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NAS CECIL FIELD, FL
5090.3a

THIRD CONTRACT QUARTER 2006 OPERATIONS AND MAINTENANCE STATUS REPORT
FOR AIR SPARGING SYSTEM AT BUILDING 271 NAS CECIL FIELD FL
2/28/2006
ESA ENVIRONMENTAL SPECIALISTS INC

**Third Contract Quarter 2006
Operations and Maintenance Status Report**

**Air Sparging System
Building 271**

**Former Naval Air Station Cecil Field
Jacksonville, Florida**

Contract No. N62467-03-G-0016

Submitted to:

U.S. Naval Facilities
Engineering Command
Southern Division

Prepared by:



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February 28, 2006

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Acronyms

ABB-ES	ABB Environmental Services, Inc.
AS	Air Sparging
AST	Aboveground Storage Tank
bls	Below Land Surface
BTEX	benzene, toluene, ethylbenzene, xylene
CA	Contamination Assessment
CAR	Contamination Assessment Report
cfm	cubic feet per minute
CTO	Contract Task Order
CSR	Confirmatory Sampling Report
DO	dissolved oxygen
EPA	U.S. Environmental Protection Agency
ESA	ESA Environmental Specialists, Inc
FAC	Florida Administration Code
FDEP	Florida Department of Environmental Protection
FID	Flame ionization detector
FL-PRO	Florida Petroleum Residual Organic
GAC	granular activated carbon
GCTLs	groundwater cleanup target levels
HLA	Harding Lawson Associates
JETC	Jet Engine Test Cell
LNAPL	Light Non-Aqueous Phase Liquids
LCAR	Limited Closure Assessment Reports
mg/ L	milligrams per liter
MTBE	methyl tert butyl ether
NADSC	Natural Attenuation Default Source Concentration
NAS	Naval Air Station
NAVFAC EDF	Naval Facilities Engineering Command, Engineering Field
SOUTH	Division, Southern Division
O&M	Operation and Maintenance
ORP	oxygen-reduction potential
OWSs	oil water separators

PAH	polynuclear aromatic hydrocarbon
ppm	parts per million
psi	pounds per square inch
RAP	Remedial Action Plan
RAPA	Remedial Action Plan Addendum
SA	Site Assessment
SARA	Site Assessment Report Addendum
SCTLs	Soil Cleanup Target Levels
TRPH	total recoverable petroleum hydrocarbon
TtNUS	Tetra Tech NUS
USACE	U.S. Army Corps of Engineers
UST	Underground Storage Tank
VOC	Volatile Organic Compound

1 Introduction

ESA Environmental Specialists, Inc. (ESA) has been contracted by the Department of the Navy, Naval Facilities Engineering Command Engineering Field Division South (NAVFAC EFD SOUTH), to provide active treatment operation and maintenance (O&M) services at two groundwater remediation sites (Jet Engine Test Cell and Building 271), plus annual natural attenuation monitoring services at one groundwater remediation site (Area 199), situated at the former Naval Air Station (NAS) Cecil Field, Jacksonville, Duval County, Florida.

The purpose of this 3rd Contract Quarter 2006 Operations and Maintenance Status Report is to provide a summary of activities performed at the Building 271 site during the period from November 6, 2005 through February 9, 2006.

1.1 Site History

Building 271

Building 271 was a former retail gasoline facility that contained four Underground Storage Tanks (USTs) (designated 271-D, 271-R, 271-UL, and 271-SUL) and two oil water separators (OWSs). The USTs were grouped in a tank pit located on the west side of Building 271, while the OWSs were located on the east side of the building. USTs 271-UL, 271-R, and 271-SUL each had an approximate capacity of 10,000 gallons and UST 271-D had an approximate capacity of 6,000 gallons (TtNUS, 2002).

According to UST closure records, UST 271-D was removed on March 5, 1996, and no soil or groundwater contamination was detected. The report also indicates that the UST and associated piping were removed from the site (TtNUS, 2002).

In July 1999, Harding Lawson Associates (HLA) compiled a Confirmatory Sampling Report (CSR) for the USTs and the two OWSs that indicated petroleum-impacted soil was encountered at two locations relative to the USTs. The CSR concluded that soil or groundwater was not impacted as a result of past OWS operations. Based on the CSR finding of soil contamination, a Site Assessment (SA) was recommended for the UST site. An SA Plan for the assessment of soil and groundwater at the UST site was prepared by TtNUS (TtNUS, 2002).

Following completion of the planned investigation in the SA Plan, CH2M Hill removed the remaining three USTs, associated piping, and distribution systems. The UST and associated soil removals addressed the soil contamination issues; however, groundwater samples collected following UST and soil removal indicated the presence of volatile organic compounds (VOCs) in site groundwater. TtNUS proceeded to plan and execute a second investigation in a SA Plan Addendum (2001) to further define the extent of contamination in the groundwater (TtNUS, 2002).

CH2M Hill also removed both OWSs, and submitted separate Limited Closure Assessment Reports (LCAR) for each OWS site in April 2001 to the FDEP. Both LCARs for the OWSs indicated that no petroleum contamination of the soil or groundwater existed in the immediate areas surrounding the former OWSs. On May 23, 2001, the FDEP issued separate letters agreeing with CH2M Hill's findings (TtNUS, 2002).

A SA report prepared by TtNUS in May 2002 concluded that petroleum constituents had impacted groundwater in the vicinity of the former USTs and that all of the contaminated soil was removed by CH2M Hill during the UST removal. TtNUS recommended the preparation and implementation of a Remedial Action Plan (RAP) to remediate groundwater at the site (TtNUS, 2002).

TtNUS submitted to FDEP for approval a RAP in September 2002 and a RAP Addendum (RAPA) in January 2003 to select the remedial alternative to remediate the contaminated groundwater at the site. Air Sparge (AS) was selected as the remedial alternative. FDEP Approval on the RAP and RAPA was received in February 2003.

CH2M Hill installed an AS system in accordance with the RAP (TtNUS, 2002), RAPA (TtNUS, 2003), and Work Plan Addendum No. 18, Installation of Air Sparging Systems at the Jet Engine Test Cell (JETC) and Building 271 (CH2M Hill, 2003) from September to November 2003. The AS system commenced operation on November 17, 2003.

On May 24, 2005, management of on-going remedial activities at the Building 271 site was transferred from CH2M Hill to ESA.

A site plan showing the site and the AS system layout is provided in Figure 1-1.

1.2 Remediation System/Technology Description

AS is a physical treatment method of expediting the transfer of VOCs from the soil and groundwater to the sparging air. Atmospheric air is injected into the air sparge wells, which are screened within the groundwater contaminant plume. As the injected air passes upward through the VOC laden groundwater and soil, VOCs are partitioned to the passing air and migrate to the vadose zone.

The Building 271 AS system consists of 7 AS wells (AS-01 through AS-07), rotary vane-type compressor, receiver tank, and associated piping and instrumentation. The AS wells are screened from approximately 28 to 30 feet below land surface (bls). The AS system is designed for each AS well to operate at an airflow rate of 10 cubic feet per minute (cfm) at an injection pressure of 15 pounds per square inch (psi). The locations of the AS wells are shown on Figure 1-1.

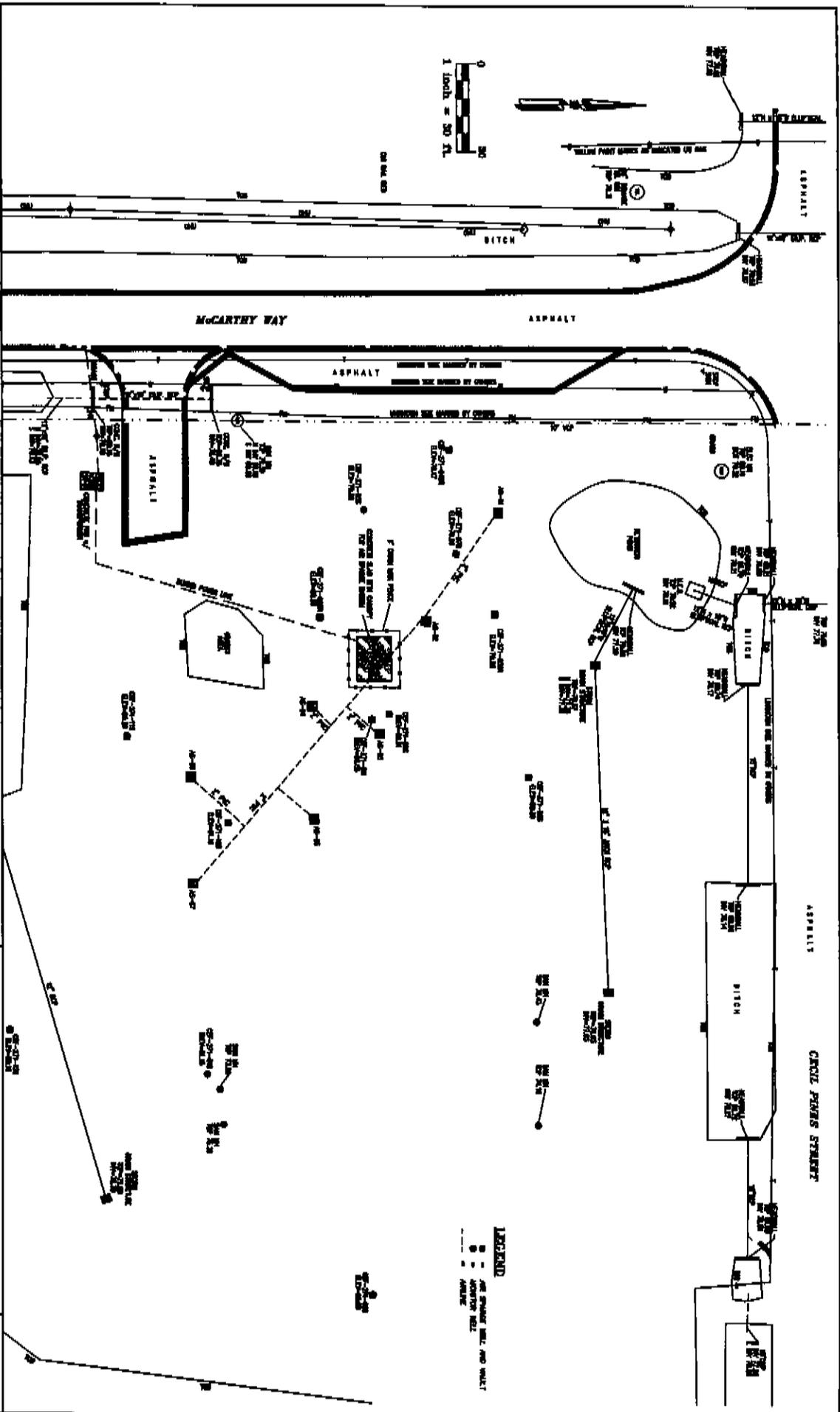
PROJECT:	NO.:	DATE:	BY:	CHK:
DESCRIPTION:				
DATE:				
SCALE:				

Geotechnical
Specialties, Inc.

**BUILDING 271
FORMER NAS CECIL FIELD
JACKSONVILLE, FLORIDA**

SITE MAP
MAY 24, 2005

FIGURE
1-1



2 System Performance Monitoring

O&M checks of the system were performed during the monitoring period. During an O&M check, a preventative maintenance checklist (based upon manufacturers' recommendations) is completed, and any required maintenance activity is performed. All meters and gauges at the system are read and recorded during the O&M check. Well vault gauges and meters are read and recorded on a monthly basis.

2.1 Operational Efficiencies

	Period (11/6/05-2/9/05)	To Date (from 5/17/05)
Air Sparging System	Building 271	Building 271
Hours of Possible Operation	2280	6432
Hours of Actual Operation	322.84	1258.51
Percent Hours of Operation	14.16%	19.57%

2.2 AS System Summary of Maintenance and Downtime

During the period from November 6, 2005 through February 9, 2006, Building 271 AS system ran a total of 13.45 days 95 days resulting on 1957.16 hours of downtime. This is significantly increased from the 4.12 days the system previously ran during the 2nd Quarter. The AS system downtime details are as follows:

■ Building 271 AS System

- On 11/6/2006 the system was down upon arrival due to a tripped system; the trip relay was reset and the system was restarted before departure.
- On 1/17/2006 the system remained down for compressor maintenance that included oil drain and fill with filter replacement. The oil separator filter element was replaced, oil separator drain line filters were replaced, and the in line air filters were replaced for the first two and the last in line. Shipment of the second 2 filters in line and Curtis filter element were made for replacement.
- On 2/7/06 the system was down upon arrival; the system was reset and restarted before departure when compressor maintenance was confirmed complete.
- On 2/9/2006 the system was up and running upon arrival, but was shut down prior to departure due to an airline leak detected 3 feet west of AS-02 in an unpaved area. The system was turned off until airline repairs are completed.

2.3 AS System Pressure/Flow Rate Monitoring

During the monitoring period, injection pressure was measured at each AS wellhead monthly. The wellhead pressures for the operating AS wells averaged 6.55 psi, compared to the design pressure of 15 psi. This low pressure is due to the system remaining shutdown for compressor maintenance and airline leaks detected. The AS wellhead pressure data is provided in Table 2-1.

**Table 2-1 Air Sparging Well Measurements
Building 271**

Location	Air Sparge Well	Date	Wellhead Pressure (psi)		Flow Rate (scfm)	
			Initial	Reset	Initial	Reset
Building 271	AS-01	11/6/2005	0	-	2.0	-
		2/9/2006	0.5	-	0	-
Building 271	AS-02	11/6/2005	10.5	-	5.0	-
		2/9/2006	2.5	-	0	-
Building 271	AS-03	11/6/2005	10.5	-	5.0	-
		2/9/2006	4.5	-	0	-
Building 271	AS-04	11/6/2005	13.5	-	8.5	-
		2/9/2006	4.5	-	0	-
Building 271	AS-05	11/6/2005	12.2	-	5.0	-
		2/9/2006	5.0	-	0	-
Building 271	AS-06	11/6/2005	9.0	-	2.0	-
		2/9/2006	4.5	-	0	-
Building 271	AS-07	11/6/2005	9.5	-	2.0	-
		2/9/2006	5.0	-	0	-
Averages			6.55 psi		2.11 scfm	

psi – pounds per square inch
scfm – standard cubic feet per minute

2.4 Water Level Measurements

Depth to groundwater measurements are recorded quarterly from the 13 monitoring wells. The results from the groundwater level measurement surveys are provided in Table 2-2. Light non-aqueous phase liquid (LNAPL) was not detected on monitoring wells during the monitoring period.

**Table 2-2, Water Level Measurements
Building 271, 3rd Contract Quarter 2006**

Monitoring Well	Date	TOC Elevation (feet)	Depth to Water (feet bTOC)	Water Level Elevation (feet NGVD)
CEF-271-02S	12/3/2005	80.68	6.91	73.77
CEF-271-01S	12/3/2005	81.15	7.65	73.50
CEF-271-12S	12/4/2005	80.19	6.83	73.36
CEF-271-11S	12/3/2005	80.29	6.81	73.48
CEF-271-10S	12/4/2005	81.18	7.70	73.48
CEF-271-08S	12/3/2005	80.89	7.26	73.63
CEF-271-09S	12/4/2005	80.51	6.95	73.56
CEF-271-1I	12/3/2005	80.56	7.04	73.52
CEF-271-06S	12/3/2005	80.50	6.96	73.54
CEF-271-03S	12/3/2005	79.88	6.22	73.66
CEF-271-04SR	12/3/2005	79.17	5.55	73.62
CEF-271-05SR	12/3/2005	79.85	6.26	73.59
CEF-271-07S	12/4/2005	79.99	6.33	73.66

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)

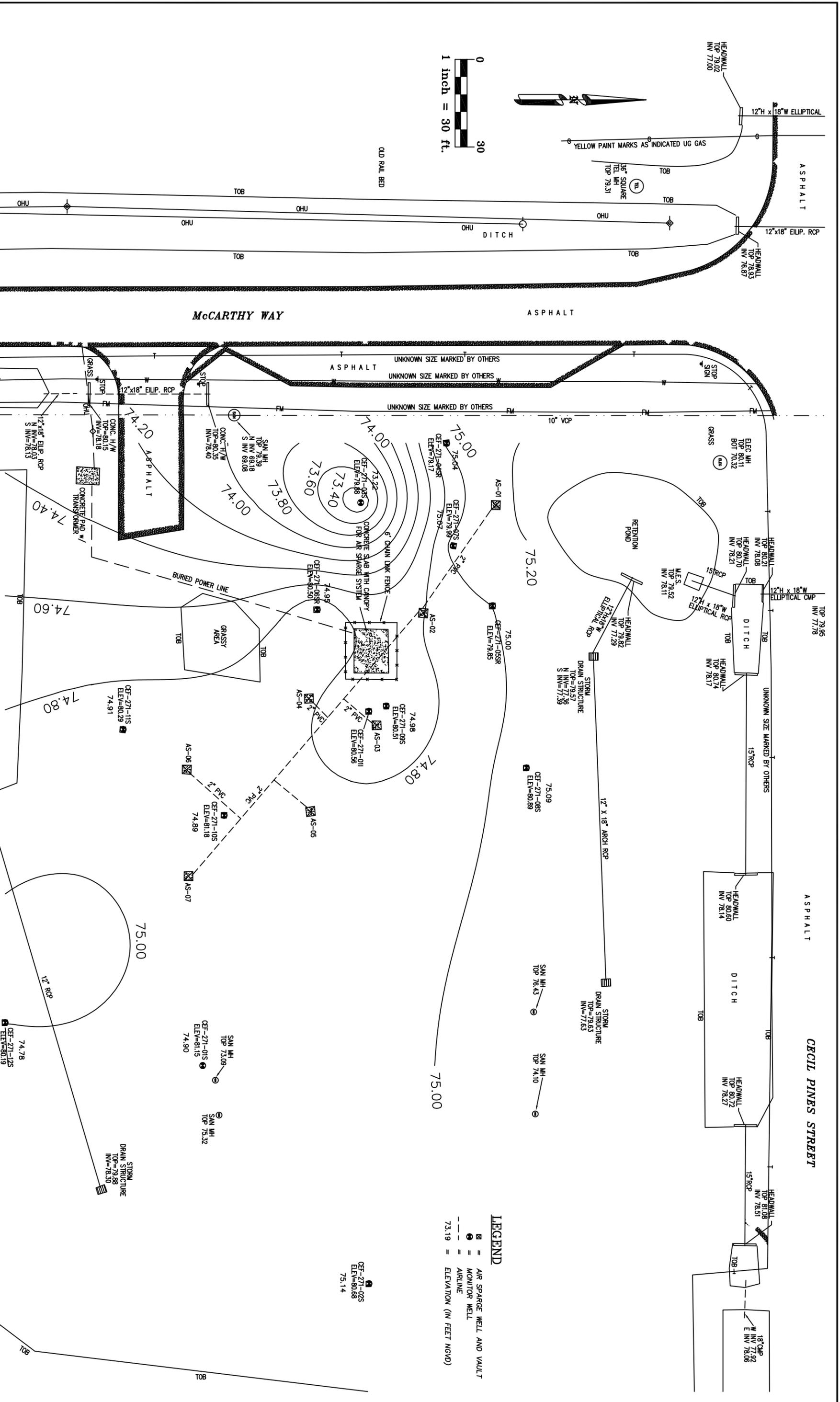
Depth to water measured from top of casing

DRAWN:	RC
CHECKED:	AS
DATE:	OCT 2005



BUILDING 271
FORMER NAS CECIL FIELD
JACKSONVILLE, FLORIDA

POTENIOMETRIC
SURFACE MAP
 September 3, 2005



LEGEND

- ☒ = AIR SPARGE WELL AND VAULT
- = MONITOR WELL
- - - = AIRLINE
- 73.19 = ELEVATION (IN FEET NGVD)

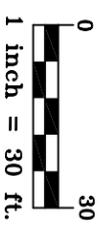


FIGURE 2-1

3 Summary of Sampling and Laboratory Analytical Results

3.1 Groundwater Monitoring

ESA conducted the 3rd Contract Quarter 2006 groundwater monitoring events beginning in November 6, 2005. During the 3rd Contract Quarter 2006 monitoring event monitoring wells CEF-271 were sampled. The groundwater samples were laboratory analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert butyl ether (MTBE) by EPA Method SW8021B, the 16-listed polynuclear aromatic hydrocarbons (PAHs) and 1- and 2-methylnaphthalene by AEL SOP SVOC-006: 2-25-03 and SW8270C-SIM, and Total Recoverable Petroleum Hydrocarbons (TRPH) were analyzed by the Florida Petroleum Organic (FL-PRO) Method. The laboratory analytical results for the detected parameters from the 3rd Contract Quarter groundwater monitoring events are summarized in Table 3-1. The locations of the monitoring wells are shown on Figure 1-1. Copies of the analytical laboratory reports from the groundwater monitoring events are provided in Appendix A.

Field parameters consisting of pH, temperature, dissolved oxygen (DO), and specific conductivity were measured during purging of the monitoring wells. The field parameters are summarized in Table 3-2. The aquifer at the site within the treatment area remains highly aerobic with DO measurements above 1 milligram per liter (mg/ L) in all of the monitoring well. These are similar results to the previous quarter that reported high levels in 12 of the 13 monitoring wells. However, Oxidation-reduction potential (ORP) measurements greater than 50 millivolts that were previously reported in 11 of the 13 monitoring wells have fallen to 0 of 13 reported above 50mV.

None of the wells during this quarterly report identified concentrations that exceeded the Groundwater Cleanup Target Levels (GCTLs) or the Natural Attenuation Default Source Concentrations (NADSC) at a detectable limit. The groundwater samples from the previous quarter reported monitoring well CEF-271-07S detected concentrations of Toluene that exceeded the NADSC, but these levels have since fallen to less than detectable limits.

It should be noted that the following table do show some bolding and shading where limits were exceeded, however, these are all followed by a U which defines that the compound was analyzed for but not detected. The duplicates and equipment blanks report the same undetected limits with a number higher than the GCTLs and NADSC allow.

Table 3-1 Groundwater Analytical Results, 3rd Contract Quarterly Report 2006

Parameter	Station ID		Equipment Blank	CEF-271-12S	CEF-271-10S	CEF-271-09S	CEF-271-07S
	Sample ID		J058063-01	J058063-02	J058063-03	J058063-04	J058063-05
	Sample Date		12/4/2005	12/4/2005	12/4/2005	12/4/2005	12/4/2005
	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	5.3 i
Toluene	1	10	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1-methylnaphthalene	28	280	0.12 U	0.12 U	0.12 U	0.12 U	1.1
2-methylnaphthalene	28	280	0.18 U	0.18 U	0.18 U	0.18 U	0.32 i
Acenaphthene	20	200	0.13 U	0.13 U	0.13 U	0.13 U	0.15 i
Acenaphthylene	210	2100	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Anthracene	2100	21000	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U
Benzo(a)anthracene	0.05	0.5	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Benzo(a)pyrene	0.2	2	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U
Benzo(b)fluoranthene	0.05	0.5	0.081 U	0.081 U	0.081 U	0.081 U	0.081 U
Benzo(g,h,i)perylene	210	2100	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U
Benzo(k)fluoranthene	0.5	5	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U
Chrysene	4.8	48	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U
Dibenz(a,h)anthracene	0.005	0.05	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Fluoranthene	280	2800	0.041 U	0.084 U	0.084 U	0.084 U	0.13 i
Fluorene	280	2800	0.10 U	0.10 U	0.10 U	0.10 U	0.12 i
Indeno(1,2,3-cd)pyrene	0.05	0.5	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Naphthalene	14	140	0.15 U	0.15 U	0.15 U	0.15 U	2.0
Phenanthrene	210	2100	0.10 U	0.10 U	0.10 U	0.10 U	0.20 i
Pyrene	210	2100	0.12 U	0.12 U	0.12 U	0.12 U	0.13 i

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

i - the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

Table 3-2
Field Parameter Measurements
Building 271 GW Field Monitoring
3rd Contract Quarter 2006

Sample Date 12/4/2005	Groundwater					
Well	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	ORP (mV)
CEF-271-02S	6.66	344	NM	4.42	22.93	40.5
CEF-271-01S	6.51	655	NM	4.50	22.88	18.0
CEF-271-12S	6.96	340	107	8.00	22.09	31.2
CEF-271-11S	6.84	388	NM	5.06	22.21	3.4
CEF-271-10S	7.29	504	18.29	7.90	23.69	29.2
CEF-271-08S	6.51	688	NM	4.85	22.94	3.4
CEF-271-09S	7.23	208	200	7.31	22.84	32.3
CEF-271-1I	6.95	259	NM	6.07	22.65	4.4
CEF-271-06S	6.85	430	NM	4.61	22.68	-2.8
CEF-271-03S	6.84	467	NM	3.61	23.27	-1.3
CEF-271-04SR	6.85	334	NM	5.09	23.23	1.9
CEF-271-05SR	7.01	150	NM	6.84	22.75	10.1
CEF-271-07S	7.10	707	1.07	8.61	23.35	-175.5

Note: All measurements taken using direct reading instruments in the field.

mS/cm – milliSiemens per centimeter

NTU – nephelomatic turbidity units

mg/L – milligrams per liter

°C – degrees Celsius

ORP – oxygen reducing potential

mV - millivolts

Shade indicates ORP values exceeding 50mV

Bold indicates DO values exceeding 1 mg/L

NM – Not Measured

4.0 Conclusions and Recommendations

Compressor Maintenance was completed during the 3rd Contract Quarter on the Building 271 mattei compressor. This maintenance was necessary to ensure the proper and most efficient running of the Compressor. The maintenance included all performances of major preventative services, new parts, the installation of oil filters, oil return valves and other filter elements, as well as servicing inlet valve, vacuum relief valve, pressure relief valve, inspection of the control systems, and a thorough testing of the operation and performance of the unit. The system was shut off during the maintenance where it was discovered for the replacement of the filter elements the previous contractor had specified the incorrect filter element. Much time was used to determine the correct filter element through trial and error. The correct filter element is now in place and the system is up and running much more efficiently and effectively.

The Building 271 AS systems operated with a great amount downtime during the monitoring period with a resulting operational efficiency of percent of 14.16%, however, this was a significant increase from the operational efficiency of 4.95% during the previous quarterly report. The majority of the downtime for the Building 271 AS System is described above, as well as a result of compressor relay trips when local electrical utilities have a power blink which frequently occurs and have been discussed in previous reports. A system enhancement modification was sent to contracting on February 10, 2006 with a full quote for the work to be performed for these installations. The installation of automatic timed resets for the Mattei compressors operating at Cecil Field will reduce downtime when electrical power outages occur. This installation will offer the AS Systems auto reset capabilities as compared to the current configuration which only offers a manual reset method.

None of the wells during this quarterly report identified concentrations that exceeded the GCTLs or the NADSCs at a detectable limit. In the previous quarter, CEF-271-07S reported Toluene levels that exceeded NADSC levels, but have since fallen below detectable limits during the 3rd contract quarter. The DO measurements above 1 milligram per liter (mg/ L) remained high and were reported for all of the 13 monitoring well, similar to the previous reported 12 of 13 monitoring wells reported during the previous quarter. However, none of the monitoring wells reported oxidation-reduction potential (ORP) measurements greater than 50 millivolts. This is significantly decreased from the 11 wells reported above 50mV in the previous quarterly report.

As compared to the previous quarterly reports, the groundwater analytical concentrations have remained undetected or decreased. This indicates that the air sparge system is reducing the groundwater contamination at this site.

5.0 References

ESA Environmental Specialists, Inc. June 2005. Cecil Field Workplan. NAS Cecil Field, Jacksonville, Florida.

ESA Environmental Specialists, Inc. June 2005. Cecil Field Health and Safety Plan. NAS Cecil Field, Jacksonville, FL.

CH2MHILL Constructors, Inc. April 2001. Limited Closure Assessment Report, Oil/Water Separator Removal. NAS Cecil Field, Jacksonville, Florida.

CH2MHILL Constructors, Inc. August 2003. Work Plan Addendum No. 18, Work Plan Addendum No. 18 Installation of Air Sparging Systems at the Jet Engine Test Cell and Building 271, Naval Air Station Cecil Field, Jacksonville, Florida.

TetraTech NUS, Inc. September 2002. Remedial Action Plan for Building 271 Tanks UL/R/SUL/D at Naval Air Station Cecil Field, Jacksonville, Florida.

TetraTech NUS, Inc. January 2003. Remedial Action Plan Addendum for Building 271 Tanks UL/R/SUL/D at Naval Air Station Cecil Field, Jacksonville, Florida.

APPENDIX A
Analytical Results



Client: URS
Project Name: Cecil Field-Bldg 271
Project Number:

Report No.: J058063
Date Sampled: 12/4/05
Date Received: 12/5/05 10:45
Date Reported: 12/13/05

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-Bldg 271

Approved By:   2005.12.13
08:23:17
-05'00'

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 = 9 + 2 COC

Advanced Environmental Laboratories, Inc.

Analytical Report

Client: URS

Report No.: J058063

Project Name: Cecil Field-Bldg 271

Date/Time Received: 12/5/05 10:45

Lab Code: J058063-01

Date/Time Sampled: 12/4/05 13:30

Client Sample ID: EB

Shipping Method: AEL Pick-up

Site: EQUIPMENT BLANK

Sampled By: BILL KELLY

Matrix: Water

Sampling Method: G

Polynuclear Aromatic Hydrocarbons

Analytes:	Dilution	Adjusted MDL	Adjusted PQL	Results	Units	Qualifier(s)	Method	Parameter Comment	Lab
1-Methylnaphthalene	1	0.12	0.49	0.12	ug/L	U	AEL SOP SVOC-006: 2-25-03		J
2-Methylnaphthalene	1	0.18	0.71	0.18	ug/L	U	SW8270C-SIM		J
Acenaphthene	1	0.13	0.51	0.13	ug/L	U	SW8270C-SIM		J
Acenaphthylene	1	0.13	0.51	0.13	ug/L	U	SW8270C-SIM		J
Anthracene	1	0.080	0.32	0.080	ug/L	U	SW8270C-SIM		J
Benzo(a)anthracene	1	0.11	0.45	0.11	ug/L	U	SW8270C-SIM		J
Benzo(a)pyrene	1	0.094	0.38	0.094	ug/L	U	SW8270C-SIM		J
Benzo(b)fluoranthene	1	0.081	0.32	0.081	ug/L	U	SW8270C-SIM		J
Benzo(g,h,i)perylene	1	0.092	0.37	0.092	ug/L	U	SW8270C-SIM		J
Benzo(k)fluoranthene	1	0.082	0.33	0.082	ug/L	U	SW8270C-SIM		J
Chrysene	1	0.060	0.24	0.060	ug/L	U	SW8270C-SIM		J
Dibenz(a,h)anthracene	1	0.10	0.41	0.10	ug/L	U	SW8270C-SIM		J
Fluoranthene	1	0.084	0.34	0.084	ug/L	U	SW8270C-SIM		J
Fluorene	1	0.10	0.42	0.10	ug/L	U	SW8270C-SIM		J
Indeno(1,2,3-cd)pyrene	1	0.15	0.59	0.15	ug/L	U	SW8270C-SIM		J
Naphthalene	1	0.15	0.61	0.15	ug/L	U	SW8270C-SIM		J
Phenanthrene	1	0.10	0.40	0.10	ug/L	U	SW8270C-SIM		J
Pyrene	1	0.12	0.48	0.12	ug/L	U	SW8270C-SIM		J

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	98		SW8021B	SW5030B
Decafluorobiphenyl	21 - 122	83		SW8270C-SIM	SW3510C

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.: J058063

Project Name: Cecil Field-Bldg 271

Date/Time Received: 12/5/05 10:45

Lab Code: J058063-02

Date/Time Sampled: 12/4/05 14:20

Client Sample ID: 12S

Shipping Method: AEL Pick-up

Site: CEF-271-12S

Sampled By: BILL KELLY

Matrix: Water

Sampling Method: G

Polynuclear Aromatic Hydrocarbons

Analytes:	Dilution	Adjusted MDL	Adjusted PQL	Results	Units	Qualifier(s)	Method	Parameter Comment	Lab
1-Methylnaphthalene	1	0.12	0.49	0.12	ug/L	U	AEL SOP SVOC-006: 2-25-03		J
2-Methylnaphthalene	1	0.18	0.71	0.18	ug/L	U	SW8270C-SIM		J
Acenaphthene	1	0.13	0.51	0.13	ug/L	U	SW8270C-SIM		J
Acenaphthylene	1	0.13	0.51	0.13	ug/L	U	SW8270C-SIM		J
Anthracene	1	0.080	0.32	0.080	ug/L	U	SW8270C-SIM		J
Benzo(a)anthracene	1	0.11	0.45	0.11	ug/L	U	SW8270C-SIM		J
Benzo(a)pyrene	1	0.094	0.38	0.094	ug/L	U	SW8270C-SIM		J
Benzo(b)fluoranthene	1	0.081	0.32	0.081	ug/L	U	SW8270C-SIM		J
Benzo(g,h,i)perylene	1	0.092	0.37	0.092	ug/L	U	SW8270C-SIM		J
Benzo(k)fluoranthene	1	0.082	0.33	0.082	ug/L	U	SW8270C-SIM		J
Chrysene	1	0.060	0.24	0.060	ug/L	U	SW8270C-SIM		J
Dibenz(a,h)anthracene	1	0.10	0.41	0.10	ug/L	U	SW8270C-SIM		J
Fluoranthene	1	0.084	0.34	0.084	ug/L	U	SW8270C-SIM		J
Fluorene	1	0.10	0.42	0.10	ug/L	U	SW8270C-SIM		J
Indeno(1,2,3-cd)pyrene	1	0.15	0.59	0.15	ug/L	U	SW8270C-SIM		J
Naphthalene	1	0.15	0.61	0.15	ug/L	U	SW8270C-SIM		J
Phenanthrene	1	0.10	0.40	0.10	ug/L	U	SW8270C-SIM		J
Pyrene	1	0.12	0.48	0.12	ug/L	U	SW8270C-SIM		J

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	96		SW8021B	SW5030B
Decafluorobiphenyl	21 - 122	66		SW8270C-SIM	SW3510C

- 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.: J058063

Project Name: Cecil Field-Bldg 271

Date/Time Received: 12/5/05 10:45

Lab Code: J058063-03

Date/Time Sampled: 12/4/05 15:03

Client Sample ID: 10S

Shipping Method: AEL Pick-up

Site: CEF-271-10S

Sampled By: BILL KELLY

Matrix: Water

Sampling Method: G

Polynuclear Aromatic Hydrocarbons

Analytes:	Dilution	Adjusted MDL	Adjusted PQL	Results	Units	Qualifier(s)	Method	Parameter Comment	Lab
1-Methylnaphthalene	1	0.12	0.49	0.12	ug/L	U	AEL SOP SVOC-006: 2-25-03		J
2-Methylnaphthalene	1	0.18	0.71	0.18	ug/L	U	SW8270C-SIM		J
Acenaphthene	1	0.13	0.51	0.13	ug/L	U	SW8270C-SIM		J
Acenaphthylene	1	0.13	0.51	0.13	ug/L	U	SW8270C-SIM		J
Anthracene	1	0.080	0.32	0.080	ug/L	U	SW8270C-SIM		J
Benzo(a)anthracene	1	0.11	0.45	0.11	ug/L	U	SW8270C-SIM		J
Benzo(a)pyrene	1	0.094	0.38	0.094	ug/L	U	SW8270C-SIM		J
Benzo(b)fluoranthene	1	0.081	0.32	0.081	ug/L	U	SW8270C-SIM		J
Benzo(g,h,i)perylene	1	0.092	0.37	0.092	ug/L	U	SW8270C-SIM		J
Benzo(k)fluoranthene	1	0.082	0.33	0.082	ug/L	U	SW8270C-SIM		J
Chrysene	1	0.060	0.24	0.060	ug/L	U	SW8270C-SIM		J
Dibenz(a,h)anthracene	1	0.10	0.41	0.10	ug/L	U	SW8270C-SIM		J
Fluoranthene	1	0.084	0.34	0.084	ug/L	U	SW8270C-SIM		J
Fluorene	1	0.10	0.42	0.10	ug/L	U	SW8270C-SIM		J
Indeno(1,2,3-cd)pyrene	1	0.15	0.59	0.15	ug/L	U	SW8270C-SIM		J
Naphthalene	1	0.15	0.61	0.15	ug/L	U	SW8270C-SIM		J
Phenanthrene	1	0.10	0.40	0.10	ug/L	U	SW8270C-SIM		J
Pyrene	1	0.12	0.48	0.12	ug/L	U	SW8270C-SIM		J

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	96		SW8021B	SW5030B
Decafluorobiphenyl	21 - 122	62		SW8270C-SIM	SW3510C

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.: J058063

Project Name: Cecil Field-Bldg 271

Date/Time Received: 12/5/05 10:45

Lab Code: J058063-04

Date/Time Sampled: 12/4/05 15:44

Client Sample ID: 09S

Shipping Method: AEL Pick-up

Site: CEF-271-09S

Sampled By: BILL KELLY

Matrix: Water

Sampling Method: G

Polynuclear Aromatic Hydrocarbons

Analytes:	Dilution	Adjusted MDL	Adjusted PQL	Results	Units	Qualifier(s)	Method	Parameter Comment	Lab
1-Methylnaphthalene	1	0.12	0.49	0.12	ug/L	U	AEL SOP SVOC-006: 2-25-03		J
2-Methylnaphthalene	1	0.18	0.71	0.18	ug/L	U	SW8270C-SIM		J
Acenaphthene	1	0.13	0.51	0.13	ug/L	U	SW8270C-SIM		J
Acenaphthylene	1	0.13	0.51	0.13	ug/L	U	SW8270C-SIM		J
Anthracene	1	0.080	0.32	0.080	ug/L	U	SW8270C-SIM		J
Benzo(a)anthracene	1	0.11	0.45	0.11	ug/L	U	SW8270C-SIM		J
Benzo(a)pyrene	1	0.094	0.38	0.094	ug/L	U	SW8270C-SIM		J
Benzo(b)fluoranthene	1	0.081	0.32	0.081	ug/L	U	SW8270C-SIM		J
Benzo(g,h,i)perylene	1	0.092	0.37	0.092	ug/L	U	SW8270C-SIM		J
Benzo(k)fluoranthene	1	0.082	0.33	0.082	ug/L	U	SW8270C-SIM		J
Chrysene	1	0.060	0.24	0.060	ug/L	U	SW8270C-SIM		J
Dibenz(a,h)anthracene	1	0.10	0.41	0.10	ug/L	U	SW8270C-SIM		J
Fluoranthene	1	0.084	0.34	0.084	ug/L	U	SW8270C-SIM		J
Fluorene	1	0.10	0.42	0.10	ug/L	U	SW8270C-SIM		J
Indeno(1,2,3-cd)pyrene	1	0.15	0.59	0.15	ug/L	U	SW8270C-SIM		J
Naphthalene	1	0.15	0.61	0.15	ug/L	U	SW8270C-SIM		J
Phenanthrene	1	0.10	0.40	0.10	ug/L	U	SW8270C-SIM		J
Pyrene	1	0.12	0.48	0.12	ug/L	U	SW8270C-SIM		J

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
Decafluorobiphenyl	21 - 122	76		SW8270C-SIM	SW3510C

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.: J058063

Project Name: Cecil Field-Bldg 271

Date/Time Received: 12/5/05 10:45

Lab Code: J058063-05

Date/Time Sampled: 12/4/05 16:50

Client Sample ID: 07S

Shipping Method: AEL Pick-up

Site: CEF-271-07S

Sampled By: BILL KELLY

Matrix: Water

Sampling Method: G

Polynuclear Aromatic Hydrocarbons

Analytes:	Dilution	Adjusted MDL	Adjusted PQL	Results	Units	Qualifier(s)	Method	Parameter Comment	Lab
1-Methylnaphthalene	1	0.12	0.49	1.1	ug/L		AEL SOP SVOC-006: 2-25-03		J
2-Methylnaphthalene	1	0.18	0.71	0.32	ug/L	i	SW8270C-SIM		J
Acenaphthene	1	0.13	0.51	0.15	ug/L	i	SW8270C-SIM		J
Acenaphthylene	1	0.13	0.51	0.13	ug/L	U	SW8270C-SIM		J
Anthracene	1	0.080	0.32	0.080	ug/L	U	SW8270C-SIM		J
Benzo(a)anthracene	1	0.11	0.45	0.11	ug/L	U	SW8270C-SIM		J
Benzo(a)pyrene	1	0.094	0.38	0.094	ug/L	U	SW8270C-SIM		J
Benzo(b)fluoranthene	1	0.081	0.32	0.081	ug/L	U	SW8270C-SIM		J
Benzo(g,h,i)perylene	1	0.092	0.37	0.092	ug/L	U	SW8270C-SIM		J
Benzo(k)fluoranthene	1	0.082	0.33	0.082	ug/L	U	SW8270C-SIM		J
Chrysene	1	0.060	0.24	0.060	ug/L	U	SW8270C-SIM		J
Dibenz(a,h)anthracene	1	0.10	0.41	0.10	ug/L	U	SW8270C-SIM		J
Fluoranthene	1	0.084	0.34	0.13	ug/L	i	SW8270C-SIM		J
Fluorene	1	0.10	0.42	0.12	ug/L	i	SW8270C-SIM		J
Indeno(1,2,3-cd)pyrene	1	0.15	0.59	0.15	ug/L	U	SW8270C-SIM		J
* Naphthalene	1	0.15	0.61	2.0	ug/L		SW8270C-SIM		J
Phenanthrene	1	0.10	0.40	0.20	ug/L	i	SW8270C-SIM		J
Pyrene	1	0.12	0.48	0.13	ug/L	i	SW8270C-SIM		J

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	1.6	ug/L	i	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	3.7	ug/L		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
Decafluorobiphenyl	21 - 122	57		SW8270C-SIM	SW3510C

i The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U The compound was analyzed for but not detected.

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

* Comment for Naphthalene -- 1

Advanced Environmental Laboratories, Inc.

Analytical Report

Client: URS

Project Name: Cecil Field-Bldg 271

Report No.: J058063

Date/Time Received: 12/5/05 10:45

Sample Cross Reference Information

Lab Code: J058063-01

Client Sample Number: EB

Site: EQUIPMENT BLANK

Matrix: Water

Test Description	Analysis Method	Prep Method	Analytical Batch ID	Analysis Date/Time	Analyst	Prep Batch ID	Prep Date/Time
Polynuclear Aromatic Hydrocarbons	SW8270C-SIM	SW3510C	sv120705N2	12/7/05 17:48	WF	OE120605-SIM	12/6/05 11:30:00
Polynuclear Aromatic Hydrocarbons	AEL SOP SVOC-006: 2-25-03	SW3510C	sv120705N2	12/7/05 17:48	WF	OE120605-SIM	12/6/05 11:30:00
Volatile Aromatic Hydrocarbons	SW8021B	SW5030B	v120505d	12/5/05 17:06	RMB	v120505d	12/5/05 17:06:00

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: J058063-02

Client Sample Number: 12S

Site: CEF-271-12S

Matrix: Water

Test Description	Analysis Method	Prep Method	Analytical Batch ID	Analysis Date/Time	Analyst	Prep Batch ID	Prep Date/Time
Polynuclear Aromatic Hydrocarbons	SW8270C-SIM	SW3510C	sv120705N2	12/7/05 17:48	WF	OE120605-SIM	12/6/05 11:30:00
Polynuclear Aromatic Hydrocarbons	AEL SOP SVOC-006: 2-25-03	SW3510C	sv120705N2	12/7/05 17:48	WF	OE120605-SIM	12/6/05 11:30:00
Volatile Aromatic Hydrocarbons	SW8021B	SW5030B	v120505d	12/5/05 17:06	RMB	v120505d	12/5/05 17:06:00

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: J058063-03

Client Sample Number: 10S

Site: CEF-271-10S

Matrix: Water

Test Description	Analysis Method	Prep Method	Analytical Batch ID	Analysis Date/Time	Analyst	Prep Batch ID	Prep Date/Time
Polynuclear Aromatic Hydrocarbons	SW8270C-SIM	SW3510C	sv120705N2	12/7/05 17:48	WF	OE120605-SIM	12/6/05 11:30:00
Polynuclear Aromatic Hydrocarbons	AEL SOP SVOC-006: 2-25-03	SW3510C	sv120705N2	12/7/05 17:48	WF	OE120605-SIM	12/6/05 11:30:00
Volatile Aromatic Hydrocarbons	SW8021B	SW5030B	v120505d	12/5/05 17:06	RMB	v120505d	12/5/05 17:06:00

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: J058063-04

Client Sample Number: 09S

Site: CEF-271-09S

Matrix: Water

Test Description	Analysis Method	Prep Method	Analytical Batch ID	Analysis Date/Time	Analyst	Prep Batch ID	Prep Date/Time
Polynuclear Aromatic Hydrocarbons	SW8270C-SIM	SW3510C	SV120905NB	12/9/05 17:47	JA	OE120605-SIM	12/6/05 11:30:00
Polynuclear Aromatic Hydrocarbons	AEL SOP SVOC-006: 2-25-03	SW3510C	SV120905NB	12/9/05 17:47	JA	OE120605-SIM	12/6/05 11:30:00
Volatile Aromatic Hydrocarbons	SW8021B	SW5030B	v120505d	12/5/05 17:06	RMB	v120505d	12/5/05 17:06:00

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: J058063-05

Client Sample Number: 07S

Site: CEF-271-07S

Matrix: Water

Test Description	Analysis Method	Prep Method	Analytical Batch ID	Analysis Date/Time	Analyst	Prep Batch ID	Prep Date/Time
Polynuclear Aromatic Hydrocarbons	SW8270C-SIM	SW3510C	sv120705N2	12/7/05 17:48	WF	OE120605-SIM	12/6/05 11:30:00
Polynuclear Aromatic Hydrocarbons	AEL SOP SVOC-006: 2-25-03	SW3510C	sv120705N2	12/7/05 17:48	WF	OE120605-SIM	12/6/05 11:30:00
Volatile Aromatic Hydrocarbons	SW8021B	SW5030B	v120505d	12/5/05 17:06	RMB	v120505d	12/5/05 17:06:00

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.: J058063

Project Name: Cecil Field-Bldg 271

Date/Time Received: 12/5/05 10:45

Quality Assurance Report

Method Blanks

Polynuclear Aromatic Hydrocarbons							
QCBatchID	Analyte	QC Sample Type	Method	MDL	Result	Units	Qualifier
sv120705N2	1-Methylnaphthalene	Method Blank	AEL SOP SVOC-006: 2-25-03	0.12	0.12	ug/L	U
sv120705N2	2-Methylnaphthalene	Method Blank	SW8270C-SIM	0.18	0.18	ug/L	U
sv120705N2	Acenaphthene	Method Blank	SW8270C-SIM	0.13	0.13	ug/L	U
sv120705N2	Acenaphthylene	Method Blank	SW8270C-SIM	0.13	0.13	ug/L	U
sv120705N2	Anthracene	Method Blank	SW8270C-SIM	0.080	0.080	ug/L	U
sv120705N2	Benzo(a)anthracene	Method Blank	SW8270C-SIM	0.11	0.11	ug/L	U
sv120705N2	Benzo(a)pyrene	Method Blank	SW8270C-SIM	0.094	0.094	ug/L	U
sv120705N2	Benzo(b)fluoranthene	Method Blank	SW8270C-SIM	0.081	0.081	ug/L	U
sv120705N2	Benzo(g,h,i)perylene	Method Blank	SW8270C-SIM	0.092	0.092	ug/L	U
sv120705N2	Benzo(k)fluoranthene	Method Blank	SW8270C-SIM	0.082	0.082	ug/L	U
sv120705N2	Chrysene	Method Blank	SW8270C-SIM	0.060	0.060	ug/L	U
sv120705N2	Dibenz(a,h)anthracene	Method Blank	SW8270C-SIM	0.10	0.10	ug/L	U
sv120705N2	Fluoranthene	Method Blank	SW8270C-SIM	0.084	0.084	ug/L	U
sv120705N2	Fluorene	Method Blank	SW8270C-SIM	0.10	0.10	ug/L	U
sv120705N2	Indeno(1,2,3-cd)pyrene	Method Blank	SW8270C-SIM	0.15	0.15	ug/L	U
sv120705N2	Naphthalene	Method Blank	SW8270C-SIM	0.15	0.15	ug/L	U
sv120705N2	Phenanthrene	Method Blank	SW8270C-SIM	0.10	0.10	ug/L	U
sv120705N2	Pyrene	Method Blank	SW8270C-SIM	0.12	0.12	ug/L	U

Surrogate(s)	Result	Units	% Recovery	Qualifier	Acceptance Limits
Decafluorobiphenyl	22	ug/L	86		21 - 122

Polynuclear Aromatic Hydrocarbons							
QCBatchID	Analyte	QC Sample Type	Method	MDL	Result	Units	Qualifier
SV120905NB	1-Methylnaphthalene	Method Blank	AEL SOP SVOC-006: 2-25-03	0.12	0.12	ug/L	U
SV120905NB	2-Methylnaphthalene	Method Blank	SW8270C-SIM	0.18	0.18	ug/L	U
SV120905NB	Acenaphthene	Method Blank	SW8270C-SIM	0.13	0.13	ug/L	U
SV120905NB	Acenaphthylene	Method Blank	SW8270C-SIM	0.13	0.13	ug/L	U
SV120905NB	Anthracene	Method Blank	SW8270C-SIM	0.080	0.080	ug/L	U
SV120905NB	Benzo(a)anthracene	Method Blank	SW8270C-SIM	0.11	0.11	ug/L	U
SV120905NB	Benzo(a)pyrene	Method Blank	SW8270C-SIM	0.094	0.094	ug/L	U
SV120905NB	Benzo(b)fluoranthene	Method Blank	SW8270C-SIM	0.081	0.081	ug/L	U
SV120905NB	Benzo(g,h,i)perylene	Method Blank	SW8270C-SIM	0.092	0.092	ug/L	U
SV120905NB	Benzo(k)fluoranthene	Method Blank	SW8270C-SIM	0.082	0.082	ug/L	U
SV120905NB	Chrysene	Method Blank	SW8270C-SIM	0.060	0.060	ug/L	U
SV120905NB	Dibenz(a,h)anthracene	Method Blank	SW8270C-SIM	0.10	0.10	ug/L	U
SV120905NB	Fluoranthene	Method Blank	SW8270C-SIM	0.084	0.084	ug/L	U
SV120905NB	Fluorene	Method Blank	SW8270C-SIM	0.10	0.10	ug/L	U
SV120905NB	Indeno(1,2,3-cd)pyrene	Method Blank	SW8270C-SIM	0.15	0.15	ug/L	U
SV120905NB	Naphthalene	Method Blank	SW8270C-SIM	0.15	0.15	ug/L	U
SV120905NB	Phenanthrene	Method Blank	SW8270C-SIM	0.10	0.10	ug/L	U
SV120905NB	Pyrene	Method Blank	SW8270C-SIM	0.12	0.12	ug/L	U

Surrogate(s)	Result	Units	% Recovery	Qualifier	Acceptance Limits
Decafluorobiphenyl		ug/L			21 - 122

Advanced Environmental Laboratories, Inc.

Analytical Report

Client: URS

Report No.: J058063

Project Name: Cecil Field-Bldg 271

Date/Time Received: 12/5/05 10:45

Volatile Aromatic Hydrocarbons							
QCBatchID	Analyte	QC Sample Type	Method	MDL	Result	Units	Qualifier
v120505d	Benzene	Method Blank	SW8021B	0.21	0.21	ug/L	U
v120505d	Ethylbenzene	Method Blank	SW8021B	0.17	0.17	ug/L	U
v120505d	m&p-Xylenes	Method Blank	SW8021B	0.40	0.40	ug/L	U
v120505d	Methyl-tert-butyl Ether	Method Blank	SW8021B	0.35	0.35	ug/L	U
v120505d	o-Xylene	Method Blank	SW8021B	0.23	0.23	ug/L	U
v120505d	Toluene	Method Blank	SW8021B	0.23	0.23	ug/L	U

Surrogate(s)	Result	Units	% Recovery	Qualifier	Acceptance Limits
1-Bromo-4-chlorobenzene	48	ug/L	96		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 calculations.

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

Bldg 571

Client: URS

Project name: Oil Field

Date/Time Rcvd: 12/5/05 10:05

Log-In request number: J058063

Received by: AS

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)	6				
Temp taken from	<input type="checkbox"/> Sample Bottle <input checked="" 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
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:



Advanced Environmental Laboratories, Inc.

- Jacksonville: 6601 Southpoint Parkway, Jacksonville, FL 32216 • (904) 363-9350 Fax (904) 363-9354
- Tampa: 9610 Princess Palm Avenue, Tampa, FL 33619 • (813) 630-9616 Fax (813) 630-4327
- Gainesville: 2106 NW 67th Place, Suite 7, Gainesville, FL 32606 • (352) 367-1500 Fax (352) 367-0050
- Orlando: 528 S. North Lake Blvd., Suite 1016, Altamonte Springs, FL 32701 • (407) 937-1594 Fax (407) 937-1597

CHAIN OF CUSTODY RECORD

LAB NUM

J058063

CLIENT NAME: URS CORP		PROJECT NAME: CECIL FIELD - BLDG 271		BOTTLE SIZE & TYPE: 3x40M G	LAB NUMBER				
ADDRESS: 8701 PEARMAN PARK BLVD STE 201		P.O. NUMBER / PROJECT NUMBER:		11 AG					
JACKSONVILLE, FL 32214		PROJECT LOCATION:							
PHONE: 904/645-6233	FAX: 904/645-6243	SAMPLED BY: W Kelly		AREANALYSES					
CONTACT: WILLIAM KELLY		REMARKS / SPECIAL INSTRUCTIONS: AEL PRE-LOG # Q0013							
TURN AROUND TIME: <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> RUSH		BTEX+MIBE BY EPA 8021		PRESERV					
WW= waste water SW=surface water GW=ground water DW=drinking water OIL A=air SO=soil SL=sludge		HCl I							
SAMPLE ID	SAMPLE DESCRIPTION	Grab Composite	SAMPLING		MATRIX	NO. CONT.			
			DATE	TIME					
EB	EQUIPT. BLANK	G	12/4/05	1330	W	4	X	X	01
12S	CEF-271-12S	G	12/4/05	1420	GW	4	X	X	02
10S	CEF-271-10S	G	12/4/05	1503	GW	4	X	X	03
09S	CEF-271-09S	G	12/4/05	1544	GW	4	X	X	04
07S	CEF-271-07S	G	12/4/05	1650	GW	6	X	X	05

I = Ice H = (HCl) S = (H₂SO₄) N = (HNO₃) T = (Sodium Thiosulfate)

Shipment Out: / /	Method Via:	Sample Kit RB, AB, Trip Bl.	Cooler # D/T, D/T	Relinquished by:		Received by:	
				Date	Time	Date	Time
				<i>W Kelly</i>	<i>12/5/05 0830</i>	<i>AEL Courier</i>	<i>12/5/05 1030</i>
				<i>AEL Courier</i>	<i>12/5/05 1045</i>	<i>D. Salter</i>	<i>12/5/05 1045</i>
Ret: / /	Via:						