

N60200.AR.004417
NAS CECIL FIELD, FL
5090.3a

SUPPLEMENTAL SITE ASSESSMENT LETTER REPORT FOR BUILDING 199 TANK 199
NAS CECIL FIELD FL
2/28/2006
ESA ENVIRONMENTAL SPECIALISTS INC

28 February 2006

Contract: N62467-03-G-0116

Ms. Debra Evans-Ripley
Contracting Officer
Naval Facilities Engineering Command
Southern Division
2155 Eagle Drive
North Charleston, SC 29406

Subject: Supplemental Site Assessment Letter Report
Building 199, Tank 199
Naval Air Station Cecil Field
Jacksonville, Florida

Dear Ms. Debra Evans-Ripley:

ESA Environmental Specialists (ESA) is please to submit this Supplemental Assessment Letter Report for the referenced Contract for the subject site. This report has been prepared for the United States Navy Southern Division, Naval Facilities Southern Division, Naval Facilities Engineering Command (NAVFAC EFD SOUTH) Contract Number N62467-03-G-0116. This report provides the result of the supplemental assessment activities and offers a limited review of proper site investigation results to aid in evaluating current site conditions and recommending future actions at the site. Figure 1 shows the general location of this site.

SUPPLEMENTAL ASSESSMENT OBJECTIVES

The objective of the supplemental assessment at Building 199 is to evaluate the site's current groundwater conditions. The assessment data will be used to recommend appropriate future actions at the site.

HISTORICAL DATA FOR MONITORING WELL INSTALLATION

In February 2005, well borings were advanced using direct-push technology to a total depth of 13 feet (ft) below grade. The two wells were each constructed with 10 ft of 0.010-inch machine-slot well screen and completed with flush mounted concrete pads. Monitoring well CEF-199-07SR was a replacement for CEF-199-07S, which was destroyed, and CEF-199-11S was installed as a new down-gradient well due to the shifting groundwater flow patterns. The top-of-casing (TOC) elevations of these two new wells were surveyed in March 2005.

GROUNDWATER SAMPLING AND ANALYSIS

On January 13, 2006, ESA personnel mobilized to Building 199 to conduct the groundwater sampling event. The sampling activities were completed on January 13, 2006, in accordance with Florida Department of Environmental Protection (FDEP) Standard Operating Procedures for Field Activities (DEP-SOP-001/01) dated January 2002. A copy of the field data record for the water level measurements is included in Attachment A.

Water level measurements were recorded from the monitoring wells on the site on January 13, 2006. The depth-to-water measurements coupled with the TOC elevation data were used to calculate groundwater elevations (see Table 1). Depth to groundwater ranged from 2.49 to 3.45 ft below top of casing (BTOC) for the shallow wells.

The sampling team collected groundwater samples from three monitoring wells (CEF-199-01S, CEF-199-11S and CEF-199-04S) and one replacement well (CEF-199-07SR). The samples were packed on ice and transported to Advanced Environmental Laboratories, Inc in Jacksonville, Florida. The samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl-tert-butyl ether (MTBE) using United States Environmental Protection Agency (US EPA) Method 8021B. The laboratory analytical results from this supplemental assessment are summarized in Table 2. Groundwater sampling logs are provided in Attachment A. Copies of the laboratory analytical report and chain-of-custody documentation are provided in Attachment B.

GROUNDWATER ANALYTICAL RESULTS

The analytical results for the groundwater samples collected at Building 199 from this supplemental assessment have been compared to appropriate groundwater cleanup target levels (GCTLs). No volatile organic compounds (VOCs) were detected in the source well CEF-199-01S as they had been during last year's supplemental report dated May 14, 2005 and conducted on February 21, 2005. All reported compounds remained below their respective GCTLs and were recorded at undetected concentrations. All VOC compounds benzene, ethylbenzene, methyl-tert-butyl ether, xylenes, and toluene were undetected at concentrations 0.21 U µg/L [GCTL 1.0 µg/L], 0.17 U µg/L [GCTL 30µg/L], 0.35 U µg/L [GCTL 20µg/L], 0.63 U µg/L [GCTL 20µg/L], and 0.23 U µg/L [GCTL 1µg/L], respectively.

SUPPLEMENTAL ASSESSMENT SUMMARY

The water level data collected as part of the supplemental assessment indicates that groundwater flow is generally to the North. This conclusion generally agrees with the flow data direction given in the Supplemental Assessment Report (SAR) and subsequent monitoring reports.

The concentrations of BTEX detected in source well CEF-199-01S has been decreasing over the past two annual sampling events with each of the concentrations below their respective GCTL's. This SAR continues to report levels of BTEX and MTBE at below detectable limits. The concentrations of BTEX and MTBE in perimeter wells CEF-199-

04S and CEF-199-07SR were similar to the concentrations reported during the previous sampling events and reported at below detection limits.

RECOMMENDATIONS

Based on the results of the Supplemental Assessment and a review of the historical site, ESA recommends that the annual monitoring program be continued for one more year at Building Site 199 to ensure that CEF-199-01S has remained below detectable limits in and followed in accordance with the Natural Attenuation Monitoring Plan Approval Order issued by the FDEP dated October 5, 2004.

If you have any questions regarding the information presented in this document, please contact me by phone at (704) 598-4407, or via e-mail at talmekinder@esaenvironmental.com.

Sincerely,

Tara L. Almekinder, REM
Environmental Project Manager

LEGEND



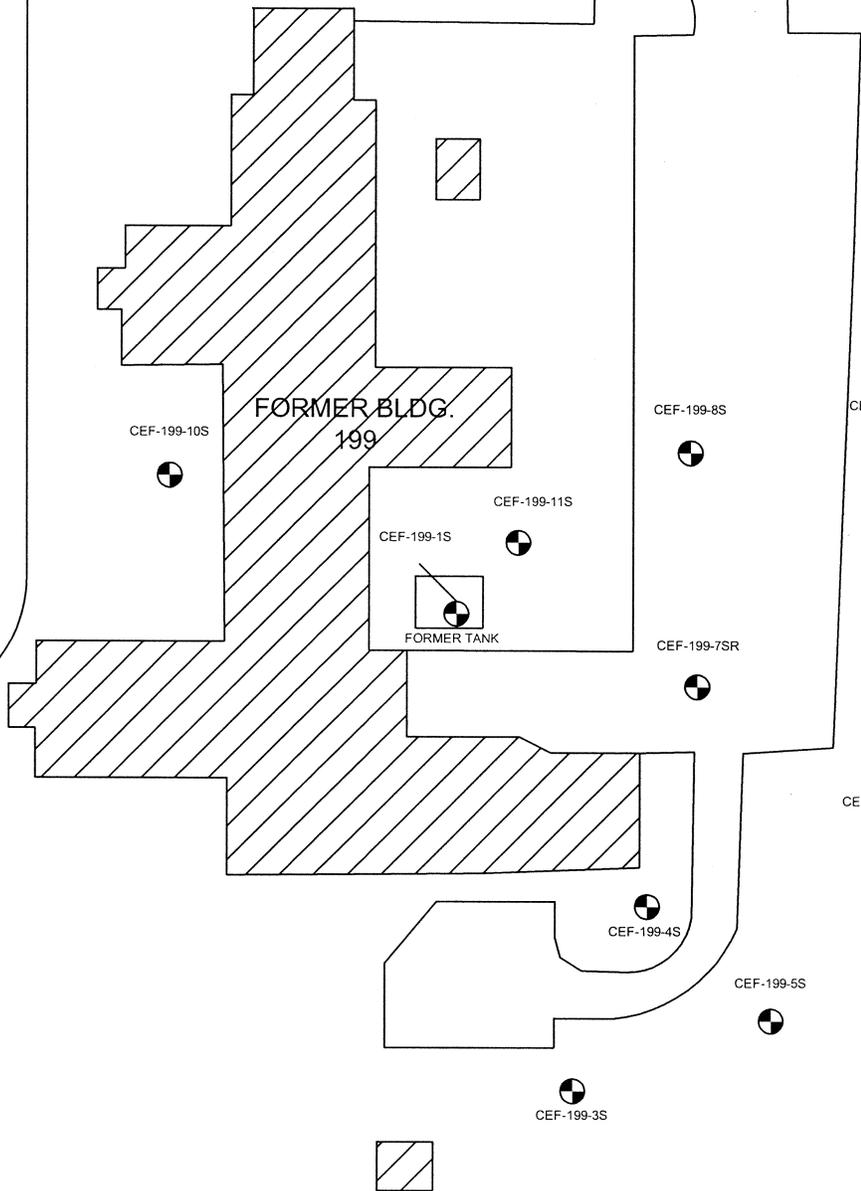
MONITORING WELL

LAKE NEWMAN STREET (FORMERLY 6TH STREET)



AUTHORITY AVENUE (FORMERLY "C" AVENUE)

POOL SIDE AVENUE (FORMERLY "B" AVENUE)



SITE PLAN

FORMER TANK 199
 LAKE NEWMAN STREET
 FORMER NAS CECIL FIELD
 JACKSONVILLE, FLORIDA



LEGEND

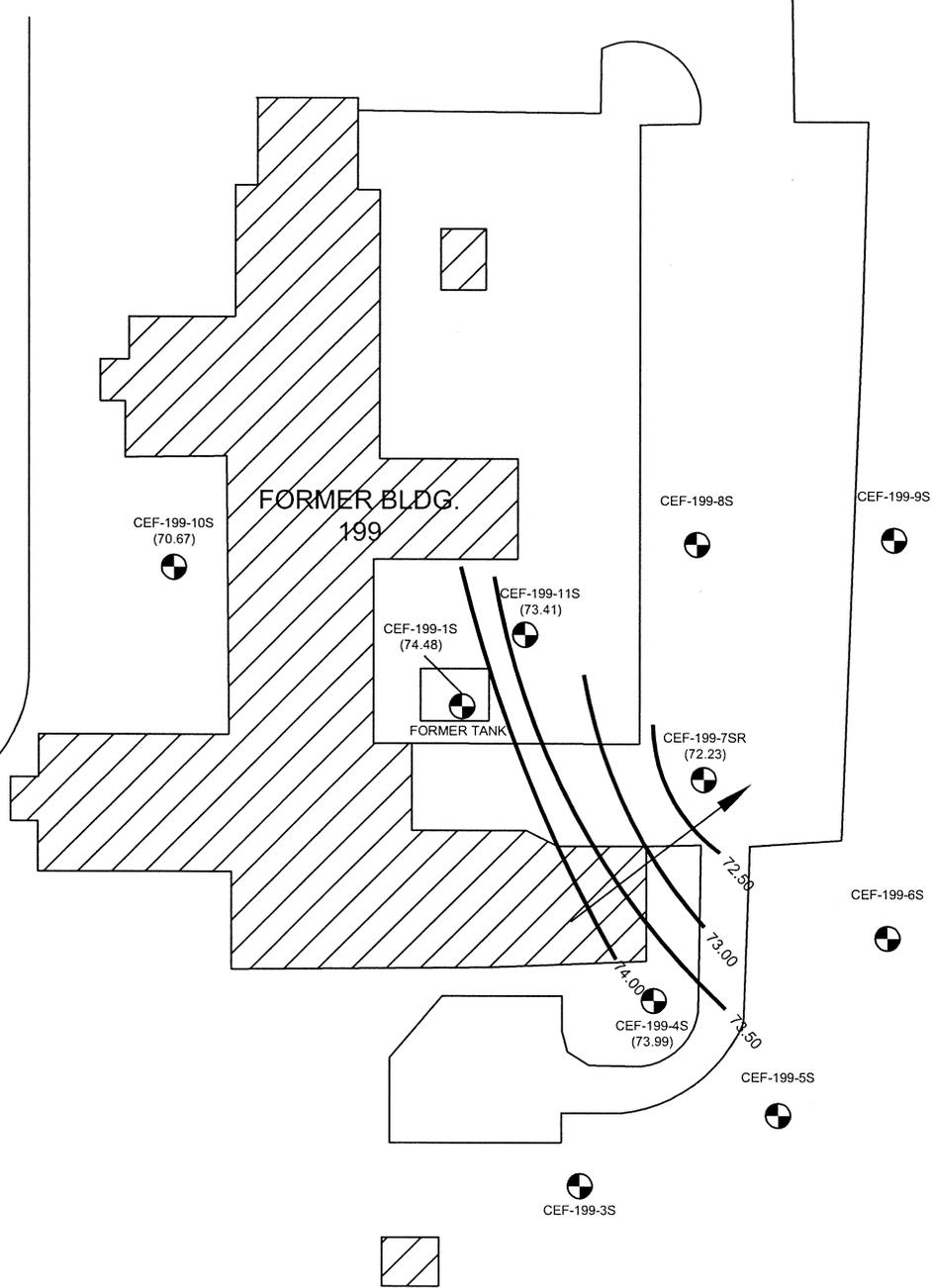
-  MONITORING WELL
- (71.05) WATER TABLE ELEVATION (IN FEET)
-  GROUNDWATER FLOW DIRECTION

LAKE NEWMAN STREET (FORMERLY 6TH STREET)



AUTHORITY AVENUE (FORMERLY "C" AVENUE)

POOL SIDE AVENUE (FORMERLY "B" CIRCLE)



FORMER BLDG.
199

FORMER TANK

WATER TABLE ELEVATION
CONTOUR MAP

FORMER TANK 199
LAKE NEWMAN STREET
FORMER NAS CECIL FIELD
JACKSONVILLE, FLORIDA



**Table 1, Water Level Measurements
Area 199 2006 Annual Sampling Event**

Monitoring Well	Date	TOC Elevation (feet)	Depth to Water (feet bTOC)	Water Level Elevation (feet NGVD)
CEF-199-1S	1/13/2006	76.78*	3.45	76.33
CEF-199-11S	1/13/2006	76.47	3.00	73.47
CEF-199-4S	1/13/2006	75.83*	3.17	72.66
CEF-199-7SR	1/13/2006	75.40	2.49	72.91

Top of Casing Elevations and data prior to 4/27/00 obtained from BEI

TOC – top of casing

bTOC – Below top of casing

Elevation is referenced to National Geodetic Vertical Datum 1929 (NGVD 1929)

* TOC Elevations resurveyed 6/14/01

Depth to water measured from top of casing

**Table 2 Groundwater Analytical Results
Area 199 2006 Annual Sampling Event**

Parameter	Station ID		CEF-199-1S	CEF-199-11S	CEF-100-4S	CEF-199-7SR	Equipment Blank
	Sample ID		J060306-01	J060306-02	J060306-03	J060306-04	J060306-05
	Sample Date		1/13/06	1/13/06	1/13/06	1/13/06	1/13/06
	GCTL ¹	NADC ¹					
micrograms per liter (µg/L)							
Volatile Aromatic Hydrocarbons							
Benzene	1	10	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Ethylbenzene	30	300	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Methyl-tert-butyl Ether	20	200	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Xylenes (total)	20	200	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Toluene	1	10	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U

Notes:

GCTL - Groundwater Cleanup Target Level, 1 = Chapter 62-777 FAC GCTLs reported in µg/L, Bold indicates concentration exceeds GCTL

NADC - Natural Attenuation Default Concentration, Shade indicates concentration exceeds NADC

U - the compound was analyzed for but not detected

ATTACHMENT A

DEP-SOP-001/01
 FS 2200 Groundwater Sampling
 Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: Area 199	SITE LOCATION:
WELL NO: CEF-199-4S	SAMPLE ID: CEF-199-4S
DATE: 1-13-06	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.17	WELL SCREEN INTERVAL DEPTH: 11.52 feet to 11.52 feet	STATIC DEPTH TO WATER (feet): 3.17	PURGE PUMP TYPE OR BAILER: Peristaltic
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable = (11.52 feet - 3.17 feet) X .16 gallons/foot = 1.33 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): 5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 5	PURGING INITIATED AT: 0955	PURGING ENDED AT: 1029	TOTAL VOLUME PURGED (gallons): 2.2							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1019	1.81	1.81	.07	4.00	6.39	19.7	366.9	2.08	56.2	brnsh	ND
1022	.13	1.94	.04	4.00	6.39	19.8	366.7	2.05	53.4	"	ND
1025	.13	2.07	.04	4.00	6.39	19.8	362.5	1.97	54.4	"	ND
1028	.13	2.2	.04	4.00	6.39	19.9	357.8	1.91	53.5	"	ND

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Robert Burri	SAMPLER(S) SIGNATURES: 	SAMPLING INITIATED AT: 1029	SAMPLING ENDED AT: 1030
PUMP OR TUBING DEPTH IN WELL (feet): 5	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE: PE	
FIELD DECONTAMINATION: Y <input checked="" type="radio"/> N	FIELD-FILTERED: Y <input checked="" type="radio"/> N	FILTER SIZE: _____ µm	DUPLICATE: Y <input type="radio"/> N <input checked="" type="radio"/>

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
	3	CG	40ml	HCl			BTEX+MTBE	RFPP

REMARKS: **OPP 114ml**

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

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; 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)

ATTACHMENT B



Client: URS
Project Name: Cecil Field Area 199
Project Number:

Report No.: J060306
Date Sampled: 1/13/06
Date Received: 1/13/06 13:08
Date Reported: 1/17/06

Attention: Bill Kelly
Phone Number: 9046456233
Address: 8761 Perimeter Park Blvd.
Suite 201
Jacksonville, FL 32216

Project Description

The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody.

Project Name: Cecil Field Area 199

Approved By: _____

Paul Gunsaulies, Project Manager

If there are any questions involving this report, the above named should be contacted.

**THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT
THE WRITTEN APPROVAL OF THE LABORATORY.**

Advanced Environmental Laboratories certifies that the test results in this report meet all requirements of the NELAC standards, unless notated otherwise in the body of the report.

Total Number of Pages = 6 + 2 COC

Advanced Environmental Laboratories, Inc.

Analytical Report

Client: URS

Report No.: J060306

Project Name: Cecil Field Area 199

Date/Time Received: 1/13/06 13:08

Lab Code: J060306-01

Date/Time Sampled: 1/13/06 11:44

Client Sample ID: 1

Shipping Method: Client drop off

Site: CEF-199-1S

Sampled By: Robert Burns

Matrix: Water

Sampling Method: G

Volatile Aromatic Hydrocarbons

Analytes:	Dilution	Adjusted MDL	Adjusted PQL	Results	Units	Qualifier(s)	Method	Parameter Comment	Lab
Benzene	1	0.21	0.84	0.21	ug/L	U	SW8021B		J
Ethylbenzene	1	0.17	0.68	0.17	ug/L	U	SW8021B		J
m&p-Xylenes	1	0.40	1.6	0.40	ug/L	U	SW8021B		J
Methyl-tert-butyl Ether	1	0.35	1.4	0.35	ug/L	U	SW8021B		J
o-Xylene	1	0.23	0.92	0.23	ug/L	U	SW8021B		J
Toluene	1	0.23	0.92	0.23	ug/L	U	SW8021B		J

Surrogates:	Control Limits	% Recovery	Qual.	Method	Prep Method
1-Bromo-4-chlorobenzene	75 - 119	92		SW8021B	SW5030B

U The compound was analyzed for but not detected.
 J DOH certification #E82574 (AEL-JAX) (FL NELAC certification)

Lab Code: J060306-02

Date/Time Sampled: 1/13/06 12:11

Client Sample ID: 2

Shipping Method: Client drop off

Site: CEF-199-11S

Sampled By: Robert Burns

Matrix: Water

Sampling Method: G

Volatile Aromatic Hydrocarbons

Analytes:	Dilution	Adjusted MDL	Adjusted PQL	Results	Units	Qualifier(s)	Method	Parameter Comment	Lab
Benzene	1	0.21	0.84	0.21	ug/L	U	SW8021B		J
Ethylbenzene	1	0.17	0.68	0.17	ug/L	U	SW8021B		J
m&p-Xylenes	1	0.40	1.6	0.40	ug/L	U	SW8021B		J
Methyl-tert-butyl Ether	1	0.35	1.4	0.35	ug/L	U	SW8021B		J
o-Xylene	1	0.23	0.92	0.23	ug/L	U	SW8021B		J
Toluene	1	0.23	0.92	0.23	ug/L	U	SW8021B		J

Surrogates:	Control Limits	% Recovery	Qual.	Method	Prep Method
1-Bromo-4-chlorobenzene	75 - 119	100		SW8021B	SW5030B

U The compound was analyzed for but not detected.
 J DOH certification #E82574 (AEL-JAX) (FL NELAC certification)

Advanced Environmental Laboratories, Inc.

Analytical Report

Client: URS

Report No.: J060306

Project Name: Cecil Field Area 199

Date/Time Received: 1/13/06 13:08

Lab Code: J060306-03

Date/Time Sampled: 1/13/06 10:30

Client Sample ID: 3

Shipping Method: Client drop off

Site: CEF-199-4S

Sampled By: Robert Burns

Matrix: Water

Sampling Method: G

Volatile Aromatic Hydrocarbons

Analytes:	Dilution	Adjusted MDL	Adjusted PQL	Results	Units	Qualifier(s)	Method	Parameter Comment	Lab
Benzene	1	0.21	0.84	0.21	ug/L	U	SW8021B		J
Ethylbenzene	1	0.17	0.68	0.17	ug/L	U	SW8021B		J
m&p-Xylenes	1	0.40	1.6	0.40	ug/L	U	SW8021B		J
Methyl-tert-butyl Ether	1	0.35	1.4	0.35	ug/L	U	SW8021B		J
o-Xylene	1	0.23	0.92	0.23	ug/L	U	SW8021B		J
Toluene	1	0.23	0.92	0.23	ug/L	U	SW8021B		J

Surrogates:	Control Limits	% Recovery	Qual.	Method	Prep Method
1-Bromo-4-chlorobenzene	75 - 119	114		SW8021B	SW5030B

U The compound was analyzed for but not detected.

J DOH certification #E82574 (AEL-JAX) (FL NELAC certification)

Lab Code: J060306-04

Date/Time Sampled: 1/13/06 11:05

Client Sample ID: 4

Shipping Method: Client drop off

Site: CEF-199-7SR

Sampled By: Robert Burns

Matrix: Water

Sampling Method: G

Volatile Aromatic Hydrocarbons

Analytes:	Dilution	Adjusted MDL	Adjusted PQL	Results	Units	Qualifier(s)	Method	Parameter Comment	Lab
Benzene	1	0.21	0.84	0.21	ug/L	U	SW8021B		J
Ethylbenzene	1	0.17	0.68	0.17	ug/L	U	SW8021B		J
m&p-Xylenes	1	0.40	1.6	0.40	ug/L	U	SW8021B		J
Methyl-tert-butyl Ether	1	0.35	1.4	0.35	ug/L	U	SW8021B		J
o-Xylene	1	0.23	0.92	0.23	ug/L	U	SW8021B		J
Toluene	1	0.23	0.92	0.23	ug/L	U	SW8021B		J

Surrogates:	Control Limits	% Recovery	Qual.	Method	Prep Method
1-Bromo-4-chlorobenzene	75 - 119	110		SW8021B	SW5030B

U The compound was analyzed for but not detected.

J DOH certification #E82574 (AEL-JAX) (FL NELAC certification)

Advanced Environmental Laboratories, Inc.

Analytical Report

Client: URS

Report No.: J060306

Project Name: Cecil Field Area 199

Date/Time Received: 1/13/06 13:08

Lab Code: J060306-05

Date/Time Sampled: 1/13/06 10:50

Client Sample ID: 5

Shipping Method: Client drop off

Site: EQUIPMENT BLANK

Sampled By: Robert Burns

Matrix: Water

Sampling Method: G

Volatile Aromatic Hydrocarbons

Analytes:	Dilution	Adjusted MDL	Adjusted PQL	Results	Units	Qualifier(s)	Method	Parameter Comment	Lab
Benzene	1	0.21	0.84	0.21	ug/L	U	SW8021B		J
Ethylbenzene	1	0.17	0.68	0.17	ug/L	U	SW8021B		J
m&p-Xylenes	1	0.40	1.6	0.40	ug/L	U	SW8021B		J
Methyl-tert-butyl Ether	1	0.35	1.4	0.35	ug/L	U	SW8021B		J
o-Xylene	1	0.23	0.92	0.23	ug/L	U	SW8021B		J
Toluene	1	0.23	0.92	0.23	ug/L	U	SW8021B		J

Surrogates:	Control Limits	% Recovery	Qual.	Method	Prep Method
1-Bromo-4-chlorobenzene	75 - 119	116		SW8021B	SW5030B

U The compound was analyzed for but not detected.

J DOH certification #E82574 (AEL-JAX) (FL NELAC certification)

Advanced Environmental Laboratories, Inc.

Analytical Report

Client: URS

Report No.: J060306

Project Name: Cecil Field Area 199

Date/Time Received: 1/13/06 13:08

Sample Cross Reference Information

Lab Code: J060306-01

Site: CEF-199-1S

Client Sample Number: 1

Matrix: Water

Test Description	Analysis Method	Prep Method	Analytical Batch ID	Analysis Date/Time	Analyst	Prep Batch ID	Prep Date/Time
Volatile Aromatic Hydrocarbons	SW8021B	SW5030B	v011606d	1/16/06 13:40	RMB	v011606d	1/16/06 13:40:00

If the Analytical Batch ID and Prep Batch ID is null, the analysis was not performed by AEL, and the original report from the subcontracted laboratory will be provided containing this information.

Lab Code: J060306-02

Site: CEF-199-11S

Client Sample Number: 2

Matrix: Water

Test Description	Analysis Method	Prep Method	Analytical Batch ID	Analysis Date/Time	Analyst	Prep Batch ID	Prep Date/Time
Volatile Aromatic Hydrocarbons	SW8021B	SW5030B	v011606d	1/16/06 13:40	RMB	v011606d	1/16/06 13:40:00

If the Analytical Batch ID and Prep Batch ID is null, the analysis was not performed by AEL, and the original report from the subcontracted laboratory will be provided containing this information.

Lab Code: J060306-03

Site: CEF-199-4S

Client Sample Number: 3

Matrix: Water

Test Description	Analysis Method	Prep Method	Analytical Batch ID	Analysis Date/Time	Analyst	Prep Batch ID	Prep Date/Time
Volatile Aromatic Hydrocarbons	SW8021B	SW5030B	v011606d	1/16/06 13:40	RMB	v011606d	1/16/06 13:40:00

If the Analytical Batch ID and Prep Batch ID is null, the analysis was not performed by AEL, and the original report from the subcontracted laboratory will be provided containing this information.

Lab Code: J060306-04

Site: CEF-199-7SR

Client Sample Number: 4

Matrix: Water

Test Description	Analysis Method	Prep Method	Analytical Batch ID	Analysis Date/Time	Analyst	Prep Batch ID	Prep Date/Time
Volatile Aromatic Hydrocarbons	SW8021B	SW5030B	v011606d	1/16/06 13:40	RMB	v011606d	1/16/06 13:40:00

If the Analytical Batch ID and Prep Batch ID is null, the analysis was not performed by AEL, and the original report from the subcontracted laboratory will be provided containing this information.

Lab Code: J060306-05

Site: EQUIPMENT BLANK

Client Sample Number: 5

Matrix: Water

Test Description	Analysis Method	Prep Method	Analytical Batch ID	Analysis Date/Time	Analyst	Prep Batch ID	Prep Date/Time
Volatile Aromatic Hydrocarbons	SW8021B	SW5030B	v011606d	1/16/06 13:40	RMB	v011606d	1/16/06 13:40:00

If the Analytical Batch ID and Prep Batch ID is null, the analysis was not performed by AEL, and the original report from the subcontracted laboratory will be provided containing this information.

Advanced Environmental Laboratories, Inc.

Analytical Report

Client: URS

Report No.: J060306

Project Name: Cecil Field Area 199

Date/Time Received: 1/13/06 13:08

Quality Assurance Report

Method Blanks

Volatile Aromatic Hydrocarbons							
QCBatchID	Analyte	QC Sample Type	Method	MDL	Result	Units	Qualifier
v011606d	Benzene	Method Blank	SW8021B		0.21	ug/L	U
v011606d	Ethylbenzene	Method Blank	SW8021B		0.17	ug/L	U
v011606d	m&p-Xylenes	Method Blank	SW8021B		0.40	ug/L	U
v011606d	Methyl-tert-butyl Ether	Method Blank	SW8021B		0.35	ug/L	U
v011606d	o-Xylene	Method Blank	SW8021B		0.23	ug/L	U
v011606d	Toluene	Method Blank	SW8021B		0.23	ug/L	U
Surrogate(s)	Result	Units	% Recovery	Qualifier	Acceptance Limits		
1-Bromo-4-chlorobenzene	58	ug/L	116		75 - 119		

Quality Assurance Qualifiers:

U The compound was analyzed for but not detected.

Definitions:

Water matrix refers to all aqueous matrices except drinking water, including but not limited to, wastewater, ground water, surface water, aqueous wastes and leach

Soil matrix refers to all non-aqueous matrices, including soils, solids, sludges, semi-solids, and non-aqueous waste samples

All results in mg/kg or % are reported in dry weight basis, unless notated otherwise. All results in mg/L are reported in wet weight basis.

MDL Method Detection Limit, without correction for dilution or moisture content

Adjusted Reporting Limit is the MDL accounting for all dilutions and moisture content cacluations.

PQL is defined to be 4 times the MDL, for all results qualified with a 'i' qualifier.

Sampling Method; G=Grab, P=Pump, C=Composite

The estimated measurements of uncertainty can be provided upon request

This is the last page of the analytical report.



Advanced Environmental Labs Inc

Advanced Environmental
6601 Southpoint Parkway
Jacksonville, FL 32216

Client: URS

Project name: Coal Field 199

Date/Time: 1/13/06 1508

Log-In request number: 1060306

Rcvd: BD

Received by: BD

Completed by: AS

Cooler/Shipping Information:

Courier: AEL Client UPS Pony Express FedEx AES ASAP Other (describe): _____

Type: Cooler Box Other (describe) _____

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID					
Temp (°C)	<u>6</u>				
Temp taken from	<input checked="" type="checkbox"/> Sample Bottle <input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Sample Bottle <input type="checkbox"/> Cooler	<input type="checkbox"/> Sample Bottle <input type="checkbox"/> Cooler	<input type="checkbox"/> Sample Bottle <input type="checkbox"/> Cooler	<input type="checkbox"/> Sample Bottle <input type="checkbox"/> Cooler
Temp measured with	<input checked="" type="checkbox"/> IR gun <input type="checkbox"/> Thermometer (enter ID):	<input type="checkbox"/> IR gun <input type="checkbox"/> Thermometer (enter ID):	<input type="checkbox"/> IR gun <input type="checkbox"/> Thermometer (enter ID):	<input type="checkbox"/> IR gun <input type="checkbox"/> Thermometer (enter ID):	<input type="checkbox"/> IR gun <input type="checkbox"/> Thermometer (enter ID):

Other Information:

Any discrepancies should be explained in the "Comments" section below.

CHECKLIST

YES NO NA

	YES	NO	NA
1. Were custody seals on shipping container(s) intact?	/		
2. Were custody papers properly included with samples?	/		
3. Were custody papers properly filled out (ink, signed, match labels)?	/		
4. Did all bottles arrive in good condition (unbroken)?	/		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	/		
6. Did the sample labels agree with the chain of custody?	/		
7. Were correct bottles used for the tests indicated?	/		
8. Were proper sample preservation techniques indicated on the label?	/		
9. Were samples received within holding times?	/		
10. Were all VOA vials checked for the presence of air bubbles?	/		
11. Were there air bubbles present in the VOA vials?		/	
12. Were samples in direct contact with wet ice? If "No," check one: <input type="checkbox"/> NO ICE <input type="checkbox"/> BLUE ICE	/		
13. Was the cooler temperature less than 6°C?	/		
14. Were the sample containers provided by AEL?	/		
15. Were samples accepted into the laboratory?	/		
16. Was it necessary to split samples into other bottles?		/	

Comments:
