012 U mg/kg	21.6	20.8	16.7	17.0	77	82	20-134	2	40	
2-Chloroethylvinyl ether	ug/kg	0.0012 U mg/kg	21.6	20.8	18.9	18.4	87	89	20-137	3	40	
Acrolein	ug/kg	0.016U mg/kg	216	208	57.7	59.9	27	29	20-152	4	40	
Acrylonitrile	ug/kg	0.012U mg/kg	216	208	168	176	78	85	24-140	4	40	
Benzene	ug/kg	0.0012 U mg/kg	21.6	20.8	18.3	18.4	85	89	24-141	4	40	
Bromodichloromethane	ug/kg	0.0012 U mg/kg	21.6	20.8	17.3	17.5	80	84	20-155	1	40	
Bromoform	ug/kg	0.0012 U mg/kg	21.6	20.8	16.8	17.4	78	84	30-130	3	40	
Bromomethane	ug/kg	0.0012 U mg/kg	21.6	20.8	19.6	19.4	90	93	22-152	1	40	
Carbon tetrachloride	ug/kg	0.0012 U mg/kg	21.6	20.8	16.4	17.0	76	82	23-141	4	40	
Chlorobenzene	ug/kg	0.0012 U mg/kg	21.6	20.8	18.8	19.0	87	91	34-130	9	40	
Chloroethane	ug/kg	0.0017 U mg/kg	21.6	20.8	15.3	16.1	71	77	43-146	5	40	
Chloroform	ug/kg	0.0014 U mg/kg	21.6	20.8	17.7	17.5	81	84	42-132	7	40	
Chloromethane	ug/kg	0.0013 U mg/kg	21.6	20.8	16.0	16.0	74	77	31-144	2	40	
cis-1,2-Dichloroethene	ug/kg	0.0012 U mg/kg	21.6	20.8	16.4	16.8	76	81	45-131	2	40	
cis-1,3-Dichloropropene	ug/kg	0.0012 U mg/kg	21.6	20.8	14.6	14.7	67	71	33-132	1	40	
Dibromochloromethane	ug/kg	0.0012 U mg/kg	21.6	20.8	17.4	18.1	80	87	20-151	4	40	



**QUALITY CONTROL DATA**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

Parameter	Units	3563013003		433206		433207		% Rec	% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result									
Ethylbenzene	ug/kg	0.0013 U mg/kg	21.6	20.8	18.5	18.5	85	89	30-130	.05	40				
m&p-Xylene	ug/kg	0.0024 U mg/kg	43.4	41.5	36.9	37.5	85	90	27-150	2	40				
Methyl-tert-butyl ether	ug/kg	0.0012 U mg/kg	21.6	20.8	19.3	19.9	89	96	31-156	3	40				
Methylene Chloride	ug/kg	0.0012 U mg/kg	21.6	20.8	15.5	16.5	72	80	20-150	6	40				
o-Xylene	ug/kg	0.0012 U mg/kg	21.6	20.8	19.7	19.5	91	94	27-150	.7	40				
Tetrachloroethene	ug/kg	0.0012 U mg/kg	21.6	20.8	24.5	24.2	113	117	23-144	1	40				
Toluene	ug/kg	0.0013 U mg/kg	21.6	20.8	19.3	19.3	89	93	24-137	.3	40				
trans-1,2-Dichloroethene	ug/kg	0.0014 U mg/kg	21.6	20.8	15.4	15.3	71	74	50-130	.07	40				
trans-1,3-Dichloropropene	ug/kg	0.0012 U mg/kg	21.6	20.8	18.0	18.1	83	87	33-130	.4	40				
Trichloroethene	ug/kg	0.0013 U mg/kg	21.6	20.8	18.7	18.8	86	90	42-130	.4	40				
Vinyl chloride	ug/kg	0.0012 U mg/kg	21.6	20.8	17.3	18.1	80	87	47-130	5	40				
Xylene (Total)	ug/kg	0.0024 U mg/kg	65	62.3	56.6	57.0	87	91	26-130	.8	40				
1,2-Dichloroethane-d4 (S)	%						95	96	80-131						
4-Bromofluorobenzene (S)	%						98	98	55-148						
Dibromofluoromethane (S)	%						94	95	82-115						
Toluene-d8 (S)	%						96	96	84-117						





**QUALITY CONTROL DATA**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

QC Batch: OEXT/9276 Analysis Method: EPA 8270  
 QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave  
 Associated Lab Samples: 3562982001

METHOD BLANK: 432863 Matrix: Solid  
 Associated Lab Samples: 3562982001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	28.5U	170	07/26/12 09:13	
1,2-Dichlorobenzene	ug/kg	25.2U	170	07/26/12 09:13	
1,2-Diphenylhydrazine	ug/kg	17.7U	170	07/26/12 09:13	
1,3-Dichlorobenzene	ug/kg	23.9U	170	07/26/12 09:13	
1,4-Dichlorobenzene	ug/kg	24.5U	170	07/26/12 09:13	
1-Methylnaphthalene	ug/kg	20.0U	170	07/26/12 09:13	
2,4,6-Trichlorophenol	ug/kg	25.2U	170	07/26/12 09:13	
2,4-Dichlorophenol	ug/kg	23.0U	170	07/26/12 09:13	
2,4-Dimethylphenol	ug/kg	30.6U	170	07/26/12 09:13	
2,4-Dinitrophenol	ug/kg	17.1U	670	07/26/12 09:13	
2,4-Dinitrotoluene	ug/kg	20.5U	170	07/26/12 09:13	
2,6-Dinitrotoluene	ug/kg	17.0U	170	07/26/12 09:13	
2-Chloronaphthalene	ug/kg	30.2U	170	07/26/12 09:13	
2-Chlorophenol	ug/kg	25.2U	170	07/26/12 09:13	
2-Methylnaphthalene	ug/kg	20.0U	170	07/26/12 09:13	
2-Methylphenol(o-Cresol)	ug/kg	24.8U	170	07/26/12 09:13	
2-Nitrophenol	ug/kg	27.5U	170	07/26/12 09:13	
3&4-Methylphenol(m&p Cresol)	ug/kg	51.0U	170	07/26/12 09:13	
4,6-Dinitro-2-methylphenol	ug/kg	18.8U	670	07/26/12 09:13	
4-Bromophenylphenyl ether	ug/kg	19.5U	170	07/26/12 09:13	
4-Chloro-3-methylphenol	ug/kg	20.6U	670	07/26/12 09:13	
4-Chloroaniline	ug/kg	27.8U	170	07/26/12 09:13	
4-Chlorophenylphenyl ether	ug/kg	21.4U	170	07/26/12 09:13	
4-Nitrophenol	ug/kg	25.3U	170	07/26/12 09:13	
Acenaphthene	ug/kg	20.0U	170	07/26/12 09:13	
Acenaphthylene	ug/kg	20.0U	170	07/26/12 09:13	
Anthracene	ug/kg	20.0U	170	07/26/12 09:13	
Benzidine	ug/kg	18.6U	830	07/26/12 09:13	
Benzo(a)anthracene	ug/kg	20.0U	170	07/26/12 09:13	
Benzo(a)pyrene	ug/kg	20.0U	170	07/26/12 09:13	
Benzo(b)fluoranthene	ug/kg	20.0U	170	07/26/12 09:13	
Benzo(g,h,i)perylene	ug/kg	20.0U	170	07/26/12 09:13	
Benzo(k)fluoranthene	ug/kg	20.0U	170	07/26/12 09:13	
bis(2-Chloroethoxy)methane	ug/kg	27.3U	170	07/26/12 09:13	
bis(2-Chloroethyl) ether	ug/kg	26.1U	170	07/26/12 09:13	
bis(2-Chloroisopropyl) ether	ug/kg	26.8U	170	07/26/12 09:13	
bis(2-Ethylhexyl)phthalate	ug/kg	24.8U	170	07/26/12 09:13	
Butylbenzylphthalate	ug/kg	19.1U	170	07/26/12 09:13	
Chrysene	ug/kg	20.0U	170	07/26/12 09:13	
Di-n-butylphthalate	ug/kg	21.7U	170	07/26/12 09:13	
Di-n-octylphthalate	ug/kg	17.4U	170	07/26/12 09:13	
Dibenz(a,h)anthracene	ug/kg	20.0U	170	07/26/12 09:13	
Diethylphthalate	ug/kg	23.4U	170	07/26/12 09:13	

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**QUALITY CONTROL DATA**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

METHOD BLANK: 432863 Matrix: Solid  
 Associated Lab Samples: 3562982001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dimethylphthalate	ug/kg	17.9U	170	07/26/12 09:13	
Fluoranthene	ug/kg	20.0U	170	07/26/12 09:13	
Fluorene	ug/kg	20.0U	170	07/26/12 09:13	
Hexachloro-1,3-butadiene	ug/kg	24.2U	170	07/26/12 09:13	
Hexachlorobenzene	ug/kg	19.2U	170	07/26/12 09:13	
Hexachlorocyclopentadiene	ug/kg	24.0U	670	07/26/12 09:13	
Hexachloroethane	ug/kg	30.9U	170	07/26/12 09:13	
Indeno(1,2,3-cd)pyrene	ug/kg	20.0U	170	07/26/12 09:13	
Isophorone	ug/kg	25.1U	170	07/26/12 09:13	
N-Nitroso-di-n-propylamine	ug/kg	24.2U	170	07/26/12 09:13	
N-Nitrosodimethylamine	ug/kg	25.4U	170	07/26/12 09:13	N2
N-Nitrosodiphenylamine	ug/kg	20.6U	170	07/26/12 09:13	
Naphthalene	ug/kg	20.0U	170	07/26/12 09:13	
Nitrobenzene	ug/kg	26.8U	170	07/26/12 09:13	
Pentachlorophenol	ug/kg	21.5U	670	07/26/12 09:13	
Phenanthrene	ug/kg	20.0U	170	07/26/12 09:13	
Phenol	ug/kg	31.4U	170	07/26/12 09:13	
Pyrene	ug/kg	20.0U	170	07/26/12 09:13	
2,4,6-Tribromophenol (S)	%	78	10-110	07/26/12 09:13	
2-Fluorobiphenyl (S)	%	78	18-110	07/26/12 09:13	
2-Fluorophenol (S)	%	70	18-110	07/26/12 09:13	
Nitrobenzene-d5 (S)	%	74	10-110	07/26/12 09:13	
Phenol-d6 (S)	%	74	10-110	07/26/12 09:13	
Terphenyl-d14 (S)	%	97	10-123	07/26/12 09:13	

LABORATORY CONTROL SAMPLE: 432864

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1670	1240	74	51-110	
1,2-Dichlorobenzene	ug/kg	1670	1160	70	51-110	
1,2-Diphenylhydrazine	ug/kg	1670	1470	88	61-111	
1,3-Dichlorobenzene	ug/kg	1670	1160	69	50-110	
1,4-Dichlorobenzene	ug/kg	1670	1170	70	51-110	
1-Methylnaphthalene	ug/kg	1670	1290	77	27-123	
2,4,6-Trichlorophenol	ug/kg	1670	1350	81	58-110	
2,4-Dichlorophenol	ug/kg	1670	1360	82	57-110	
2,4-Dimethylphenol	ug/kg	1670	1330	80	59-110	
2,4-Dinitrophenol	ug/kg	1670	1680	101	39-113	
2,4-Dinitrotoluene	ug/kg	1670	1410	84	68-110	
2,6-Dinitrotoluene	ug/kg	1670	1390	83	66-110	
2-Chloronaphthalene	ug/kg	1670	1280	77	59-110	
2-Chlorophenol	ug/kg	1670	1220	73	51-110	
2-Methylnaphthalene	ug/kg	1670	1280	77	16-137	
2-Methylphenol(o-Cresol)	ug/kg	1670	1250	75	56-110	
2-Nitrophenol	ug/kg	1670	1270	76	56-110	

Date: 07/30/2012 11:55 AM

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: City of Gainesville Phase 2BSA  
Pace Project No.: 3562982

LABORATORY CONTROL SAMPLE: 432864

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	1250	75	55-110	
4,6-Dinitro-2-methylphenol	ug/kg	1670	1480	89	55-113	
4-Bromophenylphenyl ether	ug/kg	1670	1420	85	65-110	
4-Chloro-3-methylphenol	ug/kg	1670	1380	83	64-110	
4-Chloroaniline	ug/kg	1670	1310	78	56-110	
4-Chlorophenylphenyl ether	ug/kg	1670	1360	82	58-111	
4-Nitrophenol	ug/kg	1670	1660	99	49-136	
Acenaphthene	ug/kg	1670	1330	80	37-120	
Acenaphthylene	ug/kg	1670	1300	78	41-120	
Anthracene	ug/kg	1670	1390	83	45-120	
Benzidine	ug/kg	1670	1220	73	26-110	
Benzo(a)anthracene	ug/kg	1670	1440	86	44-120	
Benzo(a)pyrene	ug/kg	1670	1410	85	44-123	
Benzo(b)fluoranthene	ug/kg	1670	1330	80	37-124	
Benzo(g,h,i)perylene	ug/kg	1670	1400	84	42-125	
Benzo(k)fluoranthene	ug/kg	1670	1450	87	44-126	
bis(2-Chloroethoxy)methane	ug/kg	1670	1260	76	53-110	
bis(2-Chloroethyl) ether	ug/kg	1670	1240	74	45-110	
bis(2-Chloroisopropyl) ether	ug/kg	1670	1190	71	51-110	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1390	84	71-110	
Butylbenzylphthalate	ug/kg	1670	1400	84	72-110	
Chrysene	ug/kg	1670	1320	79	45-120	
Di-n-butylphthalate	ug/kg	1670	1420	85	67-115	
Di-n-octylphthalate	ug/kg	1670	1390	83	71-110	
Dibenz(a,h)anthracene	ug/kg	1670	1440	87	43-124	
Diethylphthalate	ug/kg	1670	1360	81	65-112	
Dimethylphthalate	ug/kg	1670	1380	83	63-111	
Fluoranthene	ug/kg	1670	1450	87	45-120	
Fluorene	ug/kg	1670	1340	80	42-120	
Hexachloro-1,3-butadiene	ug/kg	1670	1250	75	51-110	
Hexachlorobenzene	ug/kg	1670	1380	83	65-110	
Hexachlorocyclopentadiene	ug/kg	1670	1170	70	18-112	
Hexachloroethane	ug/kg	1670	1130	68	49-110	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1350	81	43-123	
Isophorone	ug/kg	1670	1300	78	52-110	
N-Nitroso-di-n-propylamine	ug/kg	1670	1230	74	46-110	
N-Nitrosodimethylamine	ug/kg	1670	1230	74	42-110	N2
N-Nitrosodiphenylamine	ug/kg	1670	1430	86	66-110	
Naphthalene	ug/kg	1670	1240	75	40-120	
Nitrobenzene	ug/kg	1670	1270	76	49-110	
Pentachlorophenol	ug/kg	1670	1490	89	49-117	
Phenanthrene	ug/kg	1670	1360	81	36-125	
Phenol	ug/kg	1670	1270	76	52-110	
Pyrene	ug/kg	1670	1390	83	41-123	
2,4,6-Tribromophenol (S)	%			85	10-110	
2-Fluorobiphenyl (S)	%			81	18-110	
2-Fluorophenol (S)	%			69	18-110	
Nitrobenzene-d5 (S)	%			75	10-110	



### QUALITY CONTROL DATA

Project: City of Gainesville Phase 2BSA  
Pace Project No.: 3562982

LABORATORY CONTROL SAMPLE: 432864

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenol-d6 (S)	%			74	10-110	
Terphenyl-d14 (S)	%			96	10-123	



**QUALITY CONTROL DATA**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

QC Batch: OEXT/9285 Analysis Method: EPA 8270  
 QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave Short Spike  
 Associated Lab Samples: 3562982002

METHOD BLANK: 433604 Matrix: Solid  
 Associated Lab Samples: 3562982002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	20.0U	170	07/26/12 10:24	
2-Methylnaphthalene	ug/kg	20.0U	170	07/26/12 10:24	
Acenaphthene	ug/kg	20.0U	170	07/26/12 10:24	
Acenaphthylene	ug/kg	20.0U	170	07/26/12 10:24	
Anthracene	ug/kg	20.0U	170	07/26/12 10:24	
Benzo(a)anthracene	ug/kg	20.0U	170	07/26/12 10:24	
Benzo(a)pyrene	ug/kg	20.0U	170	07/26/12 10:24	
Benzo(b)fluoranthene	ug/kg	20.0U	170	07/26/12 10:24	
Benzo(g,h,i)perylene	ug/kg	20.0U	170	07/26/12 10:24	
Benzo(k)fluoranthene	ug/kg	20.0U	170	07/26/12 10:24	
Chrysene	ug/kg	20.0U	170	07/26/12 10:24	
Dibenz(a,h)anthracene	ug/kg	20.0U	170	07/26/12 10:24	
Fluoranthene	ug/kg	20.0U	170	07/26/12 10:24	
Fluorene	ug/kg	20.0U	170	07/26/12 10:24	
Indeno(1,2,3-cd)pyrene	ug/kg	20.0U	170	07/26/12 10:24	
Naphthalene	ug/kg	20.0U	170	07/26/12 10:24	
Phenanthrene	ug/kg	20.0U	170	07/26/12 10:24	
Pyrene	ug/kg	20.0U	170	07/26/12 10:24	
2-Fluorobiphenyl (S)	%	81	18-110	07/26/12 10:24	
Nitrobenzene-d5 (S)	%	76	10-110	07/26/12 10:24	
Terphenyl-d14 (S)	%	95	10-123	07/26/12 10:24	

LABORATORY CONTROL SAMPLE: 433605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	1670	1310	79	27-123	
2-Methylnaphthalene	ug/kg	1670	1310	79	16-137	
Acenaphthene	ug/kg	1670	1320	79	37-120	
Acenaphthylene	ug/kg	1670	1340	80	41-120	
Anthracene	ug/kg	1670	1370	82	45-120	
Benzo(a)anthracene	ug/kg	1670	1350	81	44-120	
Benzo(a)pyrene	ug/kg	1670	1440	86	44-123	
Benzo(b)fluoranthene	ug/kg	1670	1230	74	37-124	
Benzo(g,h,i)perylene	ug/kg	1670	1400	84	42-125	
Benzo(k)fluoranthene	ug/kg	1670	1440	86	44-126	
Chrysene	ug/kg	1670	1300	78	45-120	
Dibenz(a,h)anthracene	ug/kg	1670	1420	85	43-124	
Fluoranthene	ug/kg	1670	1410	85	45-120	
Fluorene	ug/kg	1670	1310	78	42-120	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1390	84	43-123	
Naphthalene	ug/kg	1670	1270	76	40-120	



**QUALITY CONTROL DATA**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

LABORATORY CONTROL SAMPLE: 433605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	1670	1350	81	36-125	
Pyrene	ug/kg	1670	1360	81	41-123	
2-Fluorobiphenyl (S)	%			80	18-110	
Nitrobenzene-d5 (S)	%			77	10-110	
Terphenyl-d14 (S)	%			92	10-123	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 434229 434230

Parameter	Units	3563005002 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	Spike Conc.							
1-Methylnaphthalene	ug/kg	0.021U mg/kg	1750	1750	1360	1310	77	75	27-123	4	40
2-Methylnaphthalene	ug/kg	0.021U mg/kg	1750	1750	1360	1300	77	74	16-137	5	40
Acenaphthene	ug/kg	0.021U mg/kg	1750	1750	1360	1300	77	75	37-120	4	40
Acenaphthylene	ug/kg	0.021U mg/kg	1750	1750	1400	1340	80	77	41-120	5	40
Anthracene	ug/kg	0.021U mg/kg	1750	1750	1370	1410	78	80	45-120	3	40
Benzo(a)anthracene	ug/kg	0.021U mg/kg	1750	1750	1500	1350	85	77	44-120	11	40
Benzo(a)pyrene	ug/kg	0.021U mg/kg	1750	1750	1460	1470	83	84	44-123	.6	40
Benzo(b)fluoranthene	ug/kg	0.021U mg/kg	1750	1750	1400	1480	80	85	37-124	5	40
Benzo(g,h,i)perylene	ug/kg	0.021U mg/kg	1750	1750	1420	1420	81	81	42-125	.5	40
Benzo(k)fluoranthene	ug/kg	0.021U mg/kg	1750	1750	1360	1250	78	72	44-126	8	40
Chrysene	ug/kg	0.021U mg/kg	1750	1750	1400	1490	79	85	45-120	6	40
Dibenz(a,h)anthracene	ug/kg	0.021U mg/kg	1750	1750	1410	1440	80	82	43-124	2	40
Fluoranthene	ug/kg	0.021U mg/kg	1750	1750	1440	1510	82	86	45-120	5	40
Fluorene	ug/kg	0.021U mg/kg	1750	1750	1380	1350	79	77	42-120	2	40
Indeno(1,2,3-cd)pyrene	ug/kg	0.021U mg/kg	1750	1750	1410	1460	80	84	43-123	4	40
Naphthalene	ug/kg	0.021U mg/kg	1750	1750	1320	1280	75	73	40-120	3	40
Phenanthrene	ug/kg	0.021U mg/kg	1750	1750	1340	1390	76	79	36-125	4	40
Pyrene	ug/kg	0.021U mg/kg	1750	1750	1400	1380	80	79	41-123	2	40
2-Fluorobiphenyl (S)	%						79	77	18-110		
Nitrobenzene-d5 (S)	%						74	72	10-110		
Terphenyl-d14 (S)	%						88	91	10-123		

**QUALITY CONTROL DATA**

Project: City of Gainesville Phase 2BSA  
Pace Project No.: 3562982

QC Batch: OEXT/9277 Analysis Method: FL-PRO  
QC Batch Method: EPA 3546 Analysis Description: FL-PRO Soil  
Associated Lab Samples: 3562982001, 3562982002

METHOD BLANK: 433470 Matrix: Solid

Associated Lab Samples: 3562982001, 3562982002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Petroleum Range Organics	mg/kg	2.5U	4.0	07/26/12 06:56	
N-Pentatriacontane (S)	%	84	42-159	07/26/12 06:56	
o-Terphenyl (S)	%	96	62-109	07/26/12 06:56	

LABORATORY CONTROL SAMPLE: 433471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Petroleum Range Organics	mg/kg	200	199	100	63-153	
N-Pentatriacontane (S)	%			99	42-159	
o-Terphenyl (S)	%			104	62-109	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 433684 433685

Parameter	Units	3563016001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Petroleum Range Organics	mg/kg	172	244	244	337	321	68	61	63-153	5	20	J(M1)	
N-Pentatriacontane (S)	%						84	92	42-159				
o-Terphenyl (S)	%						86	88	62-109				



**QUALITY CONTROL DATA**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

QC Batch: PMST/1270 Analysis Method: ASTM D2974-87  
 QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture  
 Associated Lab Samples: 3562982001, 3562982002

SAMPLE DUPLICATE: 432392

Parameter	Units	3562868002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%		5.5	15	10	J(D6)

SAMPLE DUPLICATE: 432393

Parameter	Units	3562872008 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	10.6	10.3	3	10	

SAMPLE DUPLICATE: 432394

Parameter	Units	3562892001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.8	22.1	2	10	

SAMPLE DUPLICATE: 432395

Parameter	Units	3562916001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.8	14.5	2	10	

SAMPLE DUPLICATE: 432396

Parameter	Units	10199534007 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	8.2	9.1	11	10	J(D6)

SAMPLE DUPLICATE: 432397

Parameter	Units	10199534016 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	13.9	14.9	7	10	



## QUALIFIERS

Project: City of Gainesville Phase 2BSA  
Pace Project No.: 3562982

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

### ANALYTE QUALIFIERS

- |       |  |
|-------|--|
| I     | The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.               |
| J(D6) | Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits. |
| J(M1) | Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.       |
| N2    | The lab does not hold TNI accreditation for this parameter.  |



**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: City of Gainesville Phase 2BSA  
 Pace Project No.: 3562982

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3562982001	OSW-3-8	EPA 3546	OEXT/9277	FL-PRO	GCSV/6487
3562982002	HO-1-8	EPA 3546	OEXT/9277	FL-PRO	GCSV/6487
3562982001	OSW-3-8	EPA 3050	MPRP/9526	EPA 6010	ICP/6251
3562982001	OSW-3-8	EPA 3546	OEXT/9276	EPA 8270	MSSV/3588
3562982002	HO-1-8	EPA 3546	OEXT/9285	EPA 8270	MSSV/3589
3562982001	OSW-3-8	EPA 8260	MSV/6068		
3562982002	HO-1-8	EPA 8260	MSV/6068		
3562982001	OSW-3-8	ASTM D2974-87	PMST/1270		
3562982002	HO-1-8	ASTM D2974-87	PMST/1270		





Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
P-FL-C-007 rev. 04

Document Revised:  
September 23, 2011  
Issuing Authority:  
Pace Florida Quality Office

#140274D

**Sample Condition Upon Receipt Form (SCUR)**

Table Number: \_\_\_\_\_

Client Name: WAR Project # 356 2936 3562982  
PL 7-23-12

Carrier:  Fed Ex  UPS  USPS  Client  Commercial  Pace

Other \_\_\_\_\_

Tracking # 8987 6872 5179

custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Date and Initials of person examining contents: \_\_\_\_\_

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 113 Type of Ice:  Wet  Blue  None

Cooler Temperature °C 3.5 (Visual)  (Correction Factor) 3.5 (Actual)

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen?

Yes  No

Receipt of samples satisfactory:  Yes  No

Rush TAT requested on COC: \_\_\_\_\_

If yes, then all conditions below were met:

If no, then mark box & describe issue (use comments area if necessary):

Gain of Custody Present	<input type="checkbox"/>
Gain of Custody Filled Out	<input type="checkbox"/>
Fluorinated Signature & Sampler Name COC	<input type="checkbox"/>
Samples Arrived within Hold Time	<input type="checkbox"/>
Stipulated Volume	<input type="checkbox"/>
Correct Containers Used	<input type="checkbox"/>
Containers Intact	<input type="checkbox"/>
Sample Labels match COC (sample IDs & date/time of collection)	<input type="checkbox"/>
	No Labels: <input type="checkbox"/> No Time/Date on Labels: <input type="checkbox"/>
Alertainers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/>
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution (use back for additional comments): \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: \_\_\_\_\_

**Finished Product Information Only**

Finished Sample ID: \_\_\_\_\_

**Size & Qty of Bottles Received**

Production Code: \_\_\_\_\_

- \_\_\_\_\_ x 5 Gal
- \_\_\_\_\_ x 2.5 Gal
- \_\_\_\_\_ x 1 Gal
- \_\_\_\_\_ x 1 Liter
- \_\_\_\_\_ x 500 mL
- \_\_\_\_\_ x 250 mL
- \_\_\_\_\_ x Other: \_\_\_\_\_

Date/Time Opened: \_\_\_\_\_

Number of Unopened Bottles Remaining: \_\_\_\_\_

Extra Sample in Shed: Yes No

**Appendix C**

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**Groundwater Analytical Laboratory Report and  
Chain-of-Custody**



#140274D  
Pace Analytical Services, Inc.  
8 East Tower Circle  
Ormond Beach, FL 32174  
(386)672-5668

July 31, 2012

Tammie Gardner  
Water and Air Research  
6821 Southwest Archer Road  
, 35608

RE: Project: City of Gainesville Army Prese  
Pace Project No.: 3563174

Dear Tammie Gardner:

Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Montero

martha.montero@pacelabs.com  
Project Manager

Enclosures

cc: Simon Cordery, Water and Air Research



**REPORT OF LABORATORY ANALYSIS**

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## CERTIFICATIONS

Project: City of Gainesville Army Prese  
Pace Project No.: 3563174

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### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174  
Alabama Certification #: 41320  
Arizona Certification #: AZ0735  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH 0216  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maine Certification #: FL01264  
Massachusetts Certification #: M-FL1264  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236  
Montana Certification #: Cert 0074  
Nevada Certification: FL NELAC Reciprocity  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL765  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
U.S. Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Certification #: 00432  
Virginia Environmental Certificate #: 460165  
Washington Certification #: C955  
Wyoming Certification: FL NELAC Reciprocity  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS



### SAMPLE SUMMARY

Project: City of Gainesville Army Prese  
Pace Project No.: 3563174

Lab ID	Sample ID	Matrix	Date Collected	Date Received
3563174001	OSW-3	Water	07/23/12 09:43	07/24/12 10:55
3563174002	OSW-1	Water	07/23/12 10:42	07/24/12 10:55
3563174003	HO-1	Water	07/23/12 10:42	07/24/12 10:55
3563174004	HO-4	Water	07/23/12 12:32	07/24/12 10:55

### REPORT OF LABORATORY ANALYSIS





**SAMPLE ANALYTE COUNT**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3563174001	OSW-3	FL-PRO	JTT	3	PASI-O
		EPA 6010	IST	5	PASI-O
		EPA 8270	EAO	86	PASI-O
		EPA 8260	JBH	55	PASI-O
3563174002	OSW-1	FL-PRO	JTT	3	PASI-O
		EPA 6010	IST	5	PASI-O
		EPA 8270	EAO	86	PASI-O
		EPA 8260	JBH	55	PASI-O
3563174003	HO-1	FL-PRO	JTT	3	PASI-O
		EPA 8270 by SCAN	TWB	20	PASI-O
		EPA 8260	JBH	9	PASI-O
3563174004	HO-4	FL-PRO	JTT	3	PASI-O
		EPA 8270 by SCAN	TWB	20	PASI-O
		EPA 8260	JBH	9	PASI-O

**REPORT OF LABORATORY ANALYSIS**



**ANALYTICAL RESULTS**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Sample: OSW-3 Lab ID: 3563174001 Collected: 07/23/12 09:43 Received: 07/24/12 10:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>FL-PRO Water</b>									
Analytical Method: FL-PRO Preparation Method: EPA 3510									
Petroleum Range Organics	0.058U	mg/L	0.098	0.058	1	07/26/12 03:00	07/26/12 21:32		
<b>Surrogates</b>									
o-Terphenyl (S)	112 %		82-142		1	07/26/12 03:00	07/26/12 21:32	84-15-1	
N-Pentatriacontane (S)	101 %		42-159		1	07/26/12 03:00	07/26/12 21:32	630-07-09	
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Antimony	5.0U	ug/L	15.0	5.0	1	07/26/12 10:44	07/28/12 17:19	7440-36-0	
Arsenic	5.0U	ug/L	10.0	5.0	1	07/26/12 10:44	07/28/12 17:19	7440-38-2	
Cadmium	0.50U	ug/L	1.0	0.50	1	07/26/12 10:44	07/28/12 17:19	7440-43-9	
Chromium	2.5U	ug/L	5.0	2.5	1	07/26/12 10:44	07/28/12 17:19	7440-47-3	
Lead	5.0U	ug/L	10.0	5.0	1	07/26/12 10:44	07/28/12 17:19	7439-92-1	
<b>8270 MSSV Semivolatile Organic</b>									
Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	0.82U	ug/L	4.8	0.82	1	07/26/12 01:00	07/26/12 16:40	83-32-9	J(M1)
Acenaphthylene	0.91U	ug/L	4.8	0.91	1	07/26/12 01:00	07/26/12 16:40	208-96-8	
Acetophenone	1.4U	ug/L	4.8	1.4	1	07/26/12 01:00	07/26/12 16:40	98-86-2	
Aniline	1.9U	ug/L	4.8	1.9	1	07/26/12 01:00	07/26/12 16:40	62-53-3	
Anthracene	0.58U	ug/L	4.8	0.58	1	07/26/12 01:00	07/26/12 16:40	120-12-7	
Atrazine	1.3U	ug/L	4.8	1.3	1	07/26/12 01:00	07/26/12 16:40	1912-24-9	
Benzaldehyde	1.5U	ug/L	4.8	1.5	1	07/26/12 01:00	07/26/12 16:40	100-52-7	N2
Benzidine	0.74U	ug/L	24.0	0.74	1	07/26/12 01:00	07/26/12 16:40	92-87-5	J(M1)
Benzo(a)anthracene	0.60U	ug/L	4.8	0.60	1	07/26/12 01:00	07/26/12 16:40	56-55-3	
Benzo(a)pyrene	0.56U	ug/L	0.96	0.56	1	07/26/12 01:00	07/26/12 16:40	50-32-8	
Benzo(b)fluoranthene	0.59U	ug/L	1.9	0.59	1	07/26/12 01:00	07/26/12 16:40	205-99-2	J(M1)
Benzo(g,h,i)perylene	0.65U	ug/L	4.8	0.65	1	07/26/12 01:00	07/26/12 16:40	191-24-2	J(M1)
Benzo(k)fluoranthene	0.49U	ug/L	3.8	0.49	1	07/26/12 01:00	07/26/12 16:40	207-08-9	J(M1)
Biphenyl (Diphenyl)	0.77U	ug/L	4.8	0.77	1	07/26/12 01:00	07/26/12 16:40	92-52-4	N2
4-Bromophenylphenyl ether	0.64U	ug/L	4.8	0.64	1	07/26/12 01:00	07/26/12 16:40	101-55-3	
Butylbenzylphthalate	0.69U	ug/L	4.8	0.69	1	07/26/12 01:00	07/26/12 16:40	85-68-7	
Caprolactam	1.2U	ug/L	4.8	1.2	1	07/26/12 01:00	07/26/12 16:40	105-60-2	N2
Carbazole	0.45U	ug/L	4.8	0.45	1	07/26/12 01:00	07/26/12 16:40	86-74-8	N2
4-Chloro-3-methylphenol	0.59U	ug/L	19.2	0.59	1	07/26/12 01:00	07/26/12 16:40	59-50-7	
4-Chloroaniline	1.2U	ug/L	4.8	1.2	1	07/26/12 01:00	07/26/12 16:40	106-47-8	
bis(2-Chloroethoxy)methane	2.8U	ug/L	4.8	2.8	1	07/26/12 01:00	07/26/12 16:40	111-91-1	
bis(2-Chloroethyl) ether	0.72U	ug/L	3.8	0.72	1	07/26/12 01:00	07/26/12 16:40	111-44-4	
bis(2-Chloroisopropyl) ether	0.70U	ug/L	4.8	0.70	1	07/26/12 01:00	07/26/12 16:40	108-60-1	
2-Chloronaphthalene	0.77U	ug/L	4.8	0.77	1	07/26/12 01:00	07/26/12 16:40	91-58-7	
2-Chlorophenol	0.65U	ug/L	4.8	0.65	1	07/26/12 01:00	07/26/12 16:40	95-57-8	
4-Chlorophenylphenyl ether	0.60U	ug/L	4.8	0.60	1	07/26/12 01:00	07/26/12 16:40	7005-72-3	
Chrysene	0.35U	ug/L	4.8	0.35	1	07/26/12 01:00	07/26/12 16:40	218-01-9	
Dibenz(a,h)anthracene	0.62U	ug/L	1.9	0.62	1	07/26/12 01:00	07/26/12 16:40	53-70-3	J(M1)
Dibenzofuran	0.64U	ug/L	4.8	0.64	1	07/26/12 01:00	07/26/12 16:40	132-64-9	
1,2-Dichlorobenzene	0.65U	ug/L	4.8	0.65	1	07/26/12 01:00	07/26/12 16:40	95-50-1	
1,3-Dichlorobenzene	0.73U	ug/L	4.8	0.73	1	07/26/12 01:00	07/26/12 16:40	541-73-1	
1,4-Dichlorobenzene	0.74U	ug/L	4.8	0.74	1	07/26/12 01:00	07/26/12 16:40	106-46-7	
3,3'-Dichlorobenzidine	0.66U	ug/L	9.6	0.66	1	07/26/12 01:00	07/26/12 16:40	91-94-1	



**ANALYTICAL RESULTS**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Sample: OSW-3 Lab ID: 3563174001 Collected: 07/23/12 09:43 Received: 07/24/12 10:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Semivolatile Organic</b> Analytical Method: EPA 8270 Preparation Method: EPA 3510									
2,4-Dichlorophenol	0.54U	ug/L	1.9	0.54	1	07/26/12 01:00	07/26/12 16:40	120-83-2	
Diethylphthalate	0.49U	ug/L	4.8	0.49	1	07/26/12 01:00	07/26/12 16:40	84-66-2	J(M1)
2,4-Dimethylphenol	1.5U	ug/L	4.8	1.5	1	07/26/12 01:00	07/26/12 16:40	105-67-9	
Dimethylphthalate	0.61U	ug/L	4.8	0.61	1	07/26/12 01:00	07/26/12 16:40	131-11-3	
Di-n-butylphthalate	0.66U	ug/L	4.8	0.39	1	07/26/12 01:00	07/26/12 16:40	84-74-2	
4,6-Dinitro-2-methylphenol	1.3U	ug/L	19.2	1.3	1	07/26/12 01:00	07/26/12 16:40	534-52-1	
2,4-Dinitrophenol	1.5U	ug/L	19.2	1.5	1	07/26/12 01:00	07/26/12 16:40	51-28-5	
2,4-Dinitrotoluene	0.51U	ug/L	1.9	0.51	1	07/26/12 01:00	07/26/12 16:40	121-14-2	
2,6-Dinitrotoluene	1.2U	ug/L	1.9	1.2	1	07/26/12 01:00	07/26/12 16:40	606-20-2	
Di-n-octylphthalate	0.86U	ug/L	4.8	0.86	1	07/26/12 01:00	07/26/12 16:40	117-84-0	
Dinoseb	0.83U	ug/L	4.8	0.83	1	07/26/12 01:00	07/26/12 16:40	88-85-7	
1,2-Diphenylhydrazine	0.63U	ug/L	4.8	0.63	1	07/26/12 01:00	07/26/12 16:40	122-66-7	
bis(2-Ethylhexyl)phthalate	0.77U	ug/L	4.8	0.77	1	07/26/12 01:00	07/26/12 16:40	117-81-7	
Fluoranthene	0.52U	ug/L	4.8	0.52	1	07/26/12 01:00	07/26/12 16:40	206-44-0	
Fluorene	0.54U	ug/L	4.8	0.54	1	07/26/12 01:00	07/26/12 16:40	86-73-7	J(M1)
Hexachloro-1,3-butadiene	1.0U	ug/L	1.9	1.0	1	07/26/12 01:00	07/26/12 16:40	87-68-3	
Hexachlorobenzene	0.77U	ug/L	0.96	0.77	1	07/26/12 01:00	07/26/12 16:40	118-74-1	
Hexachlorocyclopentadiene	1.2U	ug/L	4.8	1.2	1	07/26/12 01:00	07/26/12 16:40	77-47-4	
Hexachloroethane	0.68U	ug/L	4.8	0.68	1	07/26/12 01:00	07/26/12 16:40	67-72-1	
Indeno(1,2,3-cd)pyrene	0.70U	ug/L	1.9	0.70	1	07/26/12 01:00	07/26/12 16:40	193-39-5	J(M1)
Isophorone	0.70U	ug/L	4.8	0.70	1	07/26/12 01:00	07/26/12 16:40	78-59-1	
1-Methylnaphthalene	0.96U	ug/L	4.8	0.96	1	07/26/12 01:00	07/26/12 16:40	90-12-0	
2-Methylnaphthalene	0.95U	ug/L	4.8	0.95	1	07/26/12 01:00	07/26/12 16:40	91-57-6	
2-Methylphenol(o-Cresol)	0.70U	ug/L	4.8	0.70	1	07/26/12 01:00	07/26/12 16:40	95-48-7	
3&4-Methylphenol(m&p Cresol)	0.63U	ug/L	9.6	0.63	1	07/26/12 01:00	07/26/12 16:40		J(L2)
Naphthalene	0.75U	ug/L	4.8	0.75	1	07/26/12 01:00	07/26/12 16:40	91-20-3	
2-Nitroaniline	0.58U	ug/L	4.8	0.58	1	07/26/12 01:00	07/26/12 16:40	88-74-4	
3-Nitroaniline	0.95U	ug/L	4.8	0.95	1	07/26/12 01:00	07/26/12 16:40	99-09-2	
4-Nitroaniline	0.66U	ug/L	3.8	0.66	1	07/26/12 01:00	07/26/12 16:40	100-01-6	
Nitrobenzene	1.0U	ug/L	3.8	1.0	1	07/26/12 01:00	07/26/12 16:40	98-95-3	
2-Nitrophenol	0.78U	ug/L	4.8	0.78	1	07/26/12 01:00	07/26/12 16:40	88-75-5	
4-Nitrophenol	1.0U	ug/L	19.2	1.0	1	07/26/12 01:00	07/26/12 16:40	100-02-7	
N-Nitrosodimethylamine	0.93U	ug/L	1.9	0.93	1	07/26/12 01:00	07/26/12 16:40	62-75-9	
N-Nitroso-di-n-propylamine	0.90U	ug/L	3.8	0.90	1	07/26/12 01:00	07/26/12 16:40	621-64-7	
N-Nitrosodiphenylamine	0.48U	ug/L	4.8	0.48	1	07/26/12 01:00	07/26/12 16:40	86-30-6	
Pentachlorophenol	0.63U	ug/L	19.2	0.63	1	07/26/12 01:00	07/26/12 16:40	87-86-5	
Phenanthrene	0.50U	ug/L	4.8	0.50	1	07/26/12 01:00	07/26/12 16:40	85-01-8	
Phenol	0.52U	ug/L	4.8	0.52	1	07/26/12 01:00	07/26/12 16:40	108-95-2	
Pyrene	0.65U	ug/L	4.8	0.65	1	07/26/12 01:00	07/26/12 16:40	129-00-0	
Pyridine	1.4U	ug/L	4.8	1.4	1	07/26/12 01:00	07/26/12 16:40	110-86-1	J(L2), J(M0)
1,2,4,5-Tetrachlorobenzene	0.67U	ug/L	4.8	0.67	1	07/26/12 01:00	07/26/12 16:40	95-94-3	
2,3,4,6-Tetrachlorophenol	3.7U	ug/L	4.8	3.7	1	07/26/12 01:00	07/26/12 16:40	58-90-2	
2,3,5,6-Tetrachlorophenol	0.50U	ug/L	4.8	0.50	1	07/26/12 01:00	07/26/12 16:40	935-95-5	N2
1,2,4-Trichlorobenzene	0.80U	ug/L	4.8	0.80	1	07/26/12 01:00	07/26/12 16:40	120-82-1	
2,4,5-Trichlorophenol	0.50U	ug/L	3.8	0.50	1	07/26/12 01:00	07/26/12 16:40	95-95-4	

### ANALYTICAL RESULTS

Project: City of Gainesville Army Prese  
Pace Project No.: 3563174

Sample: OSW-3 Lab ID: 3563174001 Collected: 07/23/12 09:43 Received: 07/24/12 10:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Semivolatile Organic</b>									
Analytical Method: EPA 8270 Preparation Method: EPA 3510									
2,4,6-Trichlorophenol	0.66U	ug/L	1.9	0.66	1	07/26/12 01:00	07/26/12 16:40	88-06-2	
1,3,5-Trinitrobenzene	1.2U	ug/L	4.8	1.2	1	07/26/12 01:00	07/26/12 16:40	99-35-4	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	55 %		10-110		1	07/26/12 01:00	07/26/12 16:40	4165-60-0	
2-Fluorobiphenyl (S)	58 %		18-110		1	07/26/12 01:00	07/26/12 16:40	321-60-8	
Terphenyl-d14 (S)	92 %		10-123		1	07/26/12 01:00	07/26/12 16:40	1718-51-0	
Phenol-d6 (S)	12 %		10-110		1	07/26/12 01:00	07/26/12 16:40	13127-88-3	
2-Fluorophenol (S)	21 %		18-110		1	07/26/12 01:00	07/26/12 16:40	367-12-4	
2,4,6-Tribromophenol (S)	77 %		10-110		1	07/26/12 01:00	07/26/12 16:40	118-79-6	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Acetone	5.0U	ug/L	10.0	5.0	1		07/25/12 20:28	67-64-1	
Acetonitrile	5.0U	ug/L	10.0	5.0	1		07/25/12 20:28	75-05-8	
Benzene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	71-43-2	
Bromochloromethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	74-97-5	
Bromodichloromethane	0.27U	ug/L	0.60	0.27	1		07/25/12 20:28	75-27-4	
Bromoform	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	75-25-2	
Bromomethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	74-83-9	
2-Butanone (MEK)	5.0U	ug/L	10.0	5.0	1		07/25/12 20:28	78-93-3	
Carbon disulfide	5.0U	ug/L	10.0	5.0	1		07/25/12 20:28	75-15-0	
Carbon tetrachloride	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	56-23-5	
Chlorobenzene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	108-90-7	
Chloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	75-00-3	
Chloroform	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	67-66-3	
Chloromethane	0.62U	ug/L	1.0	0.62	1		07/25/12 20:28	74-87-3	
1,2-Dibromo-3-chloropropane	1.0U	ug/L	2.0	1.0	1		07/25/12 20:28	96-12-8	
Dibromochloromethane	0.26U	ug/L	0.50	0.26	1		07/25/12 20:28	124-48-1	
1,2-Dibromoethane (EDB)	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	106-93-4	
Dibromomethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	74-95-3	
1,2-Dichlorobenzene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	95-50-1	
1,4-Dichlorobenzene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	106-46-7	
trans-1,4-Dichloro-2-butene	5.0U	ug/L	10.0	5.0	1		07/25/12 20:28	110-57-6	
1,1-Dichloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	75-34-3	
1,2-Dichloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	107-06-2	
1,2-Dichloroethene (Total)	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	540-59-0	
1,1-Dichloroethene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	75-35-4	
cis-1,2-Dichloroethene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	156-59-2	
trans-1,2-Dichloroethene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	156-60-5	
1,2-Dichloropropane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	78-87-5	
cis-1,3-Dichloropropene	0.25U	ug/L	0.50	0.25	1		07/25/12 20:28	10061-01-5	
trans-1,3-Dichloropropene	0.25U	ug/L	0.50	0.25	1		07/25/12 20:28	10061-02-6	
Ethylbenzene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	100-41-4	
2-Hexanone	5.0U	ug/L	10.0	5.0	1		07/25/12 20:28	591-78-6	
Iodomethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	74-88-4	
Methylene Chloride	2.5U	ug/L	5.0	2.5	1		07/25/12 20:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	5.0U	ug/L	10.0	5.0	1		07/25/12 20:28	108-10-1	



**ANALYTICAL RESULTS**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Sample: OSW-3 Lab ID: 3563174001 Collected: 07/23/12 09:43 Received: 07/24/12 10:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Methyl-tert-butyl ether	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	1634-04-4	
Styrene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	100-42-5	
1,1,1,2-Tetrachloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	630-20-6	
1,1,2,2-Tetrachloroethane	0.12U	ug/L	0.50	0.12	1		07/25/12 20:28	79-34-5	
Tetrachloroethene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	127-18-4	
Toluene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	108-88-3	
1,1,1-Trichloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	71-55-6	
1,1,2-Trichloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	79-00-5	
Trichloroethene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	79-01-6	
Trichlorofluoromethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	75-69-4	
1,2,3-Trichloropropane	0.36U	ug/L	0.50	0.36	1		07/25/12 20:28	96-18-4	
Vinyl acetate	1.0U	ug/L	2.0	1.0	1		07/25/12 20:28	108-05-4	
Vinyl chloride	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	75-01-4	
Xylene (Total)	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	1330-20-7	
m&p-Xylene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	179601-23-1	
o-Xylene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:28	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	93 %		70-114		1		07/25/12 20:28	460-00-4	
Dibromofluoromethane (S)	101 %		88-117		1		07/25/12 20:28	1868-53-7	
1,2-Dichloroethane-d4 (S)	105 %		86-125		1		07/25/12 20:28	17060-07-0	
Toluene-d8 (S)	100 %		87-113		1		07/25/12 20:28	2037-26-5	



**ANALYTICAL RESULTS**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Sample: OSW-1 Lab ID: 3563174002 Collected: 07/23/12 10:42 Received: 07/24/12 10:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>FL-PRO Water</b> Analytical Method: FL-PRO Preparation Method: EPA 3510									
Petroleum Range Organics	0.058U	mg/L	0.098	0.058	1	07/26/12 03:00	07/26/12 21:32		
<b>Surrogates</b>									
o-Terphenyl (S)	97 %		82-142		1	07/26/12 03:00	07/26/12 21:32	84-15-1	
N-Pentatriacontane (S)	90 %		42-159		1	07/26/12 03:00	07/26/12 21:32	630-07-09	
<b>6010 MET ICP</b> Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Antimony	5.0U	ug/L	15.0	5.0	1	07/26/12 10:44	07/28/12 17:32	7440-36-0	
Arsenic	5.0U	ug/L	10.0	5.0	1	07/26/12 10:44	07/28/12 17:32	7440-38-2	
Cadmium	0.50U	ug/L	1.0	0.50	1	07/26/12 10:44	07/28/12 17:32	7440-43-9	
Chromium	2.5U	ug/L	5.0	2.5	1	07/26/12 10:44	07/28/12 17:32	7440-47-3	
Lead	5.0U	ug/L	10.0	5.0	1	07/26/12 10:44	07/28/12 17:32	7439-92-1	
<b>8270 MSSV Semivolatile Organic</b> Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	0.84U	ug/L	4.9	0.84	1	07/26/12 01:00	07/26/12 16:58	83-32-9	
Acenaphthylene	0.93U	ug/L	4.9	0.93	1	07/26/12 01:00	07/26/12 16:58	208-96-8	
Acetophenone	1.4U	ug/L	4.9	1.4	1	07/26/12 01:00	07/26/12 16:58	98-86-2	
Aniline	1.9U	ug/L	4.9	1.9	1	07/26/12 01:00	07/26/12 16:58	62-53-3	
Anthracene	0.59U	ug/L	4.9	0.59	1	07/26/12 01:00	07/26/12 16:58	120-12-7	
Atrazine	1.3U	ug/L	4.9	1.3	1	07/26/12 01:00	07/26/12 16:58	1912-24-9	
Benzaldehyde	1.5U	ug/L	4.9	1.5	1	07/26/12 01:00	07/26/12 16:58	100-52-7	N2
Benzidine	0.75U	ug/L	24.4	0.75	1	07/26/12 01:00	07/26/12 16:58	92-87-5	
Benzo(a)anthracene	0.62U	ug/L	4.9	0.62	1	07/26/12 01:00	07/26/12 16:58	56-55-3	
Benzo(a)pyrene	0.57U	ug/L	0.98	0.57	1	07/26/12 01:00	07/26/12 16:58	50-32-8	
Benzo(b)fluoranthene	0.61U	ug/L	2.0	0.61	1	07/26/12 01:00	07/26/12 16:58	205-99-2	
Benzo(g,h,i)perylene	0.66U	ug/L	4.9	0.66	1	07/26/12 01:00	07/26/12 16:58	191-24-2	
Benzo(k)fluoranthene	0.50U	ug/L	3.9	0.50	1	07/26/12 01:00	07/26/12 16:58	207-08-9	
Biphenyl (Diphenyl)	0.78U	ug/L	4.9	0.78	1	07/26/12 01:00	07/26/12 16:58	92-52-4	N2
4-Bromophenylphenyl ether	0.65U	ug/L	4.9	0.65	1	07/26/12 01:00	07/26/12 16:58	101-55-3	
Butylbenzylphthalate	0.70U	ug/L	4.9	0.70	1	07/26/12 01:00	07/26/12 16:58	85-68-7	
Caprolactam	1.2U	ug/L	4.9	1.2	1	07/26/12 01:00	07/26/12 16:58	105-60-2	N2
Carbazole	0.46U	ug/L	4.9	0.46	1	07/26/12 01:00	07/26/12 16:58	86-74-8	N2
4-Chloro-3-methylphenol	0.61U	ug/L	19.6	0.61	1	07/26/12 01:00	07/26/12 16:58	59-50-7	
4-Chloroaniline	1.2U	ug/L	4.9	1.2	1	07/26/12 01:00	07/26/12 16:58	106-47-8	
bis(2-Chloroethoxy)methane	2.9U	ug/L	4.9	2.9	1	07/26/12 01:00	07/26/12 16:58	111-91-1	
bis(2-Chloroethyl) ether	0.73U	ug/L	3.9	0.73	1	07/26/12 01:00	07/26/12 16:58	111-44-4	
bis(2-Chloroisopropyl) ether	0.71U	ug/L	4.9	0.71	1	07/26/12 01:00	07/26/12 16:58	108-60-1	
2-Chloronaphthalene	0.78U	ug/L	4.9	0.78	1	07/26/12 01:00	07/26/12 16:58	91-58-7	
2-Chlorophenol	0.66U	ug/L	4.9	0.66	1	07/26/12 01:00	07/26/12 16:58	95-57-8	
4-Chlorophenylphenyl ether	0.62U	ug/L	4.9	0.62	1	07/26/12 01:00	07/26/12 16:58	7005-72-3	
Chrysene	0.36U	ug/L	4.9	0.36	1	07/26/12 01:00	07/26/12 16:58	218-01-9	
Dibenz(a,h)anthracene	0.64U	ug/L	2.0	0.64	1	07/26/12 01:00	07/26/12 16:58	53-70-3	
Dibenzofuran	0.65U	ug/L	4.9	0.65	1	07/26/12 01:00	07/26/12 16:58	132-64-9	
1,2-Dichlorobenzene	0.66U	ug/L	4.9	0.66	1	07/26/12 01:00	07/26/12 16:58	95-50-1	
1,3-Dichlorobenzene	0.74U	ug/L	4.9	0.74	1	07/26/12 01:00	07/26/12 16:58	541-73-1	
1,4-Dichlorobenzene	0.75U	ug/L	4.9	0.75	1	07/26/12 01:00	07/26/12 16:58	106-46-7	
3,3'-Dichlorobenzidine	0.67U	ug/L	9.8	0.67	1	07/26/12 01:00	07/26/12 16:58	91-94-1	



**ANALYTICAL RESULTS**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Sample: OSW-1 Lab ID: 3563174002 Collected: 07/23/12 10:42 Received: 07/24/12 10:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Semivolatile Organic</b>									
Analytical Method: EPA 8270 Preparation Method: EPA 3510									
2,4-Dichlorophenol	0.55U	ug/L	2.0	0.55	1	07/26/12 01:00	07/26/12 16:58	120-83-2	
Diethylphthalate	0.50U	ug/L	4.9	0.50	1	07/26/12 01:00	07/26/12 16:58	84-66-2	
2,4-Dimethylphenol	1.5U	ug/L	4.9	1.5	1	07/26/12 01:00	07/26/12 16:58	105-67-9	
Dimethylphthalate	0.63U	ug/L	4.9	0.63	1	07/26/12 01:00	07/26/12 16:58	131-11-3	
Di-n-butylphthalate	0.40U	ug/L	4.9	0.40	1	07/26/12 01:00	07/26/12 16:58	84-74-2	
4,6-Dinitro-2-methylphenol	1.3U	ug/L	19.6	1.3	1	07/26/12 01:00	07/26/12 16:58	534-52-1	
2,4-Dinitrophenol	1.5U	ug/L	19.6	1.5	1	07/26/12 01:00	07/26/12 16:58	51-28-5	
2,4-Dinitrotoluene	0.52U	ug/L	2.0	0.52	1	07/26/12 01:00	07/26/12 16:58	121-14-2	
2,6-Dinitrotoluene	1.2U	ug/L	2.0	1.2	1	07/26/12 01:00	07/26/12 16:58	606-20-2	
Di-n-octylphthalate	0.88U	ug/L	4.9	0.88	1	07/26/12 01:00	07/26/12 16:58	117-84-0	
Dinoseb	0.85U	ug/L	4.9	0.85	1	07/26/12 01:00	07/26/12 16:58	88-85-7	
1,2-Diphenylhydrazine	0.65U	ug/L	4.9	0.65	1	07/26/12 01:00	07/26/12 16:58	122-66-7	
bis(2-Ethylhexyl)phthalate	0.78U	ug/L	4.9	0.78	1	07/26/12 01:00	07/26/12 16:58	117-81-7	
Fluoranthene	0.53U	ug/L	4.9	0.53	1	07/26/12 01:00	07/26/12 16:58	206-44-0	
Fluorene	0.55U	ug/L	4.9	0.55	1	07/26/12 01:00	07/26/12 16:58	86-73-7	
Hexachloro-1,3-butadiene	1.1U	ug/L	2.0	1.1	1	07/26/12 01:00	07/26/12 16:58	87-68-3	
Hexachlorobenzene	0.78U	ug/L	0.98	0.78	1	07/26/12 01:00	07/26/12 16:58	118-74-1	
Hexachlorocyclopentadiene	1.3U	ug/L	4.9	1.3	1	07/26/12 01:00	07/26/12 16:58	77-47-4	
Hexachloroethane	0.69U	ug/L	4.9	0.69	1	07/26/12 01:00	07/26/12 16:58	67-72-1	
Indeno(1,2,3-cd)pyrene	0.71U	ug/L	2.0	0.71	1	07/26/12 01:00	07/26/12 16:58	193-39-5	
Isophorone	0.71U	ug/L	4.9	0.71	1	07/26/12 01:00	07/26/12 16:58	78-59-1	
1-Methylnaphthalene	0.98U	ug/L	4.9	0.98	1	07/26/12 01:00	07/26/12 16:58	90-12-0	
2-Methylnaphthalene	0.97U	ug/L	4.9	0.97	1	07/26/12 01:00	07/26/12 16:58	91-57-6	
2-Methylphenol(o-Cresol)	0.71U	ug/L	4.9	0.71	1	07/26/12 01:00	07/26/12 16:58	95-48-7	
3&4-Methylphenol(m&p Cresol)	0.65U	ug/L	9.8	0.65	1	07/26/12 01:00	07/26/12 16:58		J(L2)
Naphthalene	0.76U	ug/L	4.9	0.76	1	07/26/12 01:00	07/26/12 16:58	91-20-3	
2-Nitroaniline	0.59U	ug/L	4.9	0.59	1	07/26/12 01:00	07/26/12 16:58	88-74-4	
3-Nitroaniline	0.97U	ug/L	4.9	0.97	1	07/26/12 01:00	07/26/12 16:58	99-09-2	
4-Nitroaniline	0.67U	ug/L	3.9	0.67	1	07/26/12 01:00	07/26/12 16:58	100-01-6	
Nitrobenzene	1.1U	ug/L	3.9	1.1	1	07/26/12 01:00	07/26/12 16:58	98-95-3	
2-Nitrophenol	0.79U	ug/L	4.9	0.79	1	07/26/12 01:00	07/26/12 16:58	88-75-5	
4-Nitrophenol	1.1U	ug/L	19.6	1.1	1	07/26/12 01:00	07/26/12 16:58	100-02-7	
N-Nitrosodimethylamine	0.95U	ug/L	2.0	0.95	1	07/26/12 01:00	07/26/12 16:58	62-75-9	
N-Nitroso-di-n-propylamine	0.92U	ug/L	3.9	0.92	1	07/26/12 01:00	07/26/12 16:58	621-64-7	
N-Nitrosodiphenylamine	0.49U	ug/L	4.9	0.49	1	07/26/12 01:00	07/26/12 16:58	86-30-6	
Pentachlorophenol	0.65U	ug/L	19.6	0.65	1	07/26/12 01:00	07/26/12 16:58	87-86-5	
Phenanthrene	0.51U	ug/L	4.9	0.51	1	07/26/12 01:00	07/26/12 16:58	85-01-8	
Phenol	0.53U	ug/L	4.9	0.53	1	07/26/12 01:00	07/26/12 16:58	108-95-2	
Pyrene	0.66U	ug/L	4.9	0.66	1	07/26/12 01:00	07/26/12 16:58	129-00-0	
Pyridine	1.5U	ug/L	4.9	1.5	1	07/26/12 01:00	07/26/12 16:58	110-86-1	J(L2)
1,2,4,5-Tetrachlorobenzene	0.68U	ug/L	4.9	0.68	1	07/26/12 01:00	07/26/12 16:58	95-94-3	
2,3,4,6-Tetrachlorophenol	3.8U	ug/L	4.9	3.8	1	07/26/12 01:00	07/26/12 16:58	58-90-2	
2,3,5,6-Tetrachlorophenol	0.51U	ug/L	4.9	0.51	1	07/26/12 01:00	07/26/12 16:58	935-95-5	N2
1,2,4-Trichlorobenzene	0.81U	ug/L	4.9	0.81	1	07/26/12 01:00	07/26/12 16:58	120-82-1	
2,4,5-Trichlorophenol	0.51U	ug/L	3.9	0.51	1	07/26/12 01:00	07/26/12 16:58	95-95-4	
2,4,6-Trichlorophenol	0.67U	ug/L	2.0	0.67	1	07/26/12 01:00	07/26/12 16:58	88-06-2	

### ANALYTICAL RESULTS

Project: City of Gainesville Army Prese  
Pace Project No.: 3563174

Sample: OSW-1 Lab ID: 3563174002 Collected: 07/23/12 10:42 Received: 07/24/12 10:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Semivolatile Organic</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3510							
1,3,5-Trinitrobenzene	1.2U	ug/L	4.9	1.2	1	07/26/12 01:00	07/26/12 16:58	99-35-4	
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	63 %		10-110		1	07/26/12 01:00	07/26/12 16:58	4165-60-0	
2-Fluorobiphenyl (S)	66 %		18-110		1	07/26/12 01:00	07/26/12 16:58	321-60-8	
Terphenyl-d14 (S)	93 %		10-123		1	07/26/12 01:00	07/26/12 16:58	1718-51-0	
Phenol-d6 (S)	13 %		10-110		1	07/26/12 01:00	07/26/12 16:58	13127-88-3	
2-Fluorophenol (S)	22 %		18-110		1	07/26/12 01:00	07/26/12 16:58	367-12-4	
2,4,6-Tribromophenol (S)	76 %		10-110		1	07/26/12 01:00	07/26/12 16:58	118-79-6	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Acetone	5.0U	ug/L	10.0	5.0	1		07/25/12 20:51	67-64-1	
Acetonitrile	5.0U	ug/L	10.0	5.0	1		07/25/12 20:51	75-05-8	
Benzene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	71-43-2	
Bromochloromethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	74-97-5	
Bromodichloromethane	0.27U	ug/L	0.60	0.27	1		07/25/12 20:51	75-27-4	
Bromoform	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	75-25-2	
Bromomethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	74-83-9	
2-Butanone (MEK)	5.0U	ug/L	10.0	5.0	1		07/25/12 20:51	78-93-3	
Carbon disulfide	5.0U	ug/L	10.0	5.0	1		07/25/12 20:51	75-15-0	
Carbon tetrachloride	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	56-23-5	
Chlorobenzene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	108-90-7	
Chloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	75-00-3	
Chloroform	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	67-66-3	
Chloromethane	0.62U	ug/L	1.0	0.62	1		07/25/12 20:51	74-87-3	
1,2-Dibromo-3-chloropropane	1.0U	ug/L	2.0	1.0	1		07/25/12 20:51	96-12-8	
Dibromochloromethane	0.26U	ug/L	0.50	0.26	1		07/25/12 20:51	124-48-1	
1,2-Dibromoethane (EDB)	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	106-93-4	
Dibromomethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	74-95-3	
1,2-Dichlorobenzene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	95-50-1	
1,4-Dichlorobenzene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	106-46-7	
trans-1,4-Dichloro-2-butene	5.0U	ug/L	10.0	5.0	1		07/25/12 20:51	110-57-6	
1,1-Dichloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	75-34-3	
1,2-Dichloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	107-06-2	
1,2-Dichloroethene (Total)	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	540-59-0	
1,1-Dichloroethene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	75-35-4	
cis-1,2-Dichloroethene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	156-59-2	
trans-1,2-Dichloroethene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	156-60-5	
1,2-Dichloropropane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	78-87-5	
cis-1,3-Dichloropropene	0.25U	ug/L	0.50	0.25	1		07/25/12 20:51	10061-01-5	
trans-1,3-Dichloropropene	0.25U	ug/L	0.50	0.25	1		07/25/12 20:51	10061-02-6	
Ethylbenzene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	100-41-4	
2-Hexanone	5.0U	ug/L	10.0	5.0	1		07/25/12 20:51	591-78-6	
Iodomethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	74-88-4	
Methylene Chloride	2.5U	ug/L	5.0	2.5	1		07/25/12 20:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	5.0U	ug/L	10.0	5.0	1		07/25/12 20:51	108-10-1	
Methyl-tert-butyl ether	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	1634-04-4	





**ANALYTICAL RESULTS**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Sample: OSW-1 Lab ID: 3563174002 Collected: 07/23/12 10:42 Received: 07/24/12 10:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Styrene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	100-42-5	
1,1,1,2-Tetrachloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	630-20-6	
1,1,2,2-Tetrachloroethane	0.12U	ug/L	0.50	0.12	1		07/25/12 20:51	79-34-5	
Tetrachloroethene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	127-18-4	
Toluene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	108-88-3	
1,1,1-Trichloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	71-55-6	
1,1,2-Trichloroethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	79-00-5	
Trichloroethene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	79-01-6	
Trichlorofluoromethane	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	75-69-4	
1,2,3-Trichloropropane	0.36U	ug/L	0.50	0.36	1		07/25/12 20:51	96-18-4	
Vinyl acetate	1.0U	ug/L	2.0	1.0	1		07/25/12 20:51	108-05-4	
Vinyl chloride	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	75-01-4	
Xylene (Total)	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	1330-20-7	
m&p-Xylene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	179601-23-1	
o-Xylene	0.50U	ug/L	1.0	0.50	1		07/25/12 20:51	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	93 %		70-114		1		07/25/12 20:51	460-00-4	
Dibromofluoromethane (S)	103 %		88-117		1		07/25/12 20:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	107 %		86-125		1		07/25/12 20:51	17060-07-0	
Toluene-d8 (S)	100 %		87-113		1		07/25/12 20:51	2037-26-5	



**ANALYTICAL RESULTS**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Sample: HO-1 Lab ID: 3563174003 Collected: 07/23/12 10:42 Received: 07/24/12 10:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>FL-PRO Water</b>		Analytical Method: FL-PRO Preparation Method: EPA 3510							
Petroleum Range Organics	0.058U	mg/L	0.098	0.058	1	07/26/12 03:00	07/26/12 22:04		
<b>Surrogates</b>									
o-Terphenyl (S)	113 %		82-142		1	07/26/12 03:00	07/26/12 22:04	84-15-1	
N-Pentatriacontane (S)	104 %		42-159		1	07/26/12 03:00	07/26/12 22:04	630-07-09	
<b>8270 MSSV PAH by SCAN</b>		Analytical Method: EPA 8270 by SCAN Preparation Method: EPA 3510							
Acenaphthene	0.019U	ug/L	1.0	0.019	1	07/26/12 00:00	07/26/12 10:57	83-32-9	
Acenaphthylene	0.018U	ug/L	2.0	0.018	1	07/26/12 00:00	07/26/12 10:57	208-96-8	
Anthracene	0.019U	ug/L	1.0	0.019	1	07/26/12 00:00	07/26/12 10:57	120-12-7	
Benzo(a)anthracene	0.013U	ug/L	0.20	0.013	1	07/26/12 00:00	07/26/12 10:57	56-55-3	
Benzo(a)pyrene	0.022U	ug/L	0.20	0.022	1	07/26/12 00:00	07/26/12 10:57	50-32-8	
Benzo(b)fluoranthene	0.016U	ug/L	0.10	0.016	1	07/26/12 00:00	07/26/12 10:57	205-99-2	
Benzo(g,h,i)perylene	0.017U	ug/L	1.0	0.017	1	07/26/12 00:00	07/26/12 10:57	191-24-2	
Benzo(k)fluoranthene	0.023U	ug/L	0.25	0.023	1	07/26/12 00:00	07/26/12 10:57	207-08-9	
Chrysene	0.015U	ug/L	1.0	0.015	1	07/26/12 00:00	07/26/12 10:57	218-01-9	
Dibenz(a,h)anthracene	0.019U	ug/L	0.20	0.019	1	07/26/12 00:00	07/26/12 10:57	53-70-3	
Fluoranthene	0.012U	ug/L	1.0	0.012	1	07/26/12 00:00	07/26/12 10:57	206-44-0	
Fluorene	0.011U	ug/L	1.0	0.011	1	07/26/12 00:00	07/26/12 10:57	86-73-7	
Indeno(1,2,3-cd)pyrene	0.019U	ug/L	0.15	0.019	1	07/26/12 00:00	07/26/12 10:57	193-39-5	
1-Methylnaphthalene	0.016U	ug/L	1.5	0.016	1	07/26/12 00:00	07/26/12 10:57	90-12-0	
2-Methylnaphthalene	0.013U	ug/L	1.5	0.013	1	07/26/12 00:00	07/26/12 10:57	91-57-6	
Naphthalene	0.015U	ug/L	1.0	0.015	1	07/26/12 00:00	07/26/12 10:57	91-20-3	
Phenanthrene	0.016U	ug/L	1.0	0.016	1	07/26/12 00:00	07/26/12 10:57	85-01-8	
Pyrene	0.010U	ug/L	1.0	0.010	1	07/26/12 00:00	07/26/12 10:57	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	59 %		43.9-113		1	07/26/12 00:00	07/26/12 10:57	321-60-8	
Terphenyl-d14 (S)	81 %		24.8-144		1	07/26/12 00:00	07/26/12 10:57	1718-51-0	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	0.50U	ug/L	1.0	0.50	1		07/25/12 21:13	71-43-2	
Ethylbenzene	0.50U	ug/L	1.0	0.50	1		07/25/12 21:13	100-41-4	
Methyl-tert-butyl ether	0.50U	ug/L	1.0	0.50	1		07/25/12 21:13	1634-04-4	
Toluene	0.50U	ug/L	1.0	0.50	1		07/25/12 21:13	108-88-3	
Xylene (Total)	0.50U	ug/L	1.0	0.50	1		07/25/12 21:13	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95 %		70-114		1		07/25/12 21:13	460-00-4	
Dibromofluoromethane (S)	101 %		88-117		1		07/25/12 21:13	1868-53-7	
1,2-Dichloroethane-d4 (S)	105 %		86-125		1		07/25/12 21:13	17060-07-0	
Toluene-d8 (S)	101 %		87-113		1		07/25/12 21:13	2037-26-5	



**ANALYTICAL RESULTS**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Sample: HO-4 Lab ID: 3563174004 Collected: 07/23/12 12:32 Received: 07/24/12 10:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>FL-PRO Water</b>		Analytical Method: FL-PRO Preparation Method: EPA 3510							
Petroleum Range Organics	0.058U	mg/L	0.098	0.058	1	07/26/12 03:00	07/26/12 22:04		
<b>Surrogates</b>									
o-Terphenyl (S)	105 %		82-142		1	07/26/12 03:00	07/26/12 22:04	84-15-1	
N-Pentatriacontane (S)	108 %		42-159		1	07/26/12 03:00	07/26/12 22:04	630-07-09	
<b>8270 MSSV PAH by SCAN</b>		Analytical Method: EPA 8270 by SCAN Preparation Method: EPA 3510							
Acenaphthene	0.018U	ug/L	0.97	0.018	1	07/26/12 00:00	07/26/12 11:18	83-32-9	
Acenaphthylene	0.017U	ug/L	1.9	0.017	1	07/26/12 00:00	07/26/12 11:18	208-96-8	
Anthracene	0.018U	ug/L	0.97	0.018	1	07/26/12 00:00	07/26/12 11:18	120-12-7	
Benzo(a)anthracene	0.013U	ug/L	0.19	0.013	1	07/26/12 00:00	07/26/12 11:18	56-55-3	
Benzo(a)pyrene	0.021U	ug/L	0.19	0.021	1	07/26/12 00:00	07/26/12 11:18	50-32-8	
Benzo(b)fluoranthene	0.015U	ug/L	0.097	0.015	1	07/26/12 00:00	07/26/12 11:18	205-99-2	
Benzo(g,h,i)perylene	0.016U	ug/L	0.97	0.016	1	07/26/12 00:00	07/26/12 11:18	191-24-2	
Benzo(k)fluoranthene	0.022U	ug/L	0.24	0.022	1	07/26/12 00:00	07/26/12 11:18	207-08-9	
Chrysene	0.014U	ug/L	0.97	0.014	1	07/26/12 00:00	07/26/12 11:18	218-01-9	
Dibenz(a,h)anthracene	0.018U	ug/L	0.19	0.018	1	07/26/12 00:00	07/26/12 11:18	53-70-3	
Fluoranthene	0.012U	ug/L	0.97	0.012	1	07/26/12 00:00	07/26/12 11:18	206-44-0	
Fluorene	0.011U	ug/L	0.97	0.011	1	07/26/12 00:00	07/26/12 11:18	86-73-7	
Indeno(1,2,3-cd)pyrene	0.018U	ug/L	0.14	0.018	1	07/26/12 00:00	07/26/12 11:18	193-39-5	
1-Methylnaphthalene	0.015U	ug/L	1.4	0.015	1	07/26/12 00:00	07/26/12 11:18	90-12-0	
2-Methylnaphthalene	0.013U	ug/L	1.4	0.013	1	07/26/12 00:00	07/26/12 11:18	91-57-6	
Naphthalene	0.014U	ug/L	0.97	0.014	1	07/26/12 00:00	07/26/12 11:18	91-20-3	
Phenanthrene	0.015U	ug/L	0.97	0.015	1	07/26/12 00:00	07/26/12 11:18	85-01-8	
Pyrene	0.0097U	ug/L	0.97	0.0097	1	07/26/12 00:00	07/26/12 11:18	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	57 %		43.9-113		1	07/26/12 00:00	07/26/12 11:18	321-60-8	
Terphenyl-d14 (S)	91 %		24.8-144		1	07/26/12 00:00	07/26/12 11:18	1718-51-0	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	0.50U	ug/L	1.0	0.50	1		07/25/12 21:35	71-43-2	
Ethylbenzene	0.50U	ug/L	1.0	0.50	1		07/25/12 21:35	100-41-4	
Methyl-tert-butyl ether	0.50U	ug/L	1.0	0.50	1		07/25/12 21:35	1634-04-4	
Toluene	0.50U	ug/L	1.0	0.50	1		07/25/12 21:35	108-88-3	
Xylene (Total)	0.50U	ug/L	1.0	0.50	1		07/25/12 21:35	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96 %		70-114		1		07/25/12 21:35	460-00-4	
Dibromofluoromethane (S)	102 %		88-117		1		07/25/12 21:35	1868-53-7	
1,2-Dichloroethane-d4 (S)	105 %		86-125		1		07/25/12 21:35	17060-07-0	
Toluene-d8 (S)	100 %		87-113		1		07/25/12 21:35	2037-26-5	

### QUALITY CONTROL DATA

Project: City of Gainesville Army Prese  
Pace Project No.: 3563174

QC Batch: MPRP/9583 Analysis Method: EPA 6010  
QC Batch Method: EPA 3010 Analysis Description: 6010 MET  
Associated Lab Samples: 3563174001, 3563174002

METHOD BLANK: 434353 Matrix: Water  
Associated Lab Samples: 3563174001, 3563174002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	5.0U	15.0	07/28/12 17:11	
Arsenic	ug/L	5.0U	10.0	07/28/12 17:11	
Cadmium	ug/L	0.50U	1.0	07/28/12 17:11	
Chromium	ug/L	2.5U	5.0	07/28/12 17:11	
Lead	ug/L	5.0U	10.0	07/28/12 17:11	

LABORATORY CONTROL SAMPLE: 434354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	250	251	100	80-120	
Arsenic	ug/L	250	238	95	80-120	
Cadmium	ug/L	25	24.6	98	80-120	
Chromium	ug/L	250	249	100	80-120	
Lead	ug/L	250	255	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 434355 434356

Parameter	Units	3563174001		434356		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						MSD Result
Antimony	ug/L	5.0U	250	250	245	249	98	100	75-125	1	20
Arsenic	ug/L	5.0U	250	250	235	237	94	95	75-125	.6	20
Cadmium	ug/L	0.50U	25	25	24.0	24.3	96	97	75-125	1	20
Chromium	ug/L	2.5U	250	250	246	247	98	98	75-125	.3	20
Lead	ug/L	5.0U	250	250	248	250	99	99	75-125	6	20



**QUALITY CONTROL DATA**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

QC Batch: MSV/6082 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
 Associated Lab Samples: 3563174001, 3563174002, 3563174003, 3563174004

METHOD BLANK: 434011 Matrix: Water  
 Associated Lab Samples: 3563174001, 3563174002, 3563174003, 3563174004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	0.50U	1.0	07/25/12 18:16	
1,1,1-Trichloroethane	ug/L	0.50U	1.0	07/25/12 18:16	
1,1,2,2-Tetrachloroethane	ug/L	0.12U	0.50	07/25/12 18:16	
1,1,2-Trichloroethane	ug/L	0.50U	1.0	07/25/12 18:16	
1,1-Dichloroethane	ug/L	0.50U	1.0	07/25/12 18:16	
1,1-Dichloroethene	ug/L	0.50U	1.0	07/25/12 18:16	
1,2,3-Trichloropropane	ug/L	0.36U	0.50	07/25/12 18:16	
1,2-Dibromo-3-chloropropane	ug/L	1.0U	2.0	07/25/12 18:16	
1,2-Dibromoethane (EDB)	ug/L	0.50U	1.0	07/25/12 18:16	
1,2-Dichlorobenzene	ug/L	0.50U	1.0	07/25/12 18:16	
1,2-Dichloroethane	ug/L	0.50U	1.0	07/25/12 18:16	
1,2-Dichloroethene (Total)	ug/L	0.50U	1.0	07/25/12 18:16	
1,2-Dichloropropane	ug/L	0.50U	1.0	07/25/12 18:16	
1,4-Dichlorobenzene	ug/L	0.50U	1.0	07/25/12 18:16	
2-Butanone (MEK)	ug/L	5.0U	10.0	07/25/12 18:16	
2-Hexanone	ug/L	5.0U	10.0	07/25/12 18:16	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0U	10.0	07/25/12 18:16	
Acetone	ug/L	5.0U	10.0	07/25/12 18:16	
Acetonitrile	ug/L	5.0U	10.0	07/25/12 18:16	
Benzene	ug/L	0.50U	1.0	07/25/12 18:16	
Bromochloromethane	ug/L	0.50U	1.0	07/25/12 18:16	
Bromodichloromethane	ug/L	0.27U	0.60	07/25/12 18:16	
Bromoform	ug/L	0.50U	1.0	07/25/12 18:16	
Bromomethane	ug/L	0.50U	1.0	07/25/12 18:16	
Carbon disulfide	ug/L	5.0U	10.0	07/25/12 18:16	
Carbon tetrachloride	ug/L	0.50U	1.0	07/25/12 18:16	
Chlorobenzene	ug/L	0.50U	1.0	07/25/12 18:16	
Chloroethane	ug/L	0.50U	1.0	07/25/12 18:16	
Chloroform	ug/L	0.50U	1.0	07/25/12 18:16	
Chloromethane	ug/L	0.62U	1.0	07/25/12 18:16	
cis-1,2-Dichloroethene	ug/L	0.50U	1.0	07/25/12 18:16	
cis-1,3-Dichloropropene	ug/L	0.25U	0.50	07/25/12 18:16	
Dibromochloromethane	ug/L	0.26U	0.50	07/25/12 18:16	
Dibromomethane	ug/L	0.50U	1.0	07/25/12 18:16	
Ethylbenzene	ug/L	0.50U	1.0	07/25/12 18:16	
Iodomethane	ug/L	0.50U	1.0	07/25/12 18:16	
m&p-Xylene	ug/L	0.50U	1.0	07/25/12 18:16	
Methyl-tert-butyl ether	ug/L	0.50U	1.0	07/25/12 18:16	
Methylene Chloride	ug/L	2.5U	5.0	07/25/12 18:16	
o-Xylene	ug/L	0.50U	1.0	07/25/12 18:16	
Styrene	ug/L	0.50U	1.0	07/25/12 18:16	
Tetrachloroethene	ug/L	0.50U	1.0	07/25/12 18:16	
Toluene	ug/L	0.50U	1.0	07/25/12 18:16	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: City of Gainesville Army Prese  
Pace Project No.: 3563174

METHOD BLANK: 434011 Matrix: Water  
Associated Lab Samples: 3563174001, 3563174002, 3563174003, 3563174004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	0.50U	1.0	07/25/12 18:16	
trans-1,3-Dichloropropene	ug/L	0.25U	0.50	07/25/12 18:16	
trans-1,4-Dichloro-2-butene	ug/L	5.0U	10.0	07/25/12 18:16	
Trichloroethene	ug/L	0.50U	1.0	07/25/12 18:16	
Trichlorofluoromethane	ug/L	0.50U	1.0	07/25/12 18:16	
Vinyl acetate	ug/L	1.0U	2.0	07/25/12 18:16	
Vinyl chloride	ug/L	0.50U	1.0	07/25/12 18:16	
Xylene (Total)	ug/L	0.58 I	1.0	07/25/12 18:16	
1,2-Dichloroethane-d4 (S)	%	105	86-125	07/25/12 18:16	
4-Bromofluorobenzene (S)	%	92	70-114	07/25/12 18:16	
Dibromofluoromethane (S)	%	99	88-117	07/25/12 18:16	
Toluene-d8 (S)	%	99	87-113	07/25/12 18:16	

LABORATORY CONTROL SAMPLE: 434012

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	18.5	93	70-130	
1,1,1-Trichloroethane	ug/L	20	20.3	101	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	70-130	
1,1,2-Trichloroethane	ug/L	20	18.1	90	70-130	
1,1-Dichloroethane	ug/L	20	20.1	100	70-130	
1,1-Dichloroethene	ug/L	20	20.5	102	70-130	
1,2,3-Trichloropropane	ug/L	20	19.4	97	70-130	
1,2-Dibromo-3-chloropropane	ug/L	20	17.3	87	64-130	
1,2-Dibromoethane (EDB)	ug/L	20	18.9	95	70-130	
1,2-Dichlorobenzene	ug/L	20	16.4	82	70-130	
1,2-Dichloroethane	ug/L	20	19.9	99	70-130	
1,2-Dichloroethene (Total)	ug/L	40	40.1	100	70-130	
1,2-Dichloropropane	ug/L	20	19.5	97	70-130	
1,4-Dichlorobenzene	ug/L	20	18.1	90	70-130	
2-Butanone (MEK)	ug/L	20	21.7	109	55-167	
2-Hexanone	ug/L	20	20.0	100	65-130	
4-Methyl-2-pentanone (MIBK)	ug/L	20	20.7	104	70-130	
Acetone	ug/L	20	24.8	124	40-150	
Acetonitrile	ug/L	200	230	115	63-138	
Benzene	ug/L	20	19.7	98	70-130	
Bromochloromethane	ug/L	20	20.2	101	70-130	
Bromodichloromethane	ug/L	20	20.3	101	70-130	
Bromoform	ug/L	20	15.5	78	68-130	
Bromomethane	ug/L	20	15.0	75	38-179	
Carbon disulfide	ug/L	20	21.5	108	51-155	
Carbon tetrachloride	ug/L	20	19.5	97	70-130	
Chlorobenzene	ug/L	20	19.2	96	70-130	
Chloroethane	ug/L	20	20.9	104	59-149	
Chloroform	ug/L	20	19.3	96	70-130	

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**QUALITY CONTROL DATA**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

LABORATORY CONTROL SAMPLE: 434012

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloromethane	ug/L	20	14.8	74	68-130	
cis-1,2-Dichloroethene	ug/L	20	20.0	100	70-130	
cis-1,3-Dichloropropene	ug/L	20	18.9	95	70-130	
Dibromochloromethane	ug/L	20	17.5	87	70-130	
Dibromomethane	ug/L	20	19.3	97	70-130	
Ethylbenzene	ug/L	20	19.6	98	70-130	
Iodomethane	ug/L	20	14.1	70	43-160	
m&p-Xylene	ug/L	40	40.6	102	70-130	
Methyl-tert-butyl ether	ug/L	20	20.1	101	70-130	
Methylene Chloride	ug/L	20	22.0	110	70-130	
o-Xylene	ug/L	20	19.5	98	70-130	
Styrene	ug/L	20	19.1	96	70-130	
Tetrachloroethene	ug/L	20	20.3	102	66-133	
Toluene	ug/L	20	19.9	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.2	101	70-130	
trans-1,3-Dichloropropene	ug/L	20	18.4	92	70-130	
trans-1,4-Dichloro-2-butene	ug/L	20	20.3	102	65-130	
Trichloroethene	ug/L	20	21.0	105	70-130	
Trichlorofluoromethane	ug/L	20	18.0	90	70-131	
Vinyl acetate	ug/L	20	20.1	101	69-135	
Vinyl chloride	ug/L	20	19.7	98	69-140	
Xylene (Total)	ug/L	60	60.2	100	70-130	
1,2-Dichloroethane-d4 (S)	%			98	86-125	
4-Bromofluorobenzene (S)	%			94	70-114	
Dibromofluoromethane (S)	%			99	88-117	
Toluene-d8 (S)	%			101	87-113	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 434013 434014

Parameter	Units	3563087002		MS Spike	MSD Spike	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		Result	Conc.	Conc.	Conc.	Result	Result	% Rec	% Rec		RPD	
1,1,1,2-Tetrachloroethane	ug/L	0.50U	20	20	20	17.5	18.1	87	90	39-130	3	40
1,1,1-Trichloroethane	ug/L	0.50U	20	20	20	19.6	20.8	98	104	47-141	6	40
1,1,2,2-Tetrachloroethane	ug/L	0.12U	20	20	20	16.6	18.2	83	91	49-131	9	40
1,1,2-Trichloroethane	ug/L	0.50U	20	20	20	16.4	17.1	82	85	50-130	4	40
1,1-Dichloroethane	ug/L	0.50U	20	20	20	18.6	19.8	93	99	54-137	6	40
1,1-Dichloroethene	ug/L	0.50U	20	20	20	20.8	22.1	104	111	45-155	6	40
1,2,3-Trichloropropane	ug/L	0.36U	20	20	20	18.1	27.3	90	136	31-132	41	40 J(D6), J(M1)
1,2-Dibromo-3-chloropropane	ug/L	1.0U	20	20	20	12.3	15.3	62	76	37-130	21	40
1,2-Dibromoethane (EDB)	ug/L	0.50U	20	20	20	17.6	18.0	88	90	51-132	3	40
1,2-Dichlorobenzene	ug/L	0.50U	20	20	20	14.8	16.6	74	83	43-130	11	40
1,2-Dichloroethane	ug/L	0.50U	20	20	20	18.6	20.1	93	100	54-130	8	40
1,2-Dichloroethene (Total)	ug/L	0.50U	40	40	40	35.5	37.6	89	94	50-150	6	40
1,2-Dichloropropane	ug/L	0.50U	20	20	20	18.0	19.5	90	97	53-130	8	40
1,4-Dichlorobenzene	ug/L	0.50U	20	20	20	16.0	17.8	80	89	38-130	11	40
2-Butanone (MEK)	ug/L	5.0U	20	20	20	17.5	20.1	88	100	48-138	14	40



**QUALITY CONTROL DATA**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Parameter	Units	3563087002		434013		434014		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
2-Hexanone	ug/L	5.0U	20	20	17.6	18.9	88	95	38-130	7	40	
4-Methyl-2-pentanone (MIBK)	ug/L	5.0U	20	20	17.8	18.2	89	91	28-143	2	40	
Acetone	ug/L	5.0U	20	20	24.4	22.7	122	114	20-140	7	40	
Acetonitrile	ug/L	5.0U	200	200	211	223	106	111	44-138	5	40	
Benzene	ug/L	0.50U	20	20	19.2	19.8	96	99	53-132	3	40	
Bromochloromethane	ug/L	0.50U	20	20	20.2	21.3	101	107	54-132	5	40	
Bromodichloromethane	ug/L	0.27U	20	20	18.4	19.5	92	97	46-130	6	40	
Bromoform	ug/L	0.50U	20	20	14.8	16.2	74	81	32-130	9	40	
Bromomethane	ug/L	0.50U	20	20	9.6	14.9	48	75	20-152	44	40	J(D6)
Carbon disulfide	ug/L	5.0U	20	20	22.8	23.4	114	117	28-184	2	40	
Carbon tetrachloride	ug/L	0.50U	20	20	19.6	20.8	98	104	37-137	6	40	
Chlorobenzene	ug/L	0.50U	20	20	18.3	19.0	92	95	46-130	4	40	
Chloroethane	ug/L	0.50U	20	20	23.1	22.5	115	113	48-159	2	40	
Chloroform	ug/L	0.50U	20	20	20.4	21.2	102	106	51-130	4	40	
Chloromethane	ug/L	0.62U	20	20	13.4	15.4	67	77	39-144	14	40	
cis-1,2-Dichloroethene	ug/L	0.50U	20	20	17.7	18.9	89	95	54-130	7	40	
cis-1,3-Dichloropropene	ug/L	0.25U	20	20	16.0	16.9	80	85	45-130	5	40	
Dibromochloromethane	ug/L	0.26U	20	20	16.0	16.8	80	84	43-130	5	40	
Dibromomethane	ug/L	0.50U	20	20	19.3	20.1	96	100	50-130	4	40	
Ethylbenzene	ug/L	0.50U	20	20	18.5	19.4	92	97	43-130	5	40	
Iodomethane	ug/L	0.50U	20	20	13.3	12.0	67	60	20-169	10	40	
m&p-Xylene	ug/L	0.50U	40	40	37.3	39.3	93	97	40-130	5	40	
Methyl-tert-butyl ether	ug/L	0.50U	20	20	19.7	19.6	98	98	20-150	.2	40	
Methylene Chloride	ug/L	2.5U	20	20	21.2	22.2	106	111	51-135	5	40	
o-Xylene	ug/L	0.50U	20	20	17.5	18.5	87	92	45-130	6	40	
Styrene	ug/L	0.50U	20	20	17.4	18.4	87	92	40-130	6	40	
Tetrachloroethene	ug/L	0.50U	20	20	19.0	19.8	95	99	26-130	4	40	
Toluene	ug/L	0.50U	20	20	19.0	19.5	95	97	50-130	3	40	
trans-1,2-Dichloroethene	ug/L	0.50U	20	20	17.7	18.7	89	93	48-142	5	40	
trans-1,3-Dichloropropene	ug/L	0.25U	20	20	18.0	18.4	90	92	45-130	2	40	
trans-1,4-Dichloro-2-butene	ug/L	5.0U	20	20	14.7	15.8	73	79	20-139	8	40	
Trichloroethene	ug/L	0.50U	20	20	20.5	21.0	102	105	42-133	3	40	
Trichlorofluoromethane	ug/L	0.50U	20	20	21.2	22.0	106	110	46-146	4	40	
Vinyl acetate	ug/L	1.0U	20	20	15.4	15.6	77	78	20-165	1	40	
Vinyl chloride	ug/L	0.50U	20	20	19.1	18.8	96	94	57-142	2	40	
Xylene (Total)	ug/L	0.50U	60	60	54.8	57.7	91	96	42-130	5	40	
1,2-Dichloroethane-d4 (S)	%						112	107	86-125			
4-Bromofluorobenzene (S)	%						101	100	70-114			
Dibromofluoromethane (S)	%						101	101	88-117			
Toluene-d8 (S)	%						102	104	87-113			





**QUALITY CONTROL DATA**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

QC Batch: OEXT/9288 Analysis Method: EPA 8270 by SCAN  
 QC Batch Method: EPA 3510 Analysis Description: 8270 Water CPAH by SCAN MSSV  
 Associated Lab Samples: 3563174003, 3563174004

METHOD BLANK: 433610 Matrix: Water

Associated Lab Samples: 3563174003, 3563174004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	0.016U	1.5	07/26/12 05:12	
2-Methylnaphthalene	ug/L	0.013U	1.5	07/26/12 05:12	
Acenaphthene	ug/L	0.019U	1.0	07/26/12 05:12	
Acenaphthylene	ug/L	0.018U	2.0	07/26/12 05:12	
Anthracene	ug/L	0.019U	1.0	07/26/12 05:12	
Benzo(a)anthracene	ug/L	0.013U	0.20	07/26/12 05:12	
Benzo(a)pyrene	ug/L	0.022U	0.20	07/26/12 05:12	
Benzo(b)fluoranthene	ug/L	0.016U	0.10	07/26/12 05:12	
Benzo(g,h,i)perylene	ug/L	0.017U	1.0	07/26/12 05:12	
Benzo(k)fluoranthene	ug/L	0.023U	0.25	07/26/12 05:12	
Chrysene	ug/L	0.015U	1.0	07/26/12 05:12	
Dibenz(a,h)anthracene	ug/L	0.019U	0.20	07/26/12 05:12	
Fluoranthene	ug/L	0.012U	1.0	07/26/12 05:12	
Fluorene	ug/L	0.011U	1.0	07/26/12 05:12	
Indeno(1,2,3-cd)pyrene	ug/L	0.019U	0.15	07/26/12 05:12	
Naphthalene	ug/L	0.028 I	1.0	07/26/12 05:12	
Phenanthrene	ug/L	0.016U	1.0	07/26/12 05:12	
Pyrene	ug/L	0.010U	1.0	07/26/12 05:12	
2-Fluorobiphenyl (S)	%	82	43.9-113	07/26/12 05:12	
Terphenyl-d14 (S)	%	91	24.8-144	07/26/12 05:12	

LABORATORY CONTROL SAMPLE: 433611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	5	4.2	84	21-133	
2-Methylnaphthalene	ug/L	5	4.1	82	21-133	
Acenaphthene	ug/L	5	4.1	82	47-145	
Acenaphthylene	ug/L	5	4.2	84	33-145	
Anthracene	ug/L	5	4.2	84	27-133	
Benzo(a)anthracene	ug/L	5	3.9	77	33-143	
Benzo(a)pyrene	ug/L	5	3.8	75	17-163	
Benzo(b)fluoranthene	ug/L	5	4.1	82	24-159	
Benzo(g,h,i)perylene	ug/L	5	2.5	50	10-219	
Benzo(k)fluoranthene	ug/L	5	4.0	80	11-162	
Chrysene	ug/L	5	4.2	84	17-168	
Dibenz(a,h)anthracene	ug/L	5	2.4	47	10-227	
Fluoranthene	ug/L	5	4.6	92	26-137	
Fluorene	ug/L	5	4.3	86	59-130	
Indeno(1,2,3-cd)pyrene	ug/L	5	3.0	59	10-171	
Naphthalene	ug/L	5	4.0	80	21-133	
Phenanthrene	ug/L	5	4.2	84	54-130	

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**QUALITY CONTROL DATA**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

LABORATORY CONTROL SAMPLE: 433611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/L	5	4.7	94	52-130	
2-Fluorobiphenyl (S)	%			80	43.9-113	
Terphenyl-d14 (S)	%			96	24.8-144	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 433612 433613

Parameter	Units	3563174003		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
1-Methylnaphthalene	ug/L	0.016U	9.8	9.8	9.8	6.7	7.2	68	73	21-133	7	40
2-Methylnaphthalene	ug/L	0.013U	9.8	9.8	9.8	6.6	7.0	67	71	21-133	6	40
Acenaphthene	ug/L	0.019U	9.8	9.8	9.8	6.8	7.2	69	74	47-145	6	40
Acenaphthylene	ug/L	0.018U	9.8	9.8	9.8	6.8	7.3	69	74	33-145	7	40
Anthracene	ug/L	0.019U	9.8	9.8	9.8	7.5	7.3	77	74	27-133	3	40
Benzo(a)anthracene	ug/L	0.013U	9.8	9.8	9.8	6.3	6.3	64	64	33-143	.9	40
Benzo(a)pyrene	ug/L	0.022U	9.8	9.8	9.8	5.7	6.0	58	61	17-163	5	40
Benzo(b)fluoranthene	ug/L	0.016U	9.8	9.8	9.8	6.6	7.0	68	71	24-159	6	40
Benzo(g,h,i)perylene	ug/L	0.017U	9.8	9.8	9.8	4.9	5.3	50	54	10-219	8	40
Benzo(k)fluoranthene	ug/L	0.023U	9.8	9.8	9.8	5.6	6.0	57	61	11-162	8	40
Chrysene	ug/L	0.015U	9.8	9.8	9.8	6.7	7.0	68	71	17-168	5	40
Dibenz(a,h)anthracene	ug/L	0.019U	9.8	9.8	9.8	4.9	5.2	50	53	10-227	7	40
Fluoranthene	ug/L	0.012U	9.8	9.8	9.8	8.7	8.6	88	88	26-137	.6	40
Fluorene	ug/L	0.011U	9.8	9.8	9.8	7.2	7.5	73	76	59-130	3	40
Indeno(1,2,3-cd)pyrene	ug/L	0.019U	9.8	9.8	9.8	5.1	5.4	51	55	10-171	6	40
Naphthalene	ug/L	0.015U	9.8	9.8	9.8	7.2	7.2	73	73	21-133	.2	40
Phenanthrene	ug/L	0.016U	9.8	9.8	9.8	7.5	7.5	76	77	54-130	.2	40
Pyrene	ug/L	0.010U	9.8	9.8	9.8	8.8	8.9	89	91	52-130	1	40
2-Fluorobiphenyl (S)	%							66	70	43.9-113		
Terphenyl-d14 (S)	%							72	76	24.8-144		



**QUALITY CONTROL DATA**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

QC Batch: OEXT/9284 Analysis Method: EPA 8270  
 QC Batch Method: EPA 3510 Analysis Description: 8270 Water MSSV  
 Associated Lab Samples: 3563174001, 3563174002

METHOD BLANK: 433600 Matrix: Water  
 Associated Lab Samples: 3563174001, 3563174002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	0.70U	5.0	07/26/12 08:03	
1,2,4-Trichlorobenzene	ug/L	0.83U	5.0	07/26/12 08:03	
1,2-Dichlorobenzene	ug/L	0.68U	5.0	07/26/12 08:03	
1,2-Diphenylhydrazine	ug/L	0.66U	5.0	07/26/12 08:03	
1,3,5-Trinitrobenzene	ug/L	1.2U	5.0	07/26/12 08:03	
1,3-Dichlorobenzene	ug/L	0.76U	5.0	07/26/12 08:03	
1,4-Dichlorobenzene	ug/L	0.77U	5.0	07/26/12 08:03	
1-Methylnaphthalene	ug/L	1.0U	5.0	07/26/12 08:03	
2,3,4,6-Tetrachlorophenol	ug/L	3.8U	5.0	07/26/12 08:03	
2,3,5,6-Tetrachlorophenol	ug/L	0.52U	5.0	07/26/12 08:03	N2
2,4,5-Trichlorophenol	ug/L	0.52U	4.0	07/26/12 08:03	
2,4,6-Trichlorophenol	ug/L	0.69U	2.0	07/26/12 08:03	
2,4-Dichlorophenol	ug/L	0.56U	2.0	07/26/12 08:03	
2,4-Dimethylphenol	ug/L	1.6U	5.0	07/26/12 08:03	
2,4-Dinitrophenol	ug/L	1.6U	20.0	07/26/12 08:03	
2,4-Dinitrotoluene	ug/L	0.53U	2.0	07/26/12 08:03	
2,6-Dinitrotoluene	ug/L	1.2U	2.0	07/26/12 08:03	
2-Chloronaphthalene	ug/L	0.80U	5.0	07/26/12 08:03	
2-Chlorophenol	ug/L	0.68U	5.0	07/26/12 08:03	
2-Methylnaphthalene	ug/L	0.99U	5.0	07/26/12 08:03	
2-Methylphenol(o-Cresol)	ug/L	0.73U	5.0	07/26/12 08:03	
2-Nitroaniline	ug/L	0.60U	5.0	07/26/12 08:03	
2-Nitrophenol	ug/L	0.81U	5.0	07/26/12 08:03	
3&4-Methylphenol(m&p Cresol)	ug/L	0.66U	10.0	07/26/12 08:03	
3,3'-Dichlorobenzidine	ug/L	0.69U	10.0	07/26/12 08:03	
3-Nitroaniline	ug/L	0.99U	5.0	07/26/12 08:03	
4,6-Dinitro-2-methylphenol	ug/L	1.3U	20.0	07/26/12 08:03	
4-Bromophenylphenyl ether	ug/L	0.67U	5.0	07/26/12 08:03	
4-Chloro-3-methylphenol	ug/L	0.62U	20.0	07/26/12 08:03	
4-Chloroaniline	ug/L	1.2U	5.0	07/26/12 08:03	
4-Chlorophenylphenyl ether	ug/L	0.63U	5.0	07/26/12 08:03	
4-Nitroaniline	ug/L	0.69U	4.0	07/26/12 08:03	
4-Nitrophenol	ug/L	1.1U	20.0	07/26/12 08:03	
Acenaphthene	ug/L	0.86U	5.0	07/26/12 08:03	
Acenaphthylene	ug/L	0.95U	5.0	07/26/12 08:03	
Acetophenone	ug/L	1.4U	5.0	07/26/12 08:03	
Aniline	ug/L	2.0U	5.0	07/26/12 08:03	
Anthracene	ug/L	0.60U	5.0	07/26/12 08:03	
Atrazine	ug/L	1.3U	5.0	07/26/12 08:03	
Benzaldehyde	ug/L	1.6U	5.0	07/26/12 08:03	N2
Benzidine	ug/L	0.77U	25.0	07/26/12 08:03	
Benzo(a)anthracene	ug/L	0.63U	5.0	07/26/12 08:03	
Benzo(a)pyrene	ug/L	0.58U	1.0	07/26/12 08:03	

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**QUALITY CONTROL DATA**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

METHOD BLANK: 433600 Matrix: Water

Associated Lab Samples: 3563174001, 3563174002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzo(b)fluoranthene	ug/L	0.62U	2.0	07/26/12 08:03	
Benzo(g,h,i)perylene	ug/L	0.68U	5.0	07/26/12 08:03	
Benzo(k)fluoranthene	ug/L	0.51U	4.0	07/26/12 08:03	
Biphenyl (Diphenyl)	ug/L	0.80U	5.0	07/26/12 08:03	N2
bis(2-Chloroethoxy)methane	ug/L	3.0U	5.0	07/26/12 08:03	
bis(2-Chloroethyl) ether	ug/L	0.75U	4.0	07/26/12 08:03	
bis(2-Chloroisopropyl) ether	ug/L	0.73U	5.0	07/26/12 08:03	
bis(2-Ethylhexyl)phthalate	ug/L	0.80U	5.0	07/26/12 08:03	
Butylbenzylphthalate	ug/L	0.72U	5.0	07/26/12 08:03	
Caprolactam	ug/L	1.3U	5.0	07/26/12 08:03	N2
Carbazole	ug/L	0.47U	5.0	07/26/12 08:03	N2
Chrysene	ug/L	0.37U	5.0	07/26/12 08:03	
Di-n-butylphthalate	ug/L	0.41U	5.0	07/26/12 08:03	
Di-n-octylphthalate	ug/L	0.90U	5.0	07/26/12 08:03	
Dibenz(a,h)anthracene	ug/L	0.65U	2.0	07/26/12 08:03	
Dibenzofuran	ug/L	0.67U	5.0	07/26/12 08:03	
Diethylphthalate	ug/L	0.59 U	5.0	07/26/12 08:03	
Dimethylphthalate	ug/L	0.64U	5.0	07/26/12 08:03	
Dinoseb	ug/L	0.87U	5.0	07/26/12 08:03	
Fluoranthene	ug/L	0.54U	5.0	07/26/12 08:03	
Fluorene	ug/L	0.56U	5.0	07/26/12 08:03	
Hexachloro-1,3-butadiene	ug/L	1.1U	2.0	07/26/12 08:03	
Hexachlorobenzene	ug/L	0.80U	1.0	07/26/12 08:03	
Hexachlorocyclopentadiene	ug/L	1.3U	5.0	07/26/12 08:03	
Hexachloroethane	ug/L	0.71U	5.0	07/26/12 08:03	
Indeno(1,2,3-cd)pyrene	ug/L	0.73U	2.0	07/26/12 08:03	
Isophorone	ug/L	0.73U	5.0	07/26/12 08:03	
N-Nitroso-di-n-propylamine	ug/L	0.94U	4.0	07/26/12 08:03	
N-Nitrosodimethylamine	ug/L	0.97U	2.0	07/26/12 08:03	
N-Nitrosodiphenylamine	ug/L	0.50U	5.0	07/26/12 08:03	
Naphthalene	ug/L	0.78U	5.0	07/26/12 08:03	
Nitrobenzene	ug/L	1.1U	4.0	07/26/12 08:03	
Pentachlorophenol	ug/L	0.66U	20.0	07/26/12 08:03	
Phenanthrene	ug/L	0.52U	5.0	07/26/12 08:03	
Phenol	ug/L	0.54U	5.0	07/26/12 08:03	
Pyrene	ug/L	0.68U	5.0	07/26/12 08:03	
Pyridine	ug/L	1.5U	5.0	07/26/12 08:03	
2,4,6-Tribromophenol (S)	%	80	10-110	07/26/12 08:03	
2-Fluorobiphenyl (S)	%	69	18-110	07/26/12 08:03	
2-Fluorophenol (S)	%	27	18-110	07/26/12 08:03	
Nitrobenzene-d5 (S)	%	73	10-110	07/26/12 08:03	
Phenol-d6 (S)	%	14	10-110	07/26/12 08:03	
Terphenyl-d14 (S)	%	95	10-123	07/26/12 08:03	

### QUALITY CONTROL DATA

Project: City of Gainesville Army Prese  
Pace Project No.: 3563174

LABORATORY CONTROL SAMPLE: 433601

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4,5-Tetrachlorobenzene	ug/L	50	35.4	71	41.5-98.7	
1,2,4-Trichlorobenzene	ug/L	50	32.2	64	39.9-89.2	
1,2-Dichlorobenzene	ug/L	50	30.3	61	34.6-90.5	
1,2-Diphenylhydrazine	ug/L	50	42.8	86	49.3-114.4	
1,3,5-Trinitrobenzene	ug/L	50	38.2	76	57.6-109.4	
1,3-Dichlorobenzene	ug/L	50	29.3	59	33.5-89.2	
1,4-Dichlorobenzene	ug/L	50	30.2	60	40.1-84.5	
1-Methylnaphthalene	ug/L	50	35.3	71	28.7-112.9	
2,3,4,6-Tetrachlorophenol	ug/L	50	42.5	85	27.1-127.8	
2,3,5,6-Tetrachlorophenol	ug/L	50	43.0	86	14.9-136.7	N2
2,4,5-Trichlorophenol	ug/L	50	40.8	82	51.1-111.7	
2,4,6-Trichlorophenol	ug/L	50	40.3	81	40.6-113.7	
2,4-Dichlorophenol	ug/L	50	35.6	71	46.1-100.4	
2,4-Dimethylphenol	ug/L	50	33.8	68	43-103.2	
2,4-Dinitrophenol	ug/L	50	31.3	63	10-131.1	
2,4-Dinitrotoluene	ug/L	50	42.5	85	62.4-110.1	
2,6-Dinitrotoluene	ug/L	50	41.6	83	61.5-106.3	
2-Chloronaphthalene	ug/L	50	37.1	74	44.4-97.8	
2-Chlorophenol	ug/L	50	27.9	56	36.3-94.9	
2-Methylnaphthalene	ug/L	50	35.1	70	24.4-123.8	
2-Methylphenol(o-Cresol)	ug/L	50	21.6	43	38.1-94.5	
2-Nitroaniline	ug/L	50	43.8	88	60.2-107.2	
2-Nitrophenol	ug/L	50	36.2	72	41.8-100.6	
3&4-Methylphenol(m&p Cresol)	ug/L	50	18.3	37	37.8-93.5	J(L0)
3,3'-Dichlorobenzidine	ug/L	50	44.6	89	35.6-111.3	
3-Nitroaniline	ug/L	50	40.5	81	36.7-122.3	
4,6-Dinitro-2-methylphenol	ug/L	50	41.9	84	18.5-129.6	
4-Bromophenylphenyl ether	ug/L	50	43.0	86	57.6-107.6	
4-Chloro-3-methylphenol	ug/L	50	34.4	69	53.9-107.8	
4-Chloroaniline	ug/L	50	37.0	74	49.5-97.9	
4-Chlorophenylphenyl ether	ug/L	50	40.4	81	55.8-97.6	
4-Nitroaniline	ug/L	50	40.6	81	53.1-109.4	
4-Nitrophenol	ug/L	50	12.3 l	25	10-88.9	
Acenaphthene	ug/L	50	39.2	78	58.1-93.8	
Acenaphthylene	ug/L	50	38.0	76	53.2-99.3	
Acetophenone	ug/L	50	35.8	72	44-100.1	
Aniline	ug/L	50	24.5	49	34-95.1	
Anthracene	ug/L	50	42.9	86	43.9-117.6	
Atrazine	ug/L	50	45.0	90	64.5-120.1	
Benzaldehyde	ug/L	50	47.0	94	10-114.5	N2
Benzidine	ug/L	50	17.6 l	35	10-94.1	
Benzo(a)anthracene	ug/L	50	41.5	83	56.9-102	
Benzo(a)pyrene	ug/L	50	41.1	82	66.5-106.2	
Benzo(b)fluoranthene	ug/L	50	35.3	71	66.5-103.3	
Benzo(g,h,i)perylene	ug/L	50	41.2	82	65.1-108	
Benzo(k)fluoranthene	ug/L	50	45.2	90	64.2-105.2	
Biphenyl (Diphenyl)	ug/L	50	39.2	78	48.8-99.7	N2
bis(2-Chloroethoxy)methane	ug/L	50	37.9	76	45.8-100.7	



**QUALITY CONTROL DATA**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

LABORATORY CONTROL SAMPLE: 433601

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethyl) ether	ug/L	50	34.1	68	38.4-99	
bis(2-Chloroisopropyl) ether	ug/L	50	36.1	72	36.8-95.3	
bis(2-Ethylhexyl)phthalate	ug/L	50	43.7	87	59.1-109.3	
Butylbenzylphthalate	ug/L	50	43.9	88	54.4-107.2	
Caprolactam	ug/L	50	4.8 l	10	10-72	N2
Carbazole	ug/L	50	44.0	88	65.1-107.2	N2
Chrysene	ug/L	50	42.3	85	54.2-103.6	
Di-n-butylphthalate	ug/L	50	44.8	90	66.5-108.2	
Di-n-octylphthalate	ug/L	50	43.6	87	48.4-114	
Dibenz(a,h)anthracene	ug/L	50	41.8	84	60.1-112.6	
Dibenzofuran	ug/L	50	39.6	79	55.1-97.3	
Diethylphthalate	ug/L	50	41.4	83	64.3-105.1	
Dimethylphthalate	ug/L	50	42.3	85	62.5-103.6	
Dinoseb	ug/L	50	39.9	80	41.6-118.5	
Fluoranthene	ug/L	50	44.0	88	52.9-116.1	
Fluorene	ug/L	50	39.6	79	60.3-97.3	
Hexachloro-1,3-butadiene	ug/L	50	30.1	60	34.3-96.9	
Hexachlorobenzene	ug/L	50	42.6	85	55.7-112.1	
Hexachlorocyclopentadiene	ug/L	50	27.1	54	26.4-83.9	
Hexachloroethane	ug/L	50	28.1	56	35-87.6	
Indeno(1,2,3-cd)pyrene	ug/L	50	40.4	81	66.1-107.8	
Isophorone	ug/L	50	38.9	78	44.1-108.3	
N-Nitroso-di-n-propylamine	ug/L	50	37.4	75	12.4-127.6	
N-Nitrosodimethylamine	ug/L	50	10.9	22	11.3-84.9	
N-Nitrosodiphenylamine	ug/L	50	43.0	86	19.3-136.6	
Naphthalene	ug/L	50	33.7	67	30-95.4	
Nitrobenzene	ug/L	50	32.1	64	27.8-109	
Pentachlorophenol	ug/L	50	43.3	87	10-159	
Phenanthrene	ug/L	50	43.8	88	19.9-138.2	
Phenol	ug/L	50	7.0	14	10-74.6	
Pyrene	ug/L	50	42.9	86	18-134.1	
Pyridine	ug/L	50	4.4 l	9	10-75.6	J(L0)
2,4,6-Tribromophenol (S)	%			85	10-110	
2-Fluorobiphenyl (S)	%			75	18-110	
2-Fluorophenol (S)	%			23	18-110	
Nitrobenzene-d5 (S)	%			71	10-110	
Phenol-d6 (S)	%			13	10-110	
Terphenyl-d14 (S)	%			94	10-123	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 433602 433603

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		3563174001 Result	Spike Conc.	Spike Conc.	MS Result							
1,2,4,5-Tetrachlorobenzene	ug/L	0.67U	99.2	99.2	63.9	54.0	64	54	41.5-98.	17	40	
1,2,4-Trichlorobenzene	ug/L	0.80U	99.2	99.2	57.6	44.6	58	45	39.9-89.	25	40	
1,2-Dichlorobenzene	ug/L	0.65U	99.2	99.2	54.7	42.6	55	43	34.6-90.	25	40	
1,2-Diphenylhydrazine	ug/L	0.63U	99.2	99.2	76.8	69.6	77	70	49.3-114	10	40	

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**REPORT OF LABORATORY ANALYSIS**

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QUALITY CONTROL DATA

Project: City of Gainesville Army Prese  
Pace Project No.: 3563174

Parameter	3563174001		MS	MSD	433602		433603		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS	MSD							
1,3,5-Trinitrobenzene	ug/L	1.2U	99.2	99.2	69.6	64.9	70	65	57.6-109	7	40				
1,3-Dichlorobenzene	ug/L	0.73U	99.2	99.2	53.4	41.5	54	42	33.5-89.	25	40				
1,4-Dichlorobenzene	ug/L	0.74U	99.2	99.2	54.7	41.8	55	42	40.1-84.	27	40				
1-Methylnaphthalene	ug/L	0.96U	99.2	99.2	62.2	54.4	63	55	28.7-112	13	40				
2,3,4,6-Tetrachlorophenol	ug/L	3.7U	99.2	99.2	70.9	66.0	71	66	27.1-127	7	40				
2,3,5,6-Tetrachlorophenol	ug/L	0.50U	99.2	99.2	74.2	66.6	75	67	14.9-136	11	40	N2			
2,4,5-Trichlorophenol	ug/L	0.50U	99.2	99.2	72.0	61.4	73	62	51.1-111	16	40				
2,4,6-Trichlorophenol	ug/L	0.66U	99.2	99.2	68.8	59.5	69	60	40.6-113	15	40				
2,4-Dichlorophenol	ug/L	0.54U	99.2	99.2	66.9	53.5	67	54	46.1-100	22	40				
2,4-Dimethylphenol	ug/L	1.5U	99.2	99.2	64.1	53.6	65	54	43-103.2	18	40				
2,4-Dinitrophenol	ug/L	1.5U	99.2	99.2	93.9	85.8	95	86	10-131.1	9	40				
2,4-Dinitrotoluene	ug/L	0.51U	99.2	99.2	76.0	66.4	77	67	62.4-110	13	40				
2,6-Dinitrotoluene	ug/L	1.2U	99.2	99.2	72.9	64.7	73	65	61.5-106	12	40				
2-Chloronaphthalene	ug/L	0.77U	99.2	99.2	66.4	55.6	67	56	44.4-97.	18	40				
2-Chlorophenol	ug/L	0.65U	99.2	99.2	54.5	45.6	55	46	36.3-94.	18	40				
2-Methylnaphthalene	ug/L	0.95U	99.2	99.2	62.6	53.5	63	54	24.4-123	16	40				
2-Methylphenol(o-Cresol)	ug/L	0.70U	99.2	99.2	51.4	45.3	52	46	38.1-94.	13	40				
2-Nitroaniline	ug/L	0.58U	99.2	99.2	76.7	68.2	77	69	60.2-107	12	40				
2-Nitrophenol	ug/L	0.78U	99.2	99.2	61.6	49.9	62	50	41.8-100	21	40				
3&4-Methylphenol(m&p Cresol)	ug/L	0.63U	99.2	99.2	47.9	42.9	48	43	37.8-93.	11	40				
3,3'-Dichlorobenzidine	ug/L	0.66U	99.2	99.2	72.0	72.3	73	73	35.6-111	4	40				
3-Nitroaniline	ug/L	0.95U	99.2	99.2	75.9	74.8	77	75	36.7-122	1	40				
4,6-Dinitro-2-methylphenol	ug/L	1.3U	99.2	99.2	79.0	74.0	80	75	18.5-129	7	40				
4-Bromophenylphenyl ether	ug/L	0.64U	99.2	99.2	78.1	67.1	79	68	57.6-107	15	40				
4-Chloro-3-methylphenol	ug/L	0.59U	99.2	99.2	68.8	63.9	69	64	53.9-107	7	40				
4-Chloroaniline	ug/L	1.2U	99.2	99.2	62.3	61.5	63	62	49.5-97.	1	40				
4-Chlorophenylphenyl ether	ug/L	0.60U	99.2	99.2	66.6	60.5	67	61	55.8-97.	10	40				
4-Nitroaniline	ug/L	0.66U	99.2	99.2	71.0	69.1	72	70	53.1-109	3	40				
4-Nitrophenol	ug/L	1.0U	99.2	99.2	38.0	36.5	38	37	10-88.9		40				
Acenaphthene	ug/L	0.82U	99.2	99.2	66.5	56.5	67	57	58.1-93.	16	40	J(M1)			
Acenaphthylene	ug/L	0.91U	99.2	99.2	65.6	56.5	66	57	53.2-99.	15	40				
Acetophenone	ug/L	1.4U	99.2	99.2	60.9	48.1	61	49	44-100.1	23	40				
Aniline	ug/L	1.9U	99.2	99.2	39.5	45.0	40	45	34-95.1	13	40				
Anthracene	ug/L	0.58U	99.2	99.2	75.6	67.5	76	68	43.9-117	11	40				
Atrazine	ug/L	1.3U	99.2	99.2	76.2	73.4	77	74	64.5-120	4	40				
Benzaldehyde	ug/L	1.5U	99.2	99.2	72.0	57.6	73	58	10-114.5	22	40	N2			
Benzidine	ug/L	0.74U	99.2	99.2	8.2	3.3	8	3	10-94.1		40	J(M1)			
Benzo(a)anthracene	ug/L	0.60U	99.2	99.2	78.5	72.0	79	73	56.9-102	9	40				
Benzo(a)pyrene	ug/L	0.56U	99.2	99.2	77.5	68.8	78	69	66.5-106	12	40				
Benzo(b)fluoranthene	ug/L	0.59U	99.2	99.2	79.4	61.3	80	62	66.5-103	26	40	J(M1)			
Benzo(g,h,i)perylene	ug/L	0.65U	99.2	99.2	74.5	59.5	75	60	65.1-108	22	40	J(M1)			
Benzo(k)fluoranthene	ug/L	0.49U	99.2	99.2	69.4	61.3	70	62	64.2-105	12	40	J(M1)			
Biphenyl (Diphenyl)	ug/L	0.77U	99.2	99.2	68.9	56.8	69	57	48.8-99.	19	40	N2			
bis(2-Chloroethoxy)methane	ug/L	2.8U	99.2	99.2	62.9	50.5	63	51	45.8-100	22	40				
bis(2-Chloroethyl) ether	ug/L	0.72U	99.2	99.2	57.7	46.9	58	47	38.4-99	21	40				
bis(2-Chloroisopropyl) ether	ug/L	0.70U	99.2	99.2	55.1	44.6	56	45	36.8-95.	21	40				



**QUALITY CONTROL DATA**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Parameter	3563174001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec						
bis(2-Ethylhexyl)phthalate	ug/L	0.77U	99.2	99.2	70.7	76.9	71	77	59.1-109	8	40			
Butylbenzylphthalate	ug/L	0.69U	99.2	99.2	77.7	73.6	78	74	54.4-107	5	40			
Caprolactam	ug/L	1.2U	99.2	99.2	19.3	19.7	19	20	10-72	2	40	N2		
Carbazole	ug/L	0.45U	99.2	99.2	80.2	70.5	81	71	65.1-107	13	40	N2		
Chrysene	ug/L	0.35U	99.2	99.2	69.7	65.5	70	66	54.2-103	6	40			
Di-n-butylphthalate	ug/L	0.66 I	99.2	99.2	79.6	67.0	80	67	66.5-108	17	40			
Di-n-octylphthalate	ug/L	0.86U	99.2	99.2	77.8	71.9	78	72	48.4-114	8	40			
Dibenz(a,h)anthracene	ug/L	0.62U	99.2	99.2	77.2	58.9	78	59	60.1-112	27	40	J(M1)		
Dibenzofuran	ug/L	0.64U	99.2	99.2	68.7	59.4	69	60	55.1-97.	15	40			
Diethylphthalate	ug/L	0.49U	99.2	99.2	66.7	63.4	67	64	64.3-105	5	40	J(M1)		
Dimethylphthalate	ug/L	0.61U	99.2	99.2	74.2	64.9	75	65	62.5-103	13	40			
Dinoseb	ug/L	0.83U	99.2	99.2	73.3	67.8	74	68	41.6-118	8	40			
Fluoranthene	ug/L	0.52U	99.2	99.2	82.2	69.5	83	70	52.9-116	17	40			
Fluorene	ug/L	0.54U	99.2	99.2	66.8	59.5	67	60	60.3-97.	12	40	J(M1)		
Hexachloro-1,3-butadiene	ug/L	1.0U	99.2	99.2	56.7	42.6	57	43	34.3-96.	28	40			
Hexachlorobenzene	ug/L	0.77U	99.2	99.2	75.5	67.7	76	68	55.7-112	11	40			
Hexachlorocyclopentadiene	ug/L	1.2U	99.2	99.2	44.0	36.0	44	36	26.4-83.	20	40			
Hexachloroethane	ug/L	0.68U	99.2	99.2	50.8	41.3	51	42	35-87.6	21	40			
Indeno(1,2,3-cd)pyrene	ug/L	0.70U	99.2	99.2	71.1	55.8	72	56	66.1-107	24	40	J(M1)		
Isophorone	ug/L	0.70U	99.2	99.2	65.1	53.1	66	53	44.1-108	20	40			
N-Nitroso-di-n-propylamine	ug/L	0.90U	99.2	99.2	60.6	51.4	61	52	12.4-127	16	40			
N-Nitrosodimethylamine	ug/L	0.93U	99.2	99.2	39.1	35.8	39	36	11.3-84.	9	40			
N-Nitrosodiphenylamine	ug/L	0.48U	99.2	99.2	76.1	69.6	77	70	19.3-136	9	40			
Naphthalene	ug/L	0.75U	99.2	99.2	59.7	47.7	60	48	30-95.4	22	40			
Nitrobenzene	ug/L	1.0U	99.2	99.2	58.6	47.5	59	48	27.8-109	21	40			
Pentachlorophenol	ug/L	0.63U	99.2	99.2	80.6	73.5	81	74	10-159	9	40			
Phenanthrene	ug/L	0.50U	99.2	99.2	74.6	67.6	75	68	19.9-138	10	40			
Phenol	ug/L	0.52U	99.2	99.2	26.1	21.8	26	22	10-74.6	18	40			
Pyrene	ug/L	0.65U	99.2	99.2	72.1	72.5	73	73	18-134.1	.5	40			
Pyridine	ug/L	1.4U	99.2	99.2	6.1 I	10.2	6	10	10-75.6		40	J(M0)		
2,4,6-Tribromophenol (S)	%						70	66	10-110					
2-Fluorobiphenyl (S)	%						65	55	18-110					
2-Fluorophenol (S)	%						33	29	18-110					
Nitrobenzene-d5 (S)	%						60	47	10-110					
Phenol-d6 (S)	%						24	21	10-110					
Terphenyl-d14 (S)	%						79	86	10-123					



**QUALITY CONTROL DATA**

Project: City of Gainesville Army Prese  
Pace Project No.: 3563174

QC Batch: OEXT/9287 Analysis Method: FL-PRO  
QC Batch Method: EPA 3510 Analysis Description: FL-PRO Water  
Associated Lab Samples: 3563174001, 3563174002, 3563174003, 3563174004

METHOD BLANK: 433608 Matrix: Water  
Associated Lab Samples: 3563174001, 3563174002, 3563174003, 3563174004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Petroleum Range Organics	mg/L	0.059U	0.10	07/26/12 18:49	
N-Pentatriacontane (S)	%	100	42-159	07/26/12 18:49	
o-Terphenyl (S)	%	108	82-142	07/26/12 18:49	

LABORATORY CONTROL SAMPLE: 433609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Petroleum Range Organics	mg/L	5	5.2	105	55-118	
N-Pentatriacontane (S)	%			110	42-159	
o-Terphenyl (S)	%			115	82-142	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 433614 433615

Parameter	Units	3563174001		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec						
Petroleum Range Organics	mg/L	0.058U	9.8	9.8	9.2	9.8	93	100	55-118	7	20			
N-Pentatriacontane (S)	%						91	100	42-159					
o-Terphenyl (S)	%						101	108	82-142					

## QUALIFIERS

Project: City of Gainesville Army Prese  
Pace Project No.: 3563174

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

### ANALYTE QUALIFIERS

- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J(D6) Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
- J(L0) Estimated Value. Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
- J(L2) Estimated Value. Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- J(M0) Estimated Value. Matrix spike recovery was outside laboratory control limits.
- J(M1) Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- N2 The lab does not hold TNI accreditation for this parameter.



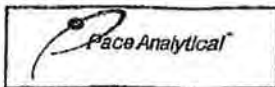
**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: City of Gainesville Army Prese  
 Pace Project No.: 3563174

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3563174001	OSW-3	EPA 3510	OEXT/9287	FL-PRO	GCSV/6489
3563174002	OSW-1	EPA 3510	OEXT/9287	FL-PRO	GCSV/6489
3563174003	HO-1	EPA 3510	OEXT/9287	FL-PRO	GCSV/6489
3563174004	HO-4	EPA 3510	OEXT/9287	FL-PRO	GCSV/6489
3563174001	OSW-3	EPA 3010	MPRP/9583	EPA 6010	ICP/6284
3563174002	OSW-1	EPA 3010	MPRP/9583	EPA 6010	ICP/6284
3563174003	HO-1	EPA 3510	OEXT/9288	EPA 8270 by SCAN	MSSV/3584
3563174004	HO-4	EPA 3510	OEXT/9288	EPA 8270 by SCAN	MSSV/3584
3563174001	OSW-3	EPA 3510	OEXT/9284	EPA 8270	MSSV/3587
3563174002	OSW-1	EPA 3510	OEXT/9284	EPA 8270	MSSV/3587
3563174001	OSW-3	EPA 8260	MSV/6082		
3563174002	OSW-1	EPA 8260	MSV/6082		
3563174003	HO-1	EPA 8260	MSV/6082		
3563174004	HO-4	EPA 8260	MSV/6082		







Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
F-FL-C-007 rev. 04

Document Revised:  
September 23, 2011  
Issuing Authorities:  
Pace Florida Quality Office

#140274D

**Sample Condition Upon Receipt Form (SCUR)**

Table Number: \_\_\_\_\_

Client Name: WAT AIR Project # 3563174

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace

Other \_\_\_\_\_

Tracking # 8009 5362 8558

Custody Seal on Cooler/Box Present:  yes  no Seals Intact:  yes  no

Date and Initials of person examining contents: 7-21-2011

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used T113 Type of Ice:  Wet  Blue  None

Cooler Temperature °C 2.0 (Visual) 0 (Correction Factor) 2.0 (Actual)

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen?

Yes  No

Receipt of samples satisfactory:  Yes  No

Rush TAT requested on COC: \_\_\_\_\_

If yes, then all conditions below were met:

If no, then mark box & describe issue (use comments area if necessary):

Chain of Custody Present	<input type="checkbox"/>
Chain of Custody Filled Out	<input type="checkbox"/>
Relinquished Signature & Sampler Name COC	<input type="checkbox"/>
Samples Arrived within Hold Time	<input type="checkbox"/>
Sufficient Volume	<input type="checkbox"/>
Correct Containers Used	<input type="checkbox"/>
Containers Intact	<input type="checkbox"/>
Sample Labels match COC (sample IDs & date/time of collection)	<input type="checkbox"/>
	No Labels: <input type="checkbox"/> No Time/Date on Labels: <input type="checkbox"/>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/>
No Headspace in VOA Vials (>6mm):	<input type="checkbox"/>

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution (use back for additional comments): \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

**Finished Product Information Only**

F.P. Sample ID: \_\_\_\_\_

**Size & Qty of Bottles Received**

Production Code: \_\_\_\_\_

- \_\_\_\_\_ x 5 Gal
- \_\_\_\_\_ x 2.5 Gal
- \_\_\_\_\_ x 1 Gal
- \_\_\_\_\_ x 1 Liter
- \_\_\_\_\_ x 500 mL
- \_\_\_\_\_ x 250 mL
- \_\_\_\_\_ x Other: \_\_\_\_\_

Date/Time Opened: \_\_\_\_\_

Number of Unopened Bottles Remaining: \_\_\_\_\_

Extra Sample In Shed: Yes No



**water & air**  
**RESEARCH, INC.**

*Environmental Engineers,  
Scientists, & Planners*

September 26, 2012

Sam Bridges  
Land Rights Coordinator  
City of Gainesville  
PO Box 490  
Gainesville, FL 32602

Re: Soil and Groundwater Testing Report for Layton Army Reserve Center  
1125 NE 8<sup>th</sup> Avenue  
Gainesville, Florida  
Project No. 12-5373-04

Dear Mr. Bridges:

Water & Air Research, Inc. (Water & Air) is pleased to present this Limited Environmental Site Assessment Phase II Report summarizing results and findings of recent soil and groundwater testing completed at the Layton Army Reserve Center (LARC) site. The reported property uses included storage of fuels and maintaining an oil/water separator.

## **1 SITE BACKGROUND**

Based on documentation provided by The City of Gainesville (The City) and forwarded by the Army Reserve, the site was developed in the early 1950s as an Army Reserve base. Site operations included training of personnel, storage of equipment, vehicles, chemicals, and fuels. The facility maintained several underground storage tanks (USTs) and aboveground storage tanks (ASTs), operated an oil/water separator, and reportedly had some minor leaks and spills during operations. The documentation showed closure activities, including testing, were completed to show if any impacts such as a spill or leak had occurred for all potential impact areas, except for two areas.

An UST was discovered during the decommissioning of the oil/water separator. The tank was removed, and soil samples were screened for petroleum vapors. The screening showed that no contaminants had leaked from the tank; however, no groundwater sample had been collected, and no samples were taken down gradient from the former UST and oil water separator system.

A former heating oil AST was in use for the property on the south side of the structure. The tank had been removed, but no soil or shallow groundwater testing was found.

The following work scope was completed in the two areas identified with potential recognized environmental concerns (RECs).

6821 SW Archer Road  
Gainesville, FL 32608  
Voice: 352/372-1500  
Toll Free: 1/800/242-4927  
Fax: 352/378-1500  
businessdev@waterandair.com  
www.waterandair.com

## 2 PHASE II ENVIRONMENTAL SITE ASSESSMENT ACTIVITIES

Soil and groundwater testing was completed at the LARC site to determine if impacts from the former oil/water separator system and the former fuel oil tank used at the property had occurred.

The site assessment work scope included:

- Completing nine soil borings into the water table or refusal,
- collecting soil samples for field testing using an organic vapor meter (OVM),
- analyzing select soil samples for laboratory testing, and
- collecting groundwater samples for analytical laboratory testing.

### 2.1 Soil Sampling, Field Testing, and Analytical Methods

On July 20, 2012, Water & Air completed nine soil borings at depths ranging between six and 13 feet below land surface (bls). Soil samples were collected in accordance with Florida Department of Environmental Protection (FDEP) Standard Operating Procedures (SOPs). Soil borings OSW-1 through OSW-4 were completed around the former oil/water separator system. Soil borings HO-1 through HO-5 were completed around the former aboveground heating oil tank pad.

Soil borings were advanced using a hand auger. Soil samples were collected at two-foot vertical intervals for field screening with an OVM equipped photo ionization detector (PID). The PID was calibrated in the field according to manufacturer specifications. Soil samples for OVM field screening were collected above the water table. The water table was encountered at approximately 8.5 to 10 feet bls.

Soil samples for laboratory analysis were collected from the sample interval with the highest recorded reading on the OVM or in the location most likely to have contamination.

None of the soil samples collected registered readings above background levels on the OVM. The soil sample from the area of the oil/water separator (OSW-3-8) was collected above the water table from the boring located in the center of the former UST.

The former heating oil AST location was identified on a map forwarded by The City. The soil sample from the heating oil AST was taken above the water table from the boring located in the expected down gradient south end of the former tank pad.

Soil boring locations OSW-1 through OSW-4 and HO-1 through HO-5 are shown on Figure 1.

Soil sample OSW-3-8 (boring 3 at eight feet bls) was analyzed by EPA Method 8260 (full list) for volatile organic aromatics (VOAs), EPA Method 8270 for semi-volatile organic carbons, FL-PRO for TRPH (total recoverable petroleum hydrocarbons), and EPA Method 6010 for arsenic, cadmium, chromium, and lead.

Soil sample HO-1-8 (boring 1 at eight feet bls) was analyzed for EPA Method 8260 for VOAs, EPA Method 8270 for semi volatile organic carbons, and FL-PRO for TRPH. The field notes, instrument calibration log, and boring logs are provided in Appendix A.

Soil borings OSW-1, OSW-3, HO-1, and HO-4 were further advanced into the water table to depths between 13 and 13.5 feet bls. Temporary monitoring wells were constructed using ten feet of two-inch diameter PVC screens (0.01-inch slot size) attached to 2-inch diameter PVC riser pipe extending to the surface. A 20/30 filter sand pack was placed in the annular space between the borehole and the well screen. The wells were developed using a peristaltic pump until clear.



## 2.2 Groundwater Sampling and Analytical Methods

On July 23, 2012, groundwater samples were collected from the four temporary monitoring wells. The oil water separator UST wells (OSW-1 and OSW-3) groundwater samples were analyzed by EPA Method 8260, EPA Method 8270, FL-PRO, and EPA Method 6010. The heating oil AST wells (HO-1 and HO-4) groundwater samples were analyzed by EPA Methods, 8270 and FL-PRO. The field notes, instrument calibration log, and groundwater sampling logs are provided in Appendix A.

## 3.0 SITE ASSESSMENT RESULTS AND FINDINGS

The following section summarizes the results and findings of the additional site assessment technical activities.

### 3.1 Soil Testing Results and Findings

Soil testing OVM results did not record any reading above background levels.

Soil analytical results from borings installed at the former oil water separator UST OSW-3-8, and heating oil AST HO-1-8 did not identify any parameters above the laboratory practical quantitation limits or the soil cleanup target levels (SCTLs) list in Florida Administrative Code (FAC) 62-777.

The soil analytical laboratory report and chain-of-custody form are provided in Appendix B.

### 3.2 Groundwater Results and Findings

Groundwater analytical results from oil water separator UST OSW-1, OSW-3, and the heating oil AST HO-1 and HO-4 were reported below the laboratory practical quantitation limits and the groundwater cleanup target levels (GCTLs) set forth in FAC 62-777 for the parameters analyzed.

The groundwater analytical laboratory report and chain-of-custody form are provided in Appendix C.

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the testing results of soil and groundwater in the REC areas of the former oil/water separator and the former fuel oil AST, no adverse impacts from these two areas were identified.

If you have any questions or need additional information, please contact myself or Simon Cordery.

Sincerely,  
Water & Air Research, Inc.

Simon Cordery  
Scientist II

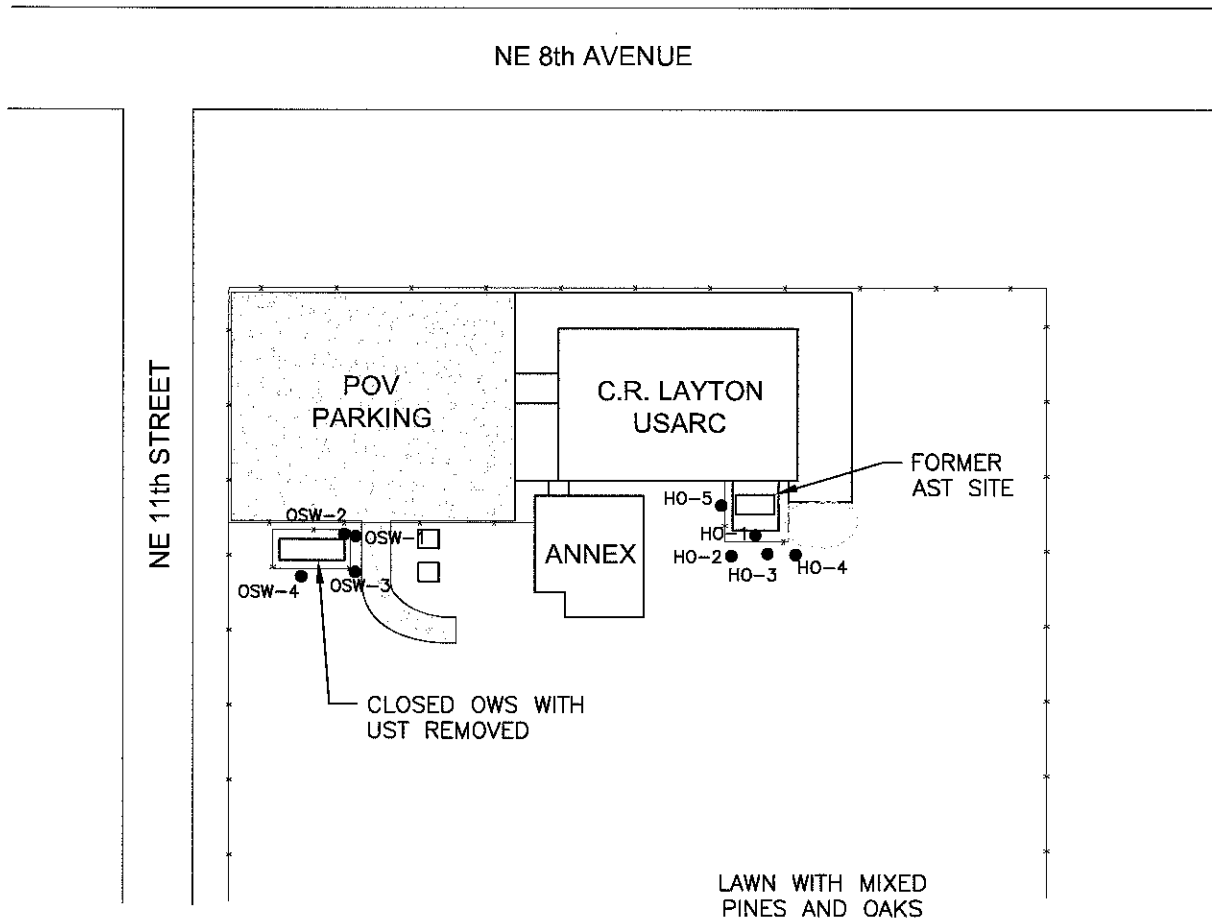
Attachments:

#### Figures:

1 Site Layout Showing Soil Boring Locations

#### Appendices:

A Field Notes, Instrument Calibration Logs, Boring Logs, and Groundwater Sampling Logs  
B Soil Laboratory Analytical Report and Chain-of-Custody  
C Groundwater Analytical Laboratory Report and Chain-of-Custody



**LEGEND**

HO-4 ● SAMPLING LOCATION

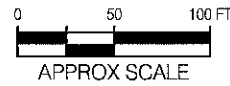


FIGURE 1.  
 SITE LAYOUT SHOWING SAMPLING LOCATIONS  
 C.R. LAYTON USARC  
 GAINESVILLE, FLORIDA

Source: Water & Air Research, Inc., 2012.





## water & air RESEARCH, INC.

### **The City of Gainesville/ Army Reserve Center Evaluation**

#### **Sampling & Analysis**

This sampling was based on a request from Sam Bridges of The City of Gainesville Public Works (The City). The request was based on the possible reverting back to The City of the Army Reserve Center at 1125 NE 8<sup>th</sup> Avenue in Gainesville, Florida. Water & Air Research (Water & Air) conducted limited Phase II sampling of the property on behalf of The City including air testing, before formally taking ownership of the property and any on-site conditions. The request for air sampling is based on former conditions documented during the operational history of the facility since the early 1950s. Mold sampling was conducted and the presence confirmed in the 1990s. Cooled air from the office was mixing with the warm, moist air of the central bay of the facility causing condensation and eventually mold. The mold was addressed and air conditioning units for the central area were installed.

None of the air conditioning or fan units were in operation at the time of the Water & Air sampling and had been off for approximately one week. The doors segregating the offices from the central area were open upon arrival for sampling. The weather was in the low 90s, humid with occasional light rain. Humidity in the sample areas varied from between 76% and 93%

On July 19, 2012, Water & Air took eight (8) air samples from the first, second, and sub-first floor areas. A ninth sample was taken as a background sample and was collected outside approximately 75 feet from structure and away from any vegetation. Air samples were collected from random varied areas and in specific areas when conditions indicated the potential for mold spore proliferation. Air samples were taken using an Air-O-Cell Sampler to collect airborne particulates for analysis by Optical Microscopy. The samples were collected by using a vacuum to draw air through the Air-O-Cell. The vacuum is operated at a specific rate so the volume of air can be determined. This test ran for 10 minute per sample at a flow rate of 15 liters per minute. The samples were sent to EMSL Analytical laboratories in Orlando Florida for analysis. The particles were analyzed by spore type and count to determine if a mold problem exists based on calculated averages for buildings in Florida and an outdoor background sample. This type of test does not determine species.

There were no obvious signs of mold other than on some vent registers on the second floor and on duct work where insulation had fallen off. Some rust was observed on the door casing of Room 209 on the second floor which was assumed to be from moisture from the air conditioning system air encountering warmer air outside the door.

**Results****Air Samples**

Below are the types or counts from each sample that differed from the background sample.

<u>Location</u>	<u>Air Samples</u> <u>Species</u>	<u>CFUs/M<sup>3</sup></u>
<b>Layton Army Reserve Center:</b>		
<b>AR 104A:</b>	none	
<b>AR 209:</b>	<i>Alternaria*</i>	21
<b>AR 104:</b>	<i>Aspergillus/Penicillium**</i>	686
<b>AR 212:</b>	<i>Aspergillus/Penicillium**</i>	125
	<i>Cladosporium</i>	21
	<i>Torula</i>	7
<b>AR range:</b>	<i>Basidiospore**</i>	478
	<i>Chaetomium*</i>	21
	<i>Cladosporium*</i>	146
	<i>Pithomyces*</i>	21
<b>AR 100:</b>	<i>Aspergillus/Penicillium**</i>	62
	<i>Basidiospores**</i>	104
<b>AR 217:</b>	<i>Alternaria*</i>	21
	<i>Stachybotrys*</i>	21

**AR 117:**

<i>Alternaria*</i>	7
<i>Aspergillus/Penicillium**</i>	21
<i>Basidiospores**</i>	145
<i>Cladosporium*</i>	42
<i>Epicoccum*</i>	21
<i>Pithomyces*</i>	21

\* indicates this spore type was not seen in the background sample. Count indicated.

\*\* indicates the count of this type of spore exceeded the background and by how much.

Most all of the fungi present in this study can serve as allergens if they build up in high populations. The threshold level of allergy patients is variable, and exceptionally high numbers of spores may induce allergic responses even in healthy individuals. A large number of fungi, however, may become opportunistic pathogens if a person's immune system is compromised or if there are persistent inflamed areas on which these fungi may encroach as a secondary invader.

The above count does not include pollen which was identified in low amounts in some indoor samples. Pollen is not unusual at this time of year however, it was unusual not to see any in the outdoor background sample.

**Conclusions**

The array of spore types identified and quantified in most of the rooms are similar to those identified in the outdoor air sample. This information indicates the air in the interior of the building is impacted by outdoor air intrusion. Also, there are spore types not seen in the background sample or in higher numbers than the background sample indicating possible mold colonies with their attendant moisture sources.

There are no government issued numerical standards for mold interpretation. However, some environmental companies, industrial hygienists, and other indoor air quality professionals use the following arbitrary numbers for guidance in interpreting spore survey results:

- < 250 spores per cubic meter Low/Normal
- 250 to 1000 spores per cubic meter Moderate/Borderline
- > 1000 spores per cubic meter Active sporulation
- > 5000 spores per cubic meter Very active sporulation

Applying this guidance, there may be active sporulation in Rooms 104 and the old gun range.

As we compare the above data with those recorded from the interior areas at the facility taken on July 19, 2012, spore counts and types at this site are slightly higher than the expected range for a public building even considering the mixing of the air with the outside.

A building is not a sterile environment, nor should it be. In fact, a building is frequently a reservoir for microorganisms. While many different types of microorganisms occupy indoor spaces, it is well-recognized that fungi can colonize and grow on a variety of building materials if sufficient nutrients and moisture are present. These contaminated materials are known to be important indoor reservoirs.

The following table provides information on common environmental fungi that have been isolated from wetted wallboard:

<b>Organism</b>	<b>Materials That Support Growth</b>
<i>Acremonium spp.</i>	Colonizes damp wallboard
<i>Alternaria spp.</i>	Grows indoors on a variety of substrates
<i>Aspergillus spp.</i>	Colonizes damp wallboard
<i>Chaetomium spp.</i>	Commonly found on damp wallboard paper
<i>Cladosporium spp.</i>	Colonizes continuously damp wallboard
<i>Epicoccum spp.</i>	Colonizes continuously damp wallboard
<i>Fusarium spp.</i>	Colonizes continuously damp wallboard
<i>Penicillium spp.</i>	Commonly found on damp wallpaper
<i>Stachybotrys spp.</i>	Colonizes continuously damp wallboard
<i>Trichoderma spp.</i>	Grows well on damp wallboard paper

At the City Army Reserve building, *Alternaria*, *Aspergillus/Penicillium*, *Chaetomium*, *Cladosporium*, *Epicoccum*, and *Stachybotrys* were found. However, only *Aspergillus/Penicillium* and *Cladosporium* were more than 100 spores per cubic meter of air. The count of *Aspergillus/Penicillium* is combined because there are no distinguishing features that would allow a separate count of each genus. Many *Penicillium* species are not associated with water damage.

Using the outside air quality as a guide, we find a high level of Ascospores (primarily plant pathogens that rarely grow inside). *Aspergillus/Penicillium* inside the building is generally higher than expected from only dilution of outside air. This is commonly caused by colonies of *Penicillium* associated with food waste, but cannot be verified in this case without performing other tests.

*Cladosporium* levels over 100 spores per cubic meter of air are found only in three rooms. Its ability to get airborne makes it an important fungal allergen.

The presence of *Stachybotrys* in two of the rooms is important because it is difficult to make its spores airborne and studies to date suggest it produces mycotoxins under certain environmental conditions. Caution should be taken when dealing with this fungus because exposure to the toxins can occur through inhalation, ingestion, or skin exposure.

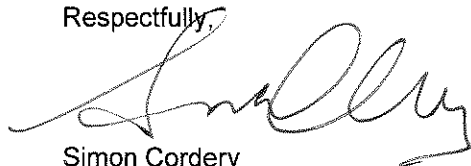
## Remediation

Based on the results of this sampling and observations made during the site visit, Water & Air recommends turning the air conditioning system back on to lower both the moisture in the air and the temperature. Also, clean any obvious areas of mold, such as the vents, and replace any insulation that had fallen off of the duct system. An inspection of the facility for water damage or water intrusion to prevent fungal growth is recommended.

Water & Air has used DUCTZ Indoor Air Professionals for local cleaning of duct work and mold-impacted surfaces.

Based on the analytical results, addressing the above conditions should occur before any regular inhabiting of the structure.

Respectfully,

A handwritten signature in black ink, appearing to read "S. Cordery". The signature is fluid and cursive, with a prominent initial "S" and a long, sweeping underline.

Simon Cordery

Environmental Scientist II

Water & Air Research, Inc.

September 25, 2012