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NAS CECIL FIELD, FL
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FOURTH QUARTER GROUNDWATER MONITORING AND OPERATION AND MAINTENANCE REPORT FOR DECEMBER 2009 FOR BUILDING 46 NAS CECIL FIELD FL

05/11/2010

SOLUTIONS-IES INC

FOURTH QUARTER
GROUNDWATER MONITORING AND
OPERATION & MAINTENANCE REPORT
DECEMBER 2009

BUILDING 46
FORMER NAS CECIL FIELD
JACKSONVILLE, FL

CONTRACT NO. N62467-05-G-0193
CONTRACT TASK ORDER NO. 0001

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MAY 11, 2010

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We, the undersigned, do hereby affirm that the information contained in this report is accurate and correct to the best of our knowledge and belief.

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1.0 INTRODUCTION

Solutions-IES, Inc. (Solutions-IES) has been contracted by the Navy (NAVFAC Southeast) to provide long-term groundwater monitoring and operation and maintenance (O&M) at Building 46 (site), Former Naval Air Station (NAS) Cecil Field, Jacksonville, Florida, under Basic Ordering Agreement (BOA) Contract Number N62467-05-G-0193, Contract Task Order Number 0001. Under this contract, Solutions-IES, with support from Terraine, Inc., performs quarterly groundwater monitoring and weekly O&M of the air sparge (AS) system. Solutions-IES submitted quarterly reports for the first and second quarter monitoring events in March and June 2009 and presented the third quarter September 2009 results during the November 2009 Base Closure Team (BCT) meeting. Based on discussions at the November 2009 BCT meeting, it was decided that groundwater monitoring results for the first, second and third quarter events would be presented at the BCT meetings in lieu of formal reports unless changes to the monitoring program were recommended. During the November 2009 BCT meeting, the decision was made to turn off and decommission the AS system. The AS system was decommissioned on November 23, 2009. This Fourth Quarter Groundwater Monitoring Report describes the fourth quarter monitoring activities performed at the site on December 1, 2009, and the weekly O&M activities performed at the site from June 9, 2009 through December 1, 2009.

1.1 SITE LOCATION AND DESCRIPTION

The Building 46 site formerly served as a gasoline station at the former NAS Cecil Field. Underground storage tanks (USTs) were housed at the site, some of which were in operation prior to 1970. Past releases from the UST systems resulted in fuel-related impacts to soil and groundwater. A site location map is included as **Figure 1**.

1.2 SITE HISTORY

In an attempt to reduce concentrations of petroleum related contaminants in the groundwater at the site to below the Florida Department of Environmental Protection (FDEP) Groundwater Clean-up Target Levels (GCTLs), two PHOSter® nutrient injection systems (east and west) were installed and operated on the site from 2001 to 2004. During this time, nitrogen and phosphorus were injected into the subsurface to promote aerobic biodegradation of petroleum contaminants of concern. Nutrient injection was discontinued in April 2004. However, the compressors were still used to inject oxygen into the aquifer

and enhance the biodegradation of benzene, toluene, ethylbenzene and xylenes (BTEX); naphthalene; methyl-*tert*-butyl-ether (MTBE); and total recoverable petroleum hydrocarbons (TRPH).

In January 2008, the FDEP approved discontinuing use of the west system. Both systems were removed from the site on January 31, 2008. An AS trailer with a Sullivan-Palatek 30D7 compressor was installed on the east side of the site on September 17, 2008. The system was connected to the six pre-existing sparge wells illustrated in **Figure 2** (CEF-046-BD-1, -2, -3, -4, -6 and -7) near the two hot spots (monitoring wells CEF-046-01S and CEF-046-07I), as instructed by the RAC contractor (CH2MHILL, 2007). Solutions-IES was initially unable to inject air into wells BD-3 and BD-7. Attempts to clear debris from the wells were unsuccessful due to corrosion of the iron well casings. However, after several months, BD-3 and BD-7 began accepting a minimal volume of air.

2.0 GROUNDWATER MONITORING SUMMARY

During the December 2009 monitoring event, water levels were recorded and groundwater samples were collected for laboratory analysis of BTEX, MTBE, polycyclic aromatic hydrocarbons (PAH), TRPH and sulfate from the wells listed below. Locations of the wells are illustrated on **Figure 2**.

Monitoring Well	Analysis
CEF-046-01S	BTEX, MTBE, PAH, TRPH, Sulfate
CEF-046-02S	BTEX, MTBE, PAH, TRPH, Sulfate
CEF-046-05I	BTEX, MTBE, PAH, TRPH, Sulfate
CEF-046-06D	Sulfate
CEF-046-07I	BTEX, MTBE, PAH, TRPH, Sulfate
CEF-046-21I	BTEX, MTBE, PAH, TRPH, Sulfate
CEF-046-24D	BTEX, MTBE, PAH, TRPH, Sulfate
CEF-046-25I	Sulfate
CEF-046-26I	BTEX, MTBE, PAH, TRPH, Sulfate

2.1 MONITORING WELL OBSERVATIONS

The integrity of the monitoring wells included in the long-term monitoring plan was evaluated during the December 2009 sampling event. The field team noted no extensive damage that would warrant the need for well replacement or repair.

2.2 WATER LEVEL MEASUREMENTS

Water level measurements were recorded in 14 wells on December 1, 2009. **Table 1** shows current and historical groundwater measurements at the site from March 2008 through the December 2009 sampling event. Based on this information, the general direction of groundwater flow in the intermediate aquifer is towards the southwest, which is consistent with previous reports. A groundwater contour map for the intermediate aquifer was prepared based on the groundwater elevations measured during the December 2009 event and has been included as **Figure 3**.

2.3 GROUNDWATER SAMPLING

2.3.1 Methodology

Groundwater sampling was conducted at the site on December 1, 2009. Nine monitoring wells were purged and sampled using low-flow methodology in general accordance with the FDEP, FS 2200 Groundwater Sampling Procedures (December 2008) and the Solutions-IES Work Plan (September 2008). The wells were purged immediately before sampling using a low-flow peristaltic pump, at rate equal to or less than the groundwater recharge rate, until field parameters (temperature, pH, conductivity, turbidity and dissolved oxygen [DO]) stabilized. Oxidation-reduction potential (ORP) was also recorded. Water levels in the wells were continuously monitored during purging to maintain minimal drawdown. Samples were also collected for field analysis of carbon dioxide, alkalinity, ferrous iron, hydrogen sulfide and DO using CHEMetrics® field test kits. The final field parameter measurements are provided in **Table 2**.

Samples were stored on ice and delivered via courier under chain-of-custody procedures to Accutest Laboratories Southeast, Inc. (Accutest), a Florida-certified and National Environmental Laboratory Accreditation Program (NELAP) certified laboratory located in Orlando, Florida.

2.3.2 Laboratory Analyses

Groundwater samples collected at the site were analyzed for the following:

- BTEX and MTBE by EPA Method 8260B;
- PAHs by EPA Method 8270C;
- TRPH by Method FL-PRO; and
- Sulfate by EPA Method 300.

The Level II data report provided by the laboratory is included in **Appendix A**.

2.4 INVESTIGATION-DERIVED WASTE (IDW)

Purge, wash and rinse water from the December 2009 event was collected in 5-gallon containers and transferred to a 55-gallon drum labeled 12012009-SIES-1. The drum was staged in the IDW Storage Building (Building 536). The NAS Jacksonville Public Works Department (PWD-JAX) was notified on December 8, 2009, that the drum was being stored in the building. The Hazardous Waste IDW Characterization Summary Report for disposal was forwarded to PWD-JAX on December 22, 2009.

3.0 SAMPLING AND ANALYTICAL RESULTS

3.1 DATA REVIEW

Accutest data analysts reviewed their data according to laboratory standard operating procedures (SOPs) for Level II quality control/quality assurance reporting. As indicated in the laboratory case narrative (**Appendix A**), several quality control results were outside recovery limits for several methods run by the lab due to possible matrix interference. The review also resulted in several data qualifiers. These are shown with the analyte concentrations in **Table 3**.

3.2 FIELD PARAMETERS

Temperature, pH, conductivity, turbidity, DO and ORP were measured with direct read meters in all nine wells during purging. Alkalinity, carbon dioxide, hydrogen sulfide, ferrous iron and DO were also measured at the completion of purging in select wells using CHEMetrics® field test kits. Results of the field measurements for 2009 are shown on **Table 2**. Copies of the groundwater sampling logs for the December 2009 sampling event are provided in **Appendix B**. A summary of the field parameter measurements is shown below:

- pH ranged from 2.16 to 6.43 standard units;
- Conductivity ranged from 48 to 10,967 microsiemens per centimeter (µS/cm);
- Turbidity ranged from 1.55 to 12.8 nephelometric turbidity units (NTUs) with the exception of CEF-046-02S (31.6 NTUs) and CEF-046-07I (80.3 NTUs);
- ORP ranged from -109 to 437 millivolts (mV); and
- DO measured with the CHEMetrics® field test kits ranged from 0.1 to 3.0 milligrams per liter (mg/L).

3.3 LABORATORY ANALYTICAL RESULTS

Naphthalene, MTBE and sulfate were detected above the GCTLs during this reporting period. Sulfate was also detected above the Natural Attenuation Default Source Concentration (NADSC). Well locations and constituent concentrations in excess of regulatory limits are shown on **Figure 4**.

- Naphthalene was reported at a concentration of 33.9 µg/L in well CEF-046-01S which exceeded the GCTL of 14 µg/L.
- MTBE was reported at a concentration of 48.5 µg/L in well CEF-046-07I which exceeded the GCTL of 20 µg/L.
- Sulfate was reported above the GCTL of 250 mg/L in wells CEF-046-05I (1,340 mg/L), CEF-046-06D (18,100 mg/L) and CEF-046-24D (1,980 mg/L).
- The concentration of benzene in well CEF-046-06D exceeded the NADSC of 2,500 mg/L.

The laboratory results are summarized in **Table 3** and the laboratory analytical report is included in **Appendix A**. Graphs displaying the historical sulfate concentrations in select wells, historical naphthalene concentrations in well CEF-046-01S and historical MTBE concentrations in well CEF-046-07I are included as **Figures 5**, **6** and **7**, respectively.

4.0 AIR SPARGE SYSTEM O&M SUMMARY

The system was restarted on June 9, 2009, following the second quarter sampling event, and operated for approximately 82 days of the 91-day third quarter reporting period. The system shut down briefly on two occasions due to loss of power; however, no major operational problems were encountered. The AS system was turned off on September 8, 2009, for the third quarter sampling event, and after it was restarted on September 14, 2009, it operated continuously until November 23, 2009, when it was permanently shut down. The AS system was decommissioned and removed from the site on December 1, 2009. Weekly O&M forms are provided in **Appendix C**.

5.0 CONCLUSIONS

The AS system at Building 46 was permanently decommissioned and removed from the site on December 1, 2009. MTBE, naphthalene and sulfate remain elevated above the GCTLs in several of the wells at the site. Sulfate was the only constituent of concern detected above the NADSC in one well during this sampling period. The next quarterly groundwater monitoring event will be conducted in March 2010.

6.0 MONITORING PROGRAM CHANGES AND RECOMMENDATIONS

During the November 2009 BCT meeting, it was agreed upon to present the results from the first, second and third quarter groundwater monitoring events at the BCT meetings in lieu of formal reports, unless changes to the monitoring program were recommended. The fourth quarter monitoring results would continue to be submitted in a formal report.

The AS system has been decommissioned and the natural attenuation parameters carbon dioxide, alkalinity, ferrous iron and hydrogen sulfide are no longer providing pertinent data on the system performance. Therefore, Solutions-IES recommends removing these parameters from the monitoring program.

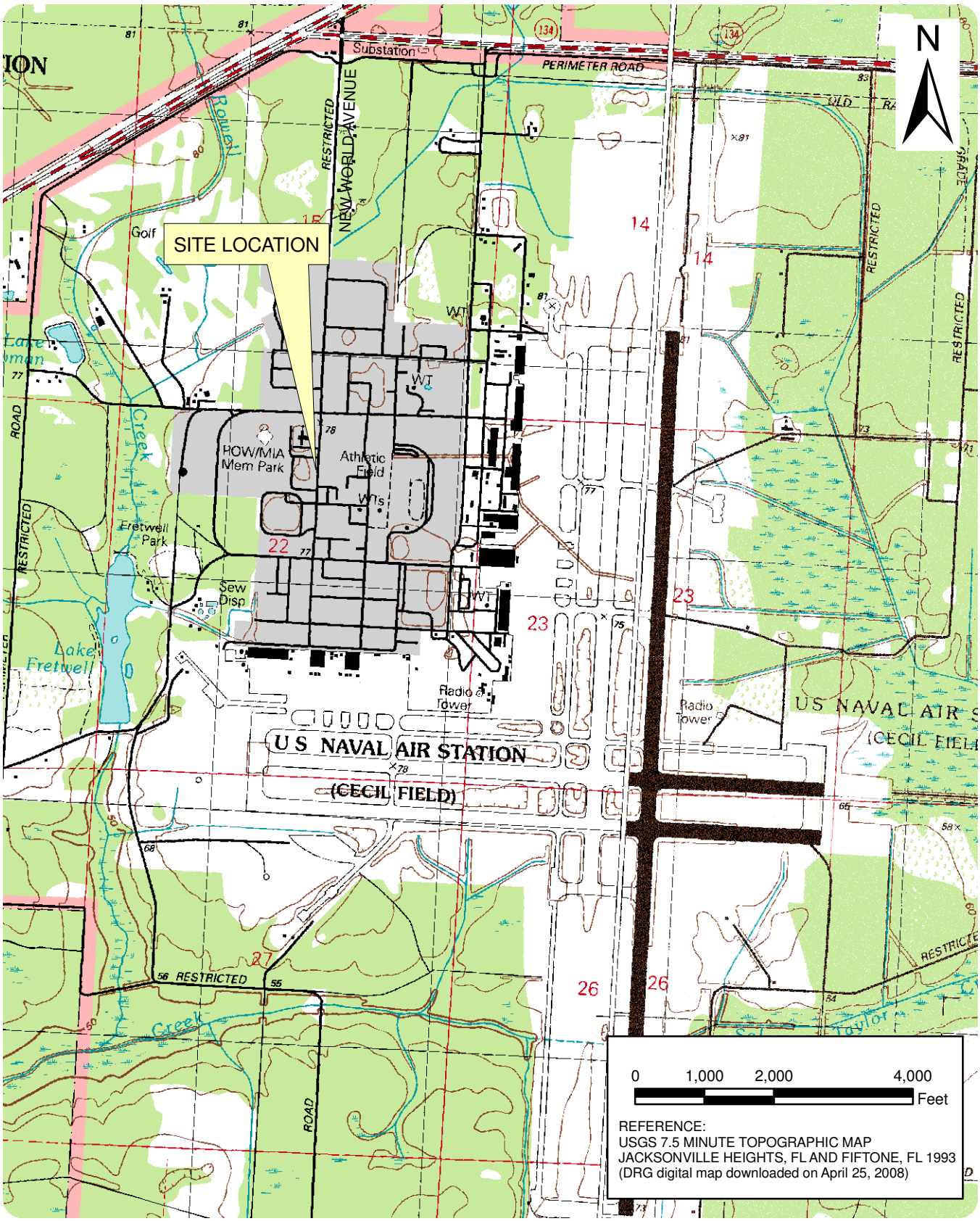
Well CEF-046-25I appears to be located more cross-gradient than immediately downgradient of the source area and has never had a detection of VOCs, PAHs or TRPH that exceeded the GCTLs. Sulfate has not been reported above the GCTL since December 2005. Based on the groundwater flow direction shown on **Figure 3**, well CEF-046-26I appears to be a better downgradient well to monitor plume migration. Therefore, Solutions-IES recommends removing well CEF-046-25I from the monitoring program. However, it appears that no deep well is currently being monitored to evaluate sulfate concentrations downgradient of well CEF-046-06D. Solutions-IES recommends adding well CEF-046-27D to the monitoring program for analysis of sulfate.

7.0 REFERENCES

CH2MHILL, 2007. Technical Memorandum – Remedial Action Optimization Report for Building 46 Naval Air Station Cecil Field, Jacksonville Florida. May 2007.

Florida Department of Environmental Protection (FDEP), 2008. DEP-SOP-001/01, FS 2200 Groundwater Sampling, December 2008.

FIGURES



PROJECT NUMBER	DRAFTER	CHECKED BY	PROJECT MANAGER	DATE	FILE
4080.08A2.CECI	JC	JK	BR	11/07/08	CeciITOPO.mxd

Solutions-IES
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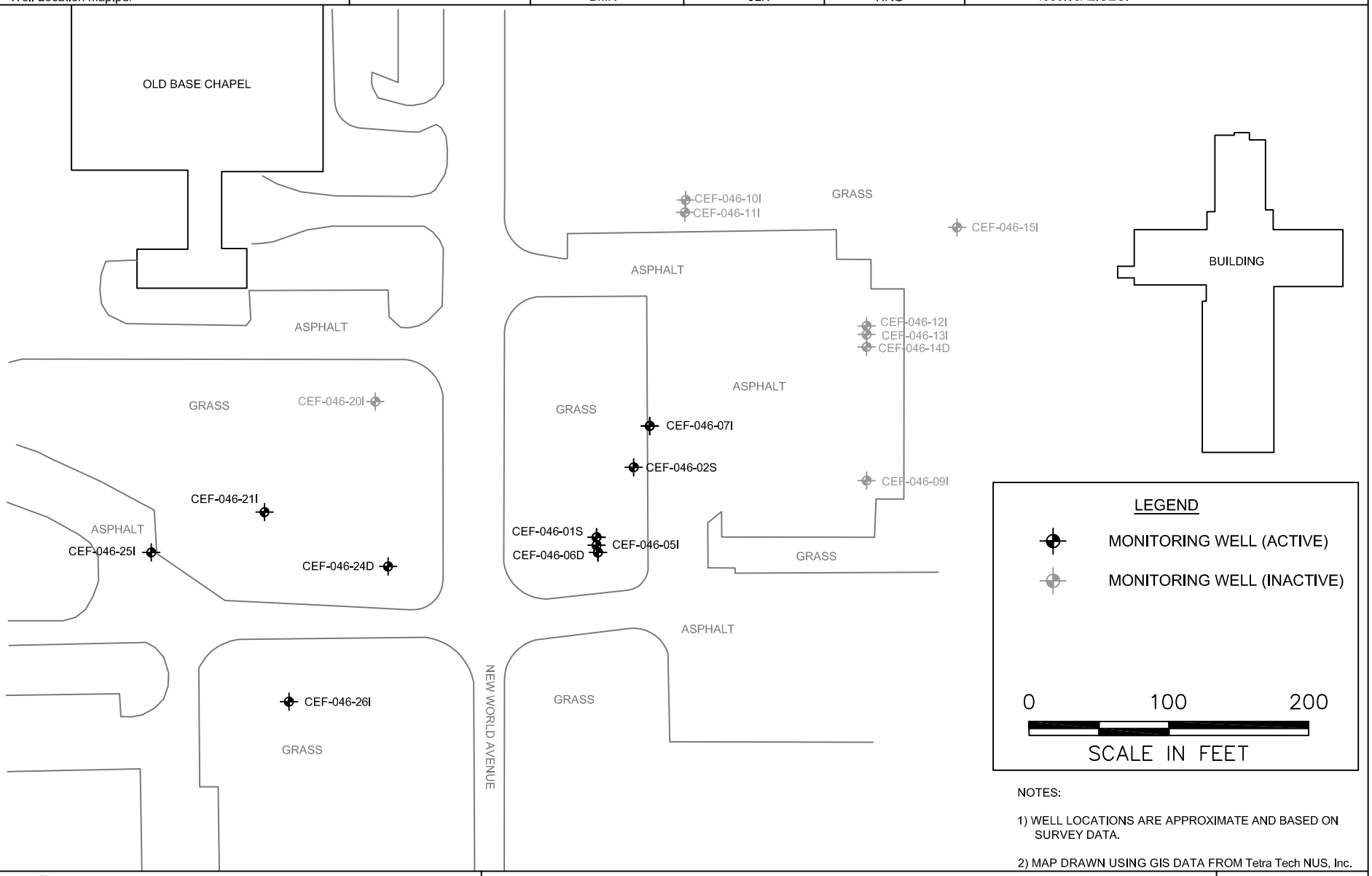
SITE LOCATION MAP
BUILDING 46 - NAS CECIL FIELD
JACKSONVILLE, FL

FIGURE:
1

FILE	DATE	PROJECT MANAGER	CHECKED BY	DRAFTER	PROJECT NUMBER
Well Location Map.pdf	01/27/2010	BMR	JLK	HRG	4080.08A2.CECI



NOTES:

1) WELL LOCATIONS ARE APPROXIMATE AND BASED ON SURVEY DATA.

2) MAP DRAWN USING GIS DATA FROM Tetra Tech NUS, Inc.

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WELL LOCATION MAP
BUILDING 46 - NAS CECIL FIELD
JACKSONVILLE, FLORIDA
DECEMBER 2009

FIGURE:

2

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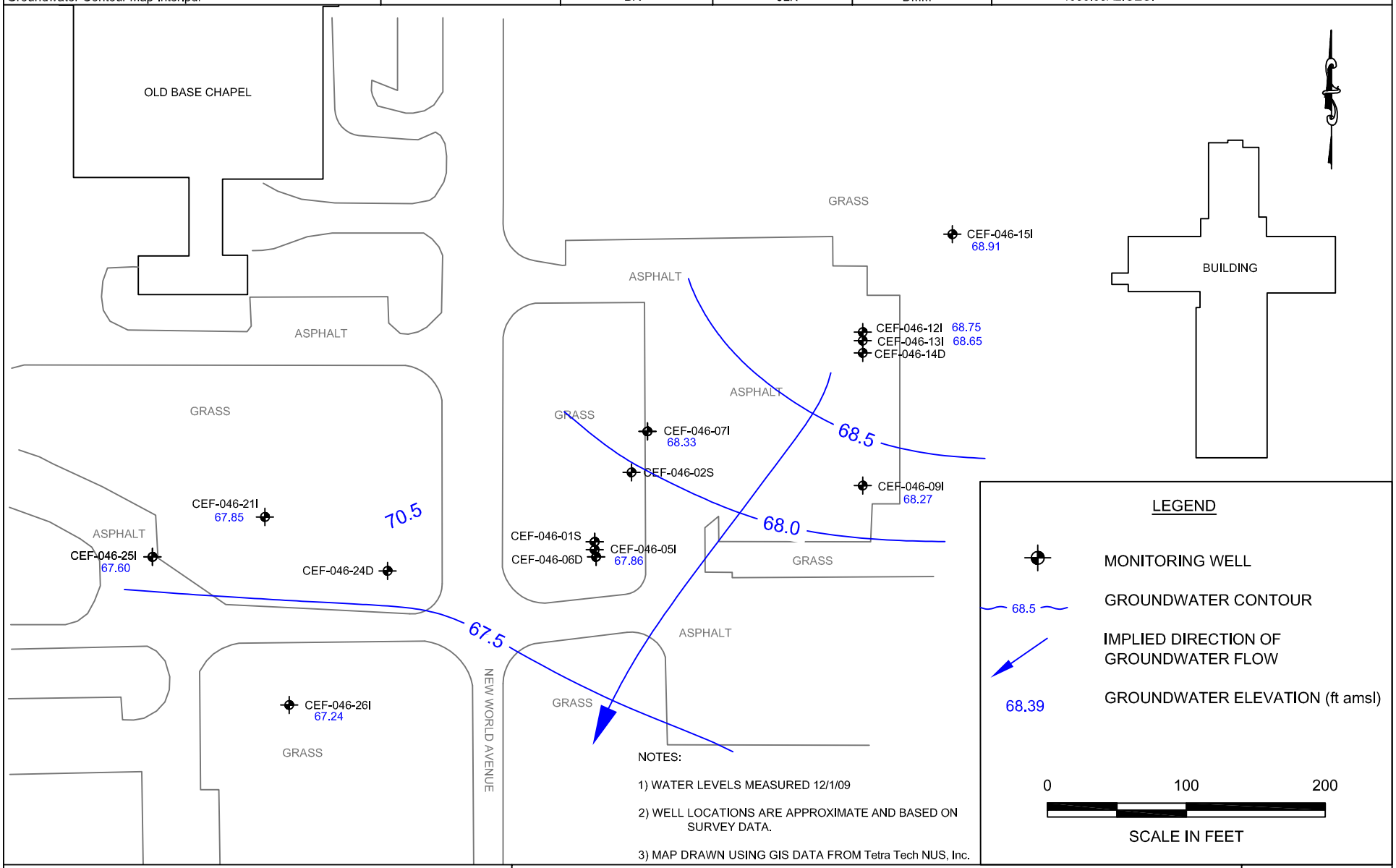
FILE	DATE	PROJECT MANAGER	CHECKED BY	DRAFTER	PROJECT NUMBER
Groundwater Contour Map-Inter.pdf	01/27/2010	BR	JLK	DMM	4080.08A2.CECI



NOTES:

1) WATER LEVELS MEASURED 12/1/09

2) WELL LOCATIONS ARE APPROXIMATE AND BASED ON SURVEY DATA.

3) MAP DRAWN USING GIS DATA FROM Tetra Tech NUS, Inc.

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GROUNDWATER CONTOUR MAP - INTERMEDIATE AQUIFER
BUILDING 46 - NAS CECIL FIELD
JACKSONVILLE, FLORIDA
DECEMBER 2009

FIGURE:

3

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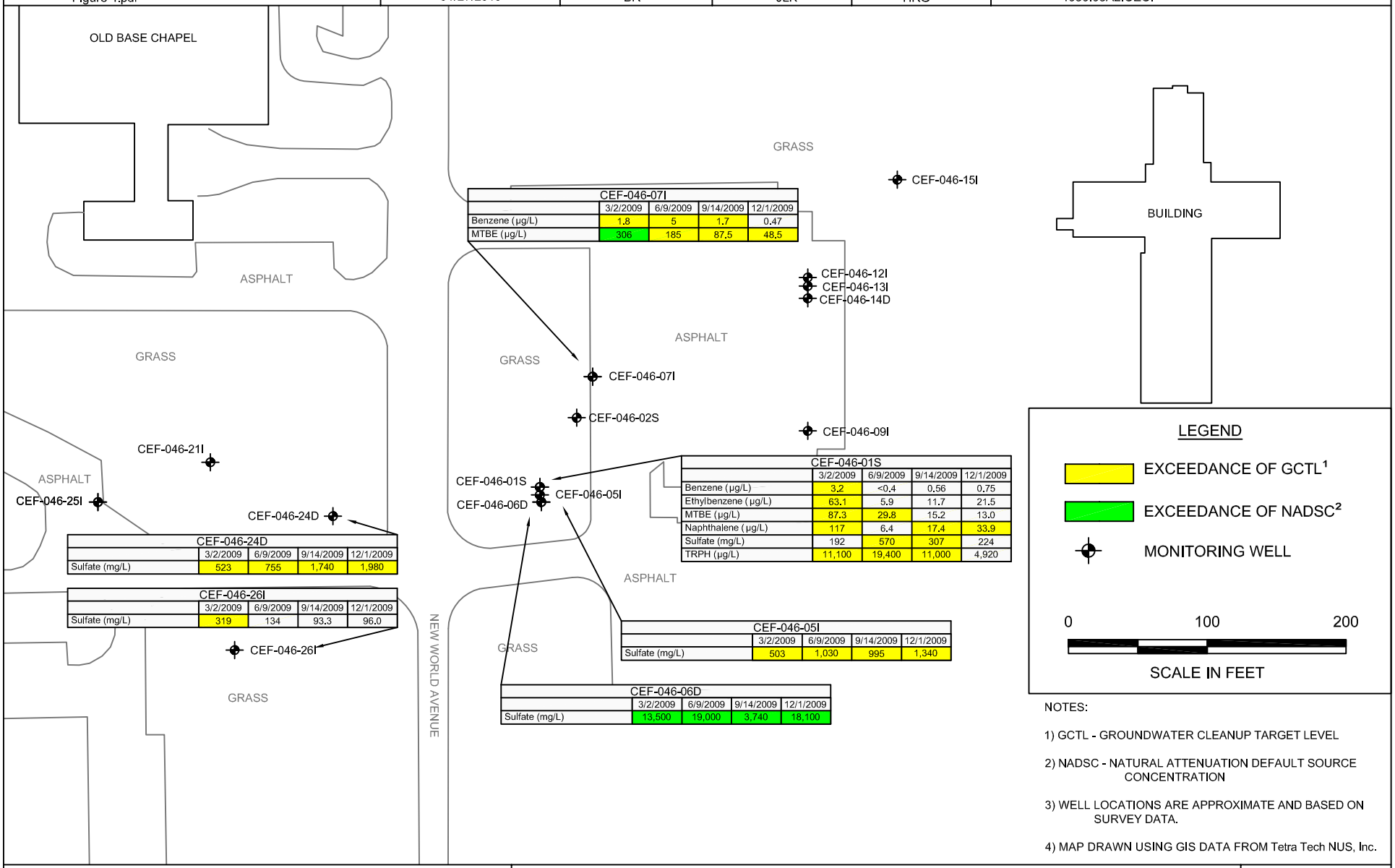
FILE	DATE	PROJECT MANAGER	CHECKED BY	DRAFTER	PROJECT NUMBER
Figure 4.pdf	01/27/2010	BR	JLK	HRG	4080.08A2.CECI



CEF-046-07I	3/2/2009	6/9/2009	9/14/2009	12/1/2009
Benzene (µg/L)	1.8	5	1.7	0.47
MTBE (µg/L)	306	185	87.5	48.5

CEF-046-01S	3/2/2009	6/9/2009	9/14/2009	12/1/2009
Benzene (µg/L)	3.2	<0.4	0.56	0.75
Ethylbenzene (µg/L)	63.1	5.9	11.7	21.5
MTBE (µg/L)	87.3	29.8	15.2	13.0
Naphthalene (µg/L)	117	6.4	17.4	33.9
Sulfate (mg/L)	192	570	307	224
TRPH (µg/L)	11,100	19,400	11,000	4,920

CEF-046-24D	3/2/2009	6/9/2009	9/14/2009	12/1/2009
Sulfate (mg/L)	523	755	1,740	1,980

CEF-046-26I	3/2/2009	6/9/2009	9/14/2009	12/1/2009
Sulfate (mg/L)	319	134	93.3	96.0

CEF-046-05I	3/2/2009	6/9/2009	9/14/2009	12/1/2009
Sulfate (mg/L)	503	1,030	995	1,340

CEF-046-06D	3/2/2009	6/9/2009	9/14/2009	12/1/2009
Sulfate (mg/L)	13,500	19,000	3,740	18,100

NOTES:

1) GCTL - GROUNDWATER CLEANUP TARGET LEVEL

2) NADSC - NATURAL ATTENUATION DEFAULT SOURCE CONCENTRATION

3) WELL LOCATIONS ARE APPROXIMATE AND BASED ON SURVEY DATA.

4) MAP DRAWN USING GIS DATA FROM Tetra Tech NUS, Inc.

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CONTAMINANT CONCENTRATION MAP
BUILDING 46 - NAS CECIL FIELD
JACKSONVILLE, FLORIDA
DECEMBER 2009

FIGURE:

4

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FIGURE 5
Historical Sulfate Concentrations in Select Wells
June 2005 - December 2009

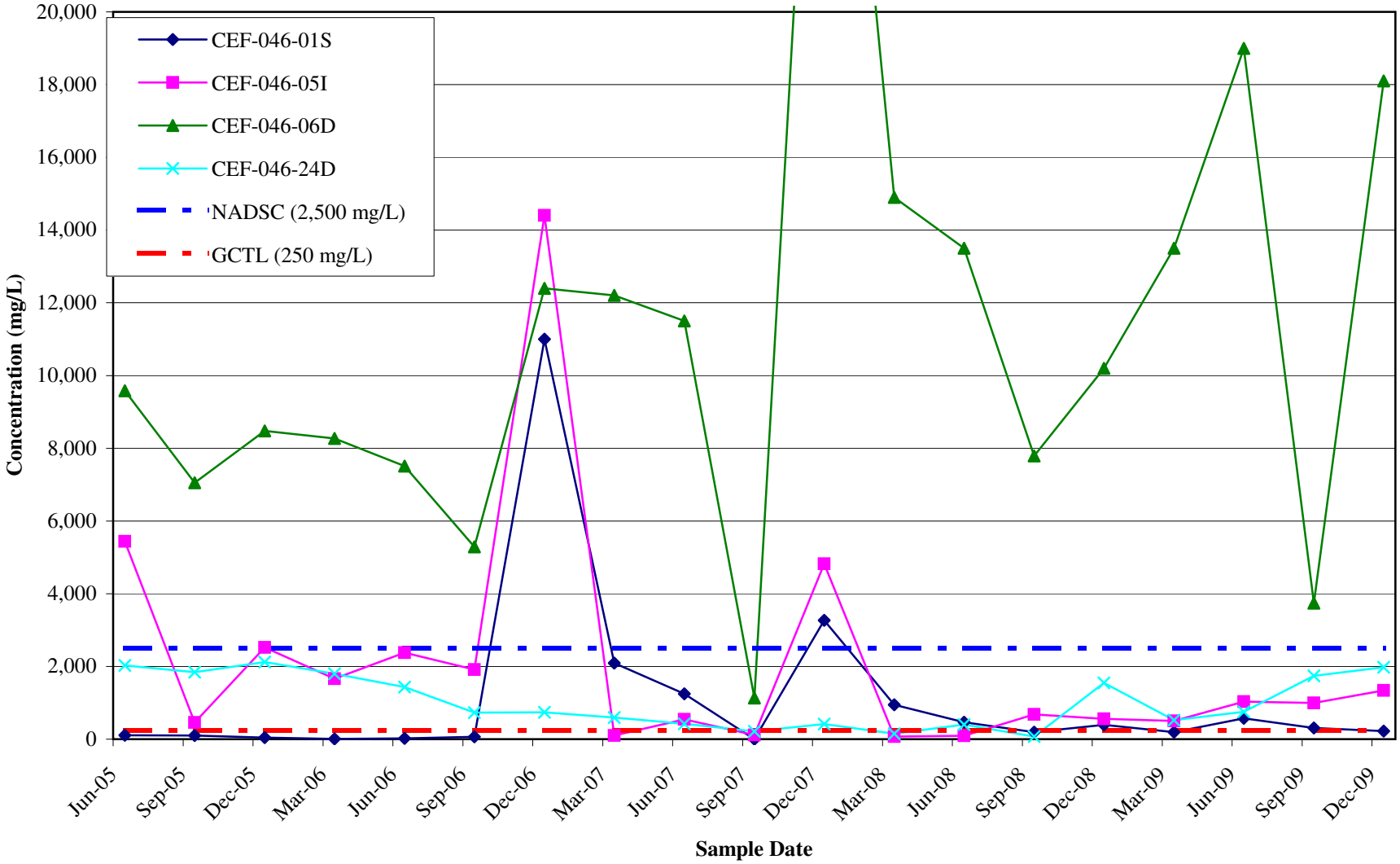


FIGURE 6
Historical Naphthalene Concentrations in Well CEF-046-01S
March 2003 - December 2009

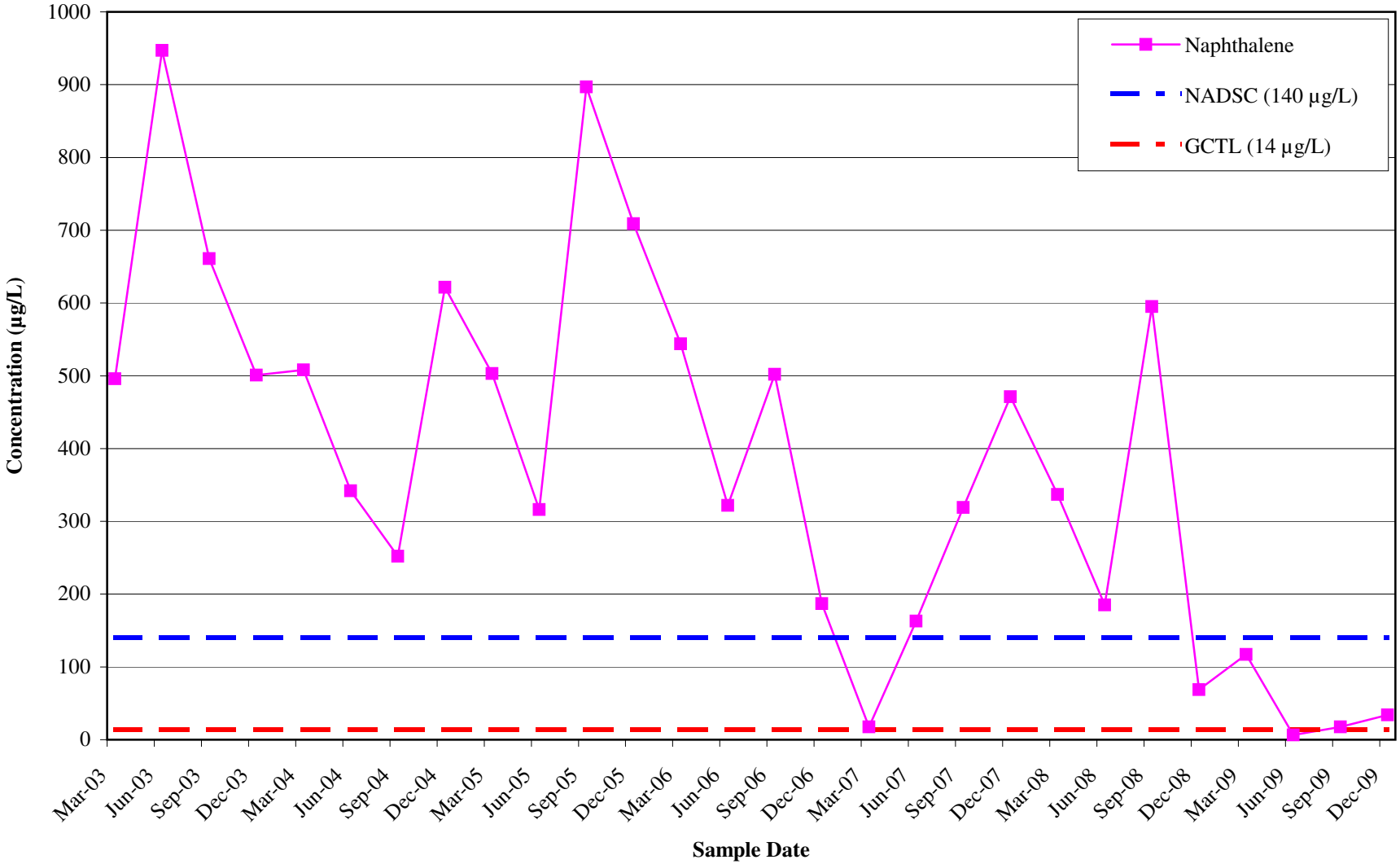
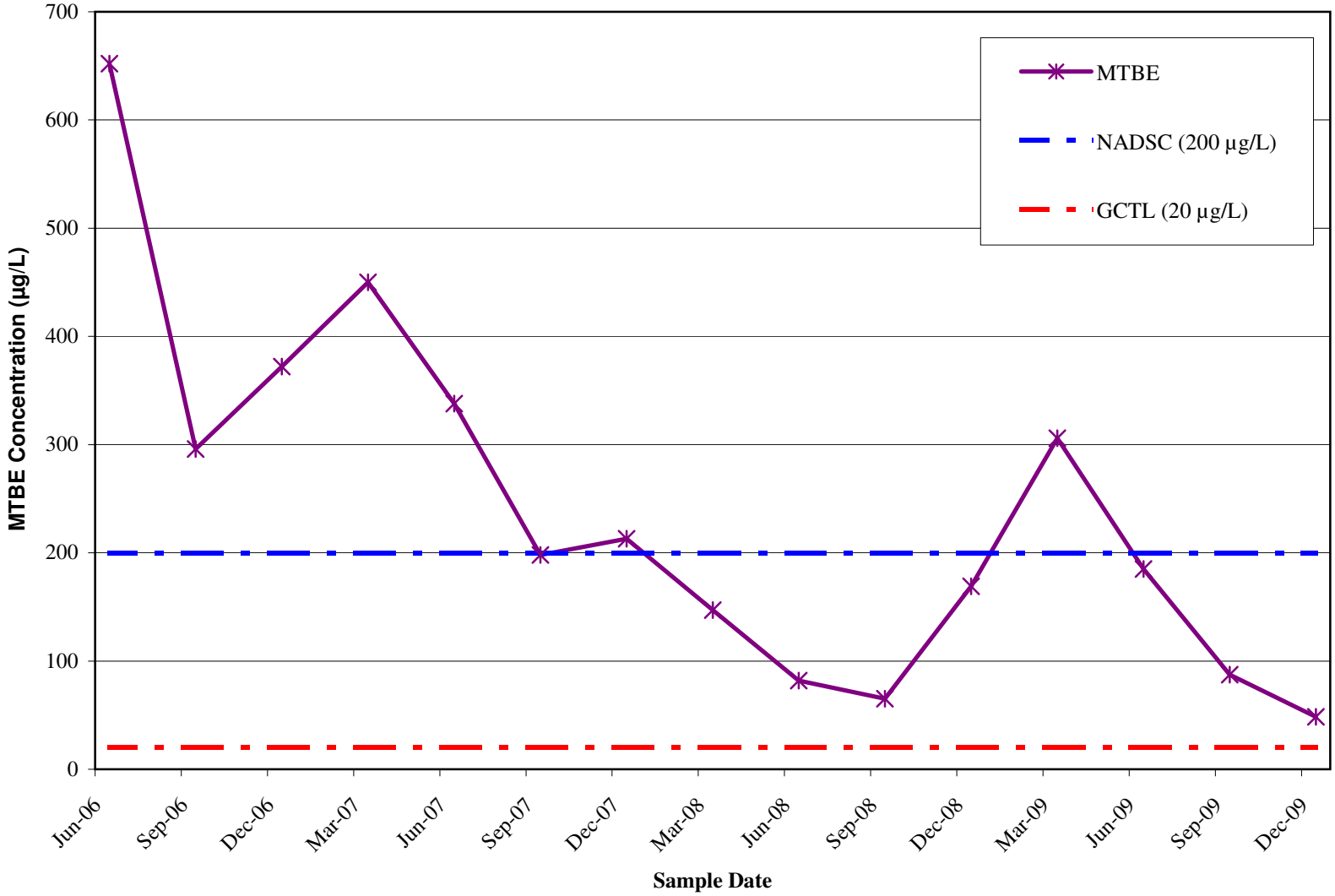


FIGURE 7
Historical MTBE Concentrations in Well CEF-046-07I
June 2006 - December 2009



TABLES

TABLE 1
GROUNDWATER ELEVATIONS

Building 46
NAS Cecil Field
Jacksonville, Florida

Well ID	Date Measured	Total Depth (ft bgs)	Top of Casing Elevation (ft amsl)	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft amsl)
CEF-046-01S	3/5/2008	14.24	79.08	9.80	69.28
	6/17/2008			10.47	68.61
	9/16/2008			5.42	73.66
	12/17/2008			9.96	69.12
	3/2/2009			10.45	68.63
	6/9/2009			5.79	73.29
	9/14/2009			7.00	72.08
	12/1/2009			10.50	68.58
CEF-046-02S	3/5/2008	13.88	79.08	9.68	69.40
	6/17/2008			10.37	68.71
	9/16/2008			5.60	73.48
	12/17/2008			9.85	69.23
	3/2/2009			10.32	68.76
	6/9/2009			5.91	73.17
	9/14/2009			6.96	72.12
	12/1/2009			10.42	68.66
CEF-046-05I	3/5/2008	49.65	79.18	10.98	68.20
	6/17/2008			11.49	67.69
	9/16/2008			7.41	71.77
	12/17/2008			10.85	68.33
	3/2/2009			11.34	67.84
	6/9/2009			7.76	71.42
	9/14/2009			8.51	70.67
	12/1/2009			11.32	67.86
CEF-046-06D	3/5/2008	79.82	79.17	11.23	67.94
	6/17/2008			11.95	67.22
	9/16/2008			9.71	69.46
	12/17/2008			13.19	65.98
	3/2/2009			13.34	65.83
	6/9/2009			10.25	68.92
	9/14/2009			10.43	68.74
	12/1/2009			12.89	66.28

TABLE 1
GROUNDWATER ELEVATIONS

Building 46
NAS Cecil Field
Jacksonville, Florida

Well ID	Date Measured	Total Depth (ft bgs)	Top of Casing Elevation (ft amsl)	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft amsl)
CEF-046-07I	3/5/2008	29.68	79.02	9.97	69.05
	6/17/2008			10.68	68.34
	9/16/2008			6.47	72.55
	12/17/2008			10.19	68.83
	3/2/2009			10.61	68.41
	6/9/2009			6.76	72.26
	9/14/2009			7.69	71.33
	12/1/2009			10.69	68.33
CEF-046-09I	3/5/2008	48.81	79.05	10.20	68.85
	6/17/2008			10.88	68.17
	9/16/2008			6.97	72.08
	12/17/2008			10.30	68.75
	3/2/2009			10.66	68.39
	6/9/2009			7.11	71.94
	9/14/2009			7.82	71.23
	12/1/2009			10.78	68.27
CEF-046-12I	3/5/2008	29.61	78.73	9.22	69.51
	6/17/2008			9.57	69.16
	9/16/2008			5.98	72.75
	12/17/2008			9.41	69.32
	3/2/2009			9.71	69.02
	6/9/2009			6.04	72.69
	9/14/2009			6.79	71.94
	12/1/2009			9.98	68.75
CEF-046-13I	3/5/2008	39.56	78.87	9.52	69.35
	6/17/2008			10.24	68.63
	9/16/2008			6.34	72.53
	12/17/2008			9.67	69.20
	3/2/2009			9.98	68.89
	6/9/2009			6.38	72.49
	9/14/2009			7.10	71.77
	12/1/2009			10.22	68.65
CEF-046-14D	3/5/2008	78.79	78.88	9.39	69.49
	6/17/2008			10.21	68.67
	9/16/2008			7.04	71.84
	12/17/2008			9.88	69.00
	3/2/2009			10.00	68.88
	6/9/2009			6.91	71.97
	9/14/2009			7.50	71.38
	12/1/2009			10.30	68.58

TABLE 1
GROUNDWATER ELEVATIONS

Building 46
NAS Cecil Field
Jacksonville, Florida

Well ID	Date Measured	Total Depth (ft bgs)	Top of Casing Elevation (ft amsl)	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft amsl)
CEF-046-15I	6/17/2008	29.77	79.75	10.74	69.01
	9/16/2008			6.91	72.84
	12/17/2008			10.28	69.47
	3/2/2009			10.40	69.35
	6/9/2009			6.85	72.90
	9/14/2009			7.55	72.20
	12/1/2009			10.84	68.91
CEF-046-21I	3/5/2008	29.70	79.33	11.34	67.99
	6/17/2008			11.87	67.46
	9/16/2008			7.42	71.91
	12/17/2008			10.96	68.37
	3/2/2009			11.36	67.97
	6/9/2009			7.75	71.58
	9/14/2009			8.58	70.75
	12/1/2009			11.48	67.85
CEF-046-24D	3/5/2008	90.45	78.74	10.46	68.28
	6/17/2008			11.25	67.49
	9/16/2008			7.99	70.75
	12/17/2008			11.01	67.73
	3/2/2009			11.19	67.55
	6/9/2009			8.16	70.58
	9/14/2009			8.74	70.00
	12/1/2009			11.27	67.47
CEF-046-25I	3/5/2008	50.45	79.17	11.51	67.66
	6/17/2008			12.14	67.03
	9/16/2008			7.69	71.48
	12/17/2008			11.06	68.11
	3/2/2009			11.53	67.64
	6/9/2009			8.02	71.15
	9/14/2009			8.81	70.36
	12/1/2009			11.57	67.60
CEF-046-26I	3/5/2008	47.76	79.43	12.25	67.18
	6/17/2008			12.76	66.67
	9/16/2008			8.53	70.90
	12/17/2008			11.80	67.63
	3/2/2009			12.30	67.13
	6/9/2009			8.87	70.56
	9/14/2009			9.66	69.77
	12/1/2009			12.19	67.24

NOTES: Data collected prior to 2008 are provided in previous reports
ft bgs - feet below ground surface
ft amsl - feet above mean sea level
ft btoc - feet below top of casing

TABLE 2
FIELD AND NATURAL ATTENUATION PARAMETERS

Building 46
NAS Cecil Field
Jacksonville, Florida

Well ID	Sample Date	Field Parameters						Natural Attenuation Parameters			
		pH (SU)	Conductivity (µS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation - Reduction Potential (mV)	Temperature (^oC)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)
CEF-046-01S	3/2/2009	5.52	867	19.7	0.1	-187.4	19.10	70	18	4.0	1.06
	6/9/2009	3.59	992	12.0	0.2	95.5	27.50	70	0.0	6.0	0.0
	9/14/2009	4.38	867	12.6	1.0	310.4	27.73	40	1,000+	5.0	0.0
	12/1/2009	4.77	545	12.8	0.1	-65.5	24.58	35	0.0	6.0	0.424
CEF-046-02S	3/2/2009	6.48	456	6.7	0.6	177.2	18.61	35	35	0.1	0.0
	6/9/2009	6.05	564	5.17	0.4	7.9	26.26	35	170	0.0	0.0
	9/14/2009	6.55	714	10.0	0.4	92.30	29.63	70	100	0.0	0.0
	12/1/2009	6.43	508	31.6	1.0	91.50	23.95	100	0.0	0.3	0.0
CEF-046-05I	3/2/2009	3.07	925	78.8	4.0	501.5	22.88	350	0.0	1.0	0.0
	6/9/2009	3.40	1,102	2.1	2.0	435.0	27.31	500	0.0	5.0	0.0
	9/14/2009	3.10	1,329	5.4	2.0	444.0	28.29	13	1,000+	2.0	0.0
	12/1/2009	2.66	1,364	5.9	3.0	431.6	25.13	500	0.0	7.0	0.0
CEF-046-06D	3/2/2009	2.61	8,190	6.51	0.2	480.1	24.24	Interference	0.0	10+	0.0
	6/9/2009	2.04	9,863	5.43	10.32*	498.7	27.61	NM	NM	NM	NM
	9/14/2009	2.51	11,019	4.55	7.0	446.6	27.75	0	Interference	10+	0.0
	12/1/2009	2.16	10,967	4.2	0.21*	437.4	25.12	NM	NM	NM	NM
CEF-046-07I	3/2/2009	3.55	291	8.36	0.7	426.2	22.46	110	0.0	7	0.0
	6/9/2009	3.91	116	13.4	0.5	353.0	25.45	50	0.0	2	0.0
	9/14/2009	4.09	260	29.9	4.5	385.90	27.49	100	1,000+	10.0	0.0
	12/1/2009	3.95	83	80.3	1.0	-31.10	24.85	100	50	0.3	0.0
CEF-046-21I	3/2/2009	2.39	228	29.4	0.2	206.10	21.36	70	0.0	3.0	0.2
	6/9/2009	4.16	223	3.24	0.3	168.80	24.48	70	0.0	4.5	0.0
	9/14/2009	4.12	198	8.89	0.4	32.30	24.63	170	100-	2.0	0.0
	12/1/2009	4.12	195	4.2	1.0	138.40	23.20	32	0	3.0	0.0
CEF-046-24D	3/2/2009	2.97	1,022	5.6	0.4	444.70	21.57	250	0.0	10+	0.0
	6/9/2009	2.82	1,353	3.05	0.5	508.10	25.93	325	0.0	10+	0.0
	9/14/2009	3.59	1,465	3.4	0.0	241.5	26.20	700	10-	10+	0.0
	12/1/2009	4.19	1,691	1.55	0.1	203.1	25.16	150	0	10.0	0.0
CEF-046-25I	03/02/09	4.36	80	0.62	0.3	-77.00	21.58	70	0	5.0	3.2
	06/09/09	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/14/09	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/1/2009	4.85	48	2.54	0.56*	-109.3	22.99	NM	NM	NM	NM
CEF-046-26I	3/2/2009	3.69	584	2.8	0.2	123.90	22.83	160	0	10+	1.06
	6/9/2009	2.47	331	9.66	0.0	37.20	22.95	150	0	10+	1.06
	9/14/2009	3.64	262	3.83	0.2	-55.10	23.50	50	0	10+	0.85
	12/1/2009	3.95	249	4.04	1.0	29.80	22.68	14	0	10.0	1.80

NOTES:
Data collected prior to 2009 are are provided in previous reports
SU - Standard units
µS/cm - Microsiemens per centimeter
NTU - Nephelometric turbidity units
mV - Millivolts
mg/L - Milligrams per liter
NM - Not measured
ND - Not detected
Interference - No reading obtained due to matrix interference
* DO measured with field meter and not Chemetrics kit

TABLE 3
SUMMARY OF LABORATORY RESULTS

Building 46
NAS Cecil Field
Jacksonville, Florida

Well ID	Sample Date	VOLATILE ORGANIC COMPOUNDS (µg/L)					POLYCYCLIC AROMATIC HYDROCARBONS (µg/L)				
		Benzene	Ethylbenzene	Toluene	Xylenes (total)	Methyl-*tert*-butyl-ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Sulfate (mg/L)	TRPH (µg/L)
GCTL (µg/L)		1	30	40	20	20	14	28	28	250 *	5,000
NADSC (µg/L)		100	300	400	200	200	140	280	280	2500 *	50,000
CEF-046-01S	12/21/2000	13,000	2,900	40,000	19,000	NM	550	NM	NM	NM	23,000
	1/25/2001	0.28	0.44	1.4	3.2	<1.0	<1.0	NM	NM	NM	290
	3/14/2003	592.0	1160.0	1190.0	4,580.0	619	496	<4.0	<4.0	NM	77,000
	6/9/2003	262.0	626.0	318.0	1,070.0	511	947	136	162	NM	33,200
	9/3/2003	350.0	735.0	575.0	2,920.0	365	661	133	126	NM	38,300
	12/11/2003	430.0	982.0	1410.0	3,540.0	432	501	89	117	NM	39,600
	3/18/2004	401.0	741.0	1160.0	2,280.0	486	508	61.5	98.5	NM	16,200
	6/8/2004	163.0	484.0	194.0	526.0	310	342	36.6	76.5	NM	15,400
	9/21/2004	54.8Y	321Y	97.4Y	2140Y	276Y	252 J3Y	24.2 J3Y	64.2 J3Y	NM	33,300Y
	12/1/2004	153.0	601.5	163.9	779.0	216.1	621.4	65.6	143	NM	25,200
	3/13/2005	174.0	687.0	152.0	1,100.0	334	503	56.9	94.5	NM	23,000
	6/9/2005	263.0	767.0	308.0	1,330.0	270	316	51.3	73.0	109	41,100
	9/6/2005	127.0	664.0	169.0	2,520.0	133	897	52.6	188	97.9	51,000
	12/6/2005	85.9	627.0	95.8	1,410.0	644	709	20.9I	108	42.8	35,500
	3/29/2006	15.2	205.0	36.2	458.0	267	544	65.8	119	4.37	35,300
	6/9/2006	21.9	259.0	118.0	698.0	187	322	36.7	78	24.5	17,100
	9/24/2006	31.6	359.0	57.1	1,320.0	140	502	76.9	111	63.0	12,300
	12/9/2006	12.8	131.0	37.3	194.0	23.1	187	32.2	53	11,000	4,130
	3/1/2007	12.0	107.0	11.4	363.0	104	17.7	64.8	50.1	2,090	6,770
	6/15/2007	34.0	159.0	9.8	391.0	150	163	30.7	49.6	1,250	7,430
	9/21/2007	145.0	173.0	5.1	292.0	142	319	73.4	84.9	1,080 MHA	11,200V
	12/5/2007	78.4	230.0	3.8	304.0	77.3	471	107	103.0	3,270	52,700
	3/6/2008	63.0	199	3.09	207	97.1	337	65.1	89.0	946	36,500
	6/18/2008	75.9 J4	194 J4	2.61	117 J4	78.4 J4	185	22.2	32.6	469	39,600 B1,S10,V
	9/16/2008	27.8	170	14.8	735	2.3 I	595	152	135.0	190	51,600
	12/18/2008	5.9	50.5 a	<1.8	42.4 a, I	38.1 a	68.8	16.0	7.8	397	19,400
	3/2/2009	3.2	63.1	0.39 I	19.5	87.3	117	26.5	25.7	192	11,100
	6/9/2009	<0.40	5.9	1.6	12.5	29.8	6.4	<0.95	1.8 I	570	19,400
	9/14/2009	0.56	11.7	1.8	15.9	15.2	17.4	2.9	4.9	307	11,000
	12/1/2009	0.75 I	21.5	0.89 I	12.1	13.0	33.9	5.6	8.8	224	4,920
CEF-046-02S	12/21/2000	300	72	51	200	NA	230	NM	NM	NM	3,100
	1/25/2001	7.3	0.96	1.5	3.3	7.1	11	NM	NM	NM	540
	3/14/2003	<1.0	<1.0	<1.0	<1.0	156	<2.0	<2.0	<2.0	NM	1,370
	6/5/2003	<1.00	<1.0	<1.0	<1.0	54.5	<0.10	<0.10	<0.10	NM	339
	9/3/2003	<1.00	<1.0	<1.0	<1.0	21.3	0.24	<0.10	<0.10	NM	339
	12/11/2003	<1.00	<1.0	<1.0	<3.0	21.7	<0.10	<0.10	<0.10	NM	796
	3/18/2004	12.4	<1.0	<1.0	3.7	24.3	1.4	0.16	0.21	NM	436
	6/8/2004	3.72	<1.00	<1.00	<1.00	26.1	0.643 I	<2.04	<2.04	NM	530
	9/21/2004	<1.00Y	<1.00Y	<1.00Y	<1.00Y	8.32Y	<2.17 J3Y	<2.17 J3Y	<2.17 J3Y	NM	0.26Y
	12/1/2004	118	134.6	0.5700 I	136	135.8	81.30	4.56 I	<0.214	NM	2,450
	3/13/2005	54.6	1.04 I	0.210 I	1.64	47.8	96.50	7.77	0.439 I	NM	1,600
	6/9/2005	25.9	< 0.201	<0.142	<0.220	17.2	<0.101	<0.133	<0.210	664	1,850
	9/6/2005	<0.143	<0.201	<0.142	<0.220	3.95	26.0	1.12 I	<0.203	843	NM
	9/21/2005	NM	NM	NM	NM	NM	NM	NM	NM	NM	341
	12/6/2005	<0.143	<0.201	<0.142	<0.220	4.47	<0.100	<0.133	<0.203	1,880	654
	3/30/2006	0.460 I	0.420 I	<0.176	<0.298	3.41	8.9	0.810 I	<0.203	722	1,170
	6/9/2006	<0.305	<0.338	<0.257	<0.433	2.00	<0.100	<0.133	<0.203	442	623
	9/25/2006	<0.305	<0.338	<0.257	<0.433	1.69	<0.100	<0.133	<0.203	297	794
	12/8/2006	3.18	0.600 I	<0.257	1.46	2.44	<0.100	<0.133	<0.203	415	431
	3/1/2007	<0.305	<0.338	<0.257	<0.433	1.06	3.44 I	2.73 I	<0.203	360	316
	6/15/2007	<0.305	<0.338	<0.338	<0.433	3.28	<0.100	<0.133	<0.203	41.0	231
	9/12/2007	<0.305	<0.338	0.380 I	<0.433	<0.336	<0.100	<0.133	<0.203	<40.0	157 I V
	12/5/2007	<0.305	<0.338	<0.257	<0.433	1.02	<0.100	<0.133	<0.203	245	32 I
	3/6/2008	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	104	<18
	6/18/2008	<0.270	0.240 I	<0.280	<0.860	<0.420	<0.909	<0.909	<0.909	163	298 V,CF2,CF6
	9/16/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	297	244
	12/18/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	293	218 I
	3/2/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	170	<170
	6/9/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	82.5	<160
	9/14/2009	<0.40	<0.43	<0.35	<1.2	<0.26	0.34 I	<0.24	<0.24	71.8	284
	12/1/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	161	<160

TABLE 3
SUMMARY OF LABORATORY RESULTS

Building 46
NAS Cecil Field
Jacksonville, Florida

Well ID	Sample Date	VOLATILE ORGANIC COMPOUNDS (µg/L)					POLYCYCLIC AROMATIC HYDROCARBONS (µg/L)				
		Benzene	Ethylbenzene	Toluene	Xylenes (total)	Methyl-*tert*-butyl-ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Sulfate (mg/L)	TRPH (µg/L)
GCTL (µg/L)		1	30	40	20	20	14	28	28	250 *	5,000
NADSC (µg/L)		100	300	400	200	200	140	280	280	2500 *	50,000
CEF-046-05I	12/21/2000	**850**	**38**	**13**	**150**	NM	**1.6**	NM	NM	NM	<550
	1/25/2001	**180**	**7.4**	**3.1**	**31**	<1.0	<1.0	NM	NM	NM	<520
	3/14/2003	<1.0	<1.0	<1.0	**9.0**	<1.0	<2.0	<2.0	<2.0	NM	<200
	6/5/2003	<1.00	<1.0	<1.0	**5.2**	**4.6**	<0.10	<0.10	<0.10	NM	<106
	9/3/2003	<1.00	<1.0	<1.0	**6.6**	**66.2**	<0.10	<0.10	<0.10	NM	**333**
	12/11/2003	<1.00	<1.0	<1.0	**4.1**	**70**	<0.10	<0.10	<0.10	NM	**456**
	3/18/2004	**1.4**	<1.0	**1.1**	**3.9**	**28.4**	<0.10	<0.10	<0.10	NM	**242**
	6/8/2004	<1.00	<1.00	<1.00	<1.00	**2.3**	<2.04	<2.04	<2.04	NM	<200
	9/21/2004	<1.00Y	**1.61Y**	<1.00Y	**2.93Y**	<1.00Y	<2.20 J3Y	<2.20 J3Y	<2.20 J3Y	NM	<200Y
	12/1/2004	<0.143	**0.4400 I**	<0.1417	<0.220	<0.2359	<0.23	<0.206	<0.216	NM	**120 I V**
	3/13/2005	**1.75 I**	<0.201	<0.142	**1.23 I**	**3.56**	<0.112	<0.148	<0.233	NM	<18
	6/9/2005	< 0.143	< 0.201	< 0.142	**0.950 I**	**8.65**	<0.101	< 0.133	< 0.210	**5,440**	**19 I**
	9/6/2005	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	**462**	<18
	12/6/2005	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	**2,520**	<18
	3/29/2006	<0.140	<0.126	<0.176	<0.298	<0.236	<0.100	<0.133	<0.203	**1,660**	<18
	6/9/2006	0.340 I	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**2,380**	**129 I**
	9/24/2006	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**1,910**	**56 I**
	12/9/2006	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**14,400**	**18 I**
	3/1/2007	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	**3.23 I**	**3.05 I**	**99.2**	<18
	6/15/2007	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**545**	**140 I**
	9/12/2007	<0.305	<0.338	<0.257	<0.433	<0.336 J4	<0.100	<0.133	<0.203	**116**	**92 I V**
	12/5/2007	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**4,820**	**59 I**
	3/6/2008	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**72.0**	<18
	6/18/2008	<0.270	<0.240	<0.280	<0.860	<0.420	<1.00	<1.00	<1.00	**91.0**	<105
	9/16/2008	<0.4	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**683**	**333**
	12/18/2008	<0.4	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**562**	<160
	3/2/2009	<0.4	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**503**	<170
	6/9/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**1,030**	<160
	9/14/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**995**	**163 I**
	12/1/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**1,340**	<160
CEF-046-06D	12/21/2000	**2.8**	**9.9**	**6**	**18**	NM	**3.5**	NM	NM	NM	<560
	2/8/2001	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	NM	NM	NM	<500
	3/14/2003	<1.0	<1.0	<1.0	6.0	<1.0	<2.0	<2.0	<2.0	NM	**274**
	6/9/2003	<1.00	<1.0	<1.0	8.7	<1.0	<1.0	<1.0	<1.0	NM	<200
	9/3/2003	<1.00	<1.0	<1.0	3.3	<1.0	<1.0	<1.0	<1.0	NM	<225
	12/10/2003	<1.00	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	NM	<200
	3/16/2004	<1.00	<1.0	<1.0	<3.0	<1.0	<0.10	<0.10	<0.10	NM	<100
	6/8/2004	<1.00	<1.00	<1.00	<1.00	<1.00	<2.04	<2.04	<2.04	NM	<200
	9/21/2004	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<2.15 J3Y	<2.15 J3Y	<2.15 J3Y	NM	<220Y
	12/1/2004	<0.143	**1.180 I**	<0.1417	**1.35 I**	<0.2359	<0.23	<0.208	<0.219	NM	**140 I V**
	3/13/2005	<0.143	<0.201	<0.142	**1.78 I**	<0.236	<0.112	<0.148	<0.233	NM	<18
	6/9/2005	<0.143	<0.201	<0.142	**1.01 I**	<0.236	<0.101	<0.133	<0.210	**9,580**	**24 I**
	9/6/2005	<0.143	<0.201	<0.142	**0.340 I**	<0.236	<0.100	<0.133	<0.203	**7,050**	<18
	12/6/2005	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	**8,480**	<18
	3/29/2006	<0.140	<0.126	<0.176	<0.298	<0.236	<0.100	<0.133	<0.203	**8,270**	<18
	6/9/2006	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**7,510**	**135 I**
	9/24/2006	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.0133	<0.203	**5,290**	**36 I**
	12/9/2006	<0.305	<0.338	<0.257	**1.22**	<0.336	**0.370 I**	<0.133	<0.203	**12,400**	**74 I**
	3/1/2007	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**12,200**	<18
	6/15/2007	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	**0.230 I**	**0.220 I**	**11,500**	**168 I**
	9/12/2007	<0.305	<0.338	**0.290 I**	**1.51**	<0.336	<0.100	**0.230 I**	**0.220 I**	**1,130**	**103 I V**
	12/5/2007	<0.305	<0.338	<0.257	**1.56**	<0.336	<0.452	**0.210 I**	**0.280 I**	**34,600**	**91 I**
	3/6/2008	<0.305	<0.338	<0.257	**1.63**	<0.336	<0.100	<0.133	<0.203	**14,900**	<18
	6/18/2008	<0.270	<0.240	<0.280	**1.55 I**	<0.420	<1.00	<1.00	<1.00	**13,500**	**225 V,CF2,CV6**
	9/16/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**7,790**	**238**
	12/18/2008	<0.40	<0.43	<0.35	**2.4 I**	<0.26	<0.24	<0.24	<0.24	**10,200**	**238 I**
	3/2/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**13,500**	**235 I**
	6/9/2009	NM	NM	NM	NM	NM	NM	NM	NM	**19,000**	NM
	9/14/2009	NM	NM	NM	NM	NM	NM	NM	NM	**3,740**	NM
	12/1/2009	NM	NM	NM	NM	NM	NM	NM	NM	**18,100**	NM

TABLE 3
SUMMARY OF LABORATORY RESULTS

Building 46
NAS Cecil Field
Jacksonville, Florida

Well ID	Sample Date	VOLATILE ORGANIC COMPOUNDS (µg/L)					POLYCYCLIC AROMATIC HYDROCARBONS (µg/L)				
		Benzene	Ethylbenzene	Toluene	Xylenes (total)	Methyl-*tert*-butyl-ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Sulfate (mg/L)	TRPH (µg/L)
GCTL (µg/L)		1	30	40	20	20	14	28	28	250 *	5,000
NADSC (µg/L)		100	300	400	200	200	140	280	280	2500 *	50,000
CEF-046-07I	12/21/2000	9,100	2,800	17,000	15,000	NM	260	NM	NM	NM	13,000
	2/22/2001	6,500	1,400	10,000	7,900	6,100	120	NM	NM	NM	17,000
	3/14/2003	945	150	86.5	904	4,380	<2.0	<2.0	<2.0	NM	5,480
	6/9/2003	678	123	51.6	752	4,190	32.4	0.42	0.24	NM	4,080
	9/3/2003	832	158	<10.0	697	5,140	123	6.12	7.92	NM	2,530
	12/11/2003	734	111	5	290	5,820	96.2	4.76	6.28	NM	5,410
	3/18/2004	386	66	8.5	414	3,460	2.15	<0.10	<0.10	NM	1,900
	6/8/2004	208	42.7	11.3	330	3,080	3.34	<2.04	<2.04	NM	650
	9/21/2004	494Y	38.1Y	9.99Y	387Y	2,190Y	0.242 J3, IY	<2.20 J3Y	<2.20 J3Y	NM	980Y
	12/1/2004	833	144.9	10.30	631	1,943	131.2	5.18	8.13	NM	1,770
	3/13/2005	775	176	3.26	269	1,480	128	5.39	7.40	NM	1,570
	6/9/2005	394	127	2.79	199	628	<0.101	<0.133	<0.210	279	1,380
	9/6/2005	92.9	41.3	2.52	95.6	1,730	<0.100	<0.133	<0.203	167	1,280
	12/6/2005	651	144	11.3 I	357	2,140	28.6	<0.148	<0.226	54.6	970
	3/30/2006	146	26.0	0.650 I	29	1,290	33.7	0.900 I	1.10 I	37.1	<18
	6/9/2006	207	33.2	0.310 I	11.4	652	60.7	2.67 I	1.24 I	33.0	832
	9/25/2006	162	25.4	0.310 I	5.07	296L	75.1	2.96 I	0.510 I	28.6	544
	12/8/2006	<0.305	0.490 I	<0.257	<0.433	372	<0.100	<0.133	<0.203	139.0	<18
	3/1/2007	74.0	11.8 I	<5.14	<8.65	450	29.1	3.72 I	<0.203	35.0	224
	6/15/2007	115	15.0	0.360 I	2.81	338	20.0	1.04 I	<0.203	25.2	397
	9/12/2007	81.9	9.91	0.290 I	0.840 I	198	18.8	1.01 I	<0.203	18.3	314 V
	12/5/2007	84.1	12.4	0.380 I	0.970 I	213	30.8	1.45 I	<0.203	147	221
	3/6/2008	64.2	11.0	<0.257	0.830	147 J4	13.6	1.20	<0.203	14.7	132
	6/18/2008	43.4	8.28	<0.280	<0.860	81.9	13.0	1.81 I	<1.00	14.0	376 V,CF2,CF6
	9/16/2008	42.5	6.40	<0.35	<1.2	65.1	7.9	1.30	<0.24	15.5	365
	12/18/2008	24.1	2.3	<0.35	<1.2	169	<0.24	<0.24	<0.24	21.7	<160
	3/2/2009	1.8	<0.43	<0.35	<1.2	306	<0.24	<0.24	<0.24	116	<160
	6/9/2009	5.0	0.45 I	<0.35	<1.2	185	<0.24	<0.24	<0.24	38	<160
	9/14/2009	1.7	<0.43	<0.35	<1.2	87.5	3.4	<0.24	<0.24	23.9	<160
	12/1/2009	0.47 I	1.0	<0.35	4.6	48.5	<0.24	<0.24	<0.24	21.0	<160
CEF-046-21I	12/20/2000	<1.0	<1.0	<1.0	<1.0	NM	<1.1	NM	NM	NM	<550
	1/25/2001	0.25	<1.0	0.7	<1.0	<1.0	<1.0	NM	NM	NM	300
	3/13/2003	<1.0	<1.0	<1.0	<1.0	<1.0	<2.2	<2.2	<2.2	NM	<200
	6/5/2003	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<100
	9/3/2003	<1.00	<1.0	<1.0	<1.0	<1.0	0.18	0.27	0.2	NM	308
	12/11/2003	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<200
	3/18/2004	<1.00	<1.0	<1.0	<3.0	<1.0	<0.10	<0.10	<0.10	NM	<222
	6/8/2004	<1.00	<1.00	<1.00	<1.00	<1.00	<2.04	<2.04	<2.04	NM	<200
	9/21/2004	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<2.20Y	<2.20 J3Y	<2.20 J3Y	NM	<220Y
	12/1/2004	<0.143	<0.2010	<0.1417	<0.220	<0.2359	<0.23	<0.206	<0.216	NM	100 I V
	3/13/2005	<0.143	<0.201	<0.142	<0.220	<0.236	<0.101	<0.133	<0.210	NM	<18
	6/9/2005	<0.143	<0.201	<0.142	<0.220	<0.236	<0.101	<0.133	<0.210	14.1	< 18
	9/6/2005	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	29.5	< 18
	12/7/2005	<0.143	<0.201	<0.142	<0.220	<0.236	<0.111	<0.148	<0.226	10.6	<20
	3/29/2006	<0.140	<0.126	<0.176	<0.298	<0.236	<0.100	<0.133	<0.203	14.9	<18
	6/9/2006	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	12.6	76 I
	9/24/2006	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	26.2	35 I
	12/8/2006	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	34.2	<18
	3/1/2007	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	31.9	<18
	6/15/2007	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	61.4	156 I
	9/12/2007	<0.305	<0.338	0.410 I	<0.433	<0.336	<0.100	<0.133	<0.203	27.7	238 V
	12/5/2007	<0.305	<0.0338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	28.0	<18
	3/6/2008	<0.305	<0.0338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	34.9	<18
	6/18/2008	<0.270	<0.240	<0.280	<0.860	<0.420	<1.00	<1.00	<1.00	51.1	<110 CF2,CF6,U
	9/16/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	709	<160
	12/18/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	76.1	<160
	3/2/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	74.7	<160
	6/9/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	74.4	<160
	9/14/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.25	<0.25	<0.25	70.6	<160
	12/1/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	68.7	<160

TABLE 3
SUMMARY OF LABORATORY RESULTS

Building 46
NAS Cecil Field
Jacksonville, Florida

Well ID	Sample Date	VOLATILE ORGANIC COMPOUNDS (µg/L)					POLYCYCLIC AROMATIC HYDROCARBONS (µg/L)				
		Benzene	Ethylbenzene	Toluene	Xylenes (total)	Methyl-*tert*-butyl-ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Sulfate (mg/L)	TRPH (µg/L)
GCTL (µg/L)		1	30	40	20	20	14	28	28	250 *	5,000
NADSC (µg/L)		100	300	400	200	200	140	280	280	2500 *	50,000
CEF-046-24D	12/20/2000	<1.0	<1.0	**0.47**	**0.41**	NM	<1.1	NM	NM	NM	<500
	1/25/2001	**8.3**	**0.81**	**1**	**2**	<1.0	<1.0	NM	NM	NM	<510
	3/14/2003	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	NM	<200
	6/5/2003	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<100
	9/3/2003	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<225
	12/10/2003	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<200
	3/16/2004	<1.00	<1.0	<1.0	<3.0	<1.0	<0.10	<0.10	<0.10	NM	<100
	6/8/2004	<1.00	<1.00	<1.00	<1.00	<1.00	<2.20	<2.20	<2.20	NM	<200
	9/21/2004	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<2.04Y	<2.04 J3Y	<2.04 J3Y	NM	<200Y
	12/1/2004	<0.143	<0.2010	<0.1417	<0.220	<0.2359	**0.40 I**	<0.200	<0.210	NM	**130 I V**
	3/13/2005	<0.143	<0.201	<0.142	<0.220	<0.236	<0.101	<0.133	<0.210	NM	<18
	6/9/2005	<0.143	<0.201	<0.142	<0.220	<0.236	<0.101	<0.133	<0.210	**2,030**	< 20
	9/6/2005	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	**1,840**	<18
	12/7/2005	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	**2,120**	<22
	3/29/2006	<0.140	<0.126	<0.176	<0.298	<0.236	<0.100	<0.133	<0.203	**1,800**	<18
	6/9/2006	<0.305	<0.388	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**1,430**	**125 I**
	9/24/2006	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**732**	**31 I**
	12/8/2006	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**737**	**34 I**
	3/1/2007	<0.305	<0.338	<0.257	<0.433	<0.336	**3.42 I**	<0.133	<0.203	**596**	<18
	6/15/2007	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**420**	**109 I**
	9/12/2007	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**217**	**40 I V**
	12/5/2007	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**414**	**245**
	3/6/2008	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**151**	<18
	6/17/2008	<0.270	<0.240	<0.280	<0.860	<0.420	<0.952	<0.952	<0.952	**398**	**184 H2,I**
	9/16/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**70.5**	<160
	12/18/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**1,550 ****	**214 I**
	3/2/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**523**	<160
	6/9/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**755**	<160
	9/14/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**1,740**	**202 I**
	12/1/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.25	<0.25	<0.25	**1,980**	**191 I**
CEF-046-25I	12/20/2000	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	NM	<560
	1/25/2001	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	NM	**320**
	3/13/2003	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	NM	<200
	6/4/2003	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	NM	<200
	9/3/2003	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	NM	<225
	12/10/2003	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	NM	<200
	3/16/2004	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	NM	<111
	6/8/2004	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	NM	<200
	9/21/2004	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	NM	<220Y
	12/1/2004	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	NM	**100 I V**
	3/13/2005	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	NM	<18
	6/9/2005	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**622**	<20
	9/6/2005	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**477**	<20
	12/7/2005	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**271**	<20
	3/29/2006	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**93.2**	<18
	6/9/2006	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**65.1**	**68 I**
	9/24/2006	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**33.0**	**38.0 I**
	12/9/2006	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**94.9**	**55 I**
	3/1/2007	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**67.4**	<18
	6/15/2007	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**61.7**	**135 I**
	9/12/2007	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**42.3**	**111 I V**
	12/5/2007	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**23.9**	**39 I**
	3/6/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**43.4**	<18
	6/18/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**23.2**	<110
	9/16/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**22.9**	**203**
	12/17/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**15.0**	<170
	3/2/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**15.2**	<160
	12/1/2009	NM	NM	NM	NM	NM	NM	NM	NM	**10.2**	**NM**

TABLE 3
SUMMARY OF LABORATORY RESULTS

Building 46
NAS Cecil Field
Jacksonville, Florida

Well ID	Sample Date	VOLATILE ORGANIC COMPOUNDS (µg/L)					POLYCYCLIC AROMATIC HYDROCARBONS (µg/L)				
		Benzene	Ethylbenzene	Toluene	Xylenes (total)	Methyl-*tert*-butyl-ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Sulfate (mg/L)	TRPH (µg/L)
GCTL (µg/L)		1	30	40	20	20	14	28	28	250 *	5,000
NADSC (µg/L)		100	300	400	200	200	140	280	280	2500 *	50,000
CEF-046-26I	12/20/2000	**1,300**	**78**	**41**	**310**	NM	<1.1	NM	NM	NM	<530
	1/25/2001	**2,400**	**270**	**100**	**820**	<5.0	<1.0	NM	NM	NM	**890**
	3/14/2003	**866**	**23.3**	**5.4**	**199**	**15.9**	<2.0	<2.0	<2.0	NM	**628**
	6/5/2003	**845**	**30**	<10.0	**314**	**21**	<0.10	<0.10	<0.10	NM	**598**
	9/3/2003	**902**	**24**	<10.0	**347**	**17.0**	<0.10	<0.10	<0.10	NM	**488**
	12/11/2003	**693**	**16.5**	**7.9**	**198**	**19.4**	<0.10	<0.10	<0.10	NM	**954**
	3/18/2004	**870**	**8.3**	**6.3 ?**	**162**	**20.3**	<2.20	<2.20	<2.20	NM	**380**
	6/8/2004	**832**	**87.9**	**47.7**	**371**	**25.4**	**0.13**	<0.10	<0.10	NM	**524**
	9/21/2004	**184Y**	**27.7Y**	**7.84Y**	**233Y**	**141Y**	<2.04Y	<2.04 J3Y	<2.04 J3Y	NM	**280Y**
	12/1/2004	**168**	**16.67**	**6.42**	**128**	**12.05**	**0.56 I**	<0.206	<0.216	NM	**1,500**
	3/13/2005	**5.17**	**2.03**	**0.420 I**	**17.6**	**1.83 I**	**0.216 I**	<0.133	<0.210	NM	**59 I**
	6/9/2005	**9.21**	**4.68**	**0.570 I**	**42.4**	**2.33**	<0.101	<0.133	<0.210	**3,190**	**1730**
	9/6/2005	**1.16 I**	**0.900 I**	<0.142	**13.3**	<0.236	<0.100	<0.133	<0.203	**2,300**	**67 I**
	12/7/2005	**6.72**	**0.740 I**	<0.142	**11.5**	**0.480 I**	<0.100	<0.133	<0.203	**1,890**	<18
	3/29/2006	**1.00**	**0.490 I**	<0.176	**9.64**	**1.89**	<0.100	<0.133	<0.203	**415**	**390**
	6/9/2006	**0.460 I**	<0.338	<0.257	**5.35**	**0.380 I**	<0.100	<0.133	<0.203	**1,460**	**107 I**
	9/24/2006	**0.490 I**	<0.338	<0.257	**4.10**	<0.336	<0.100	<0.133	<0.203	**876**	**19 I**
	12/8/2006	**0.730 I**	<0.338	<0.257	**3.96**	<0.336	<0.100	<0.133	<0.203	**1,190**	**20 I**
	3/1/2007	**0.850 I**	<0.338	<0.257	**3.57**	<0.336	<0.100	<0.133	<0.203	**804**	<18
	6/15/2007	**0.340 I**	<0.338	<0.257	**1.62**	**0.440 I**	<0.100	<0.133	<0.203	**1,840**	**167 I**
	9/12/2007	**0.350 I**	<0.338	**0.290 I**	**1.13**	<0.336	<0.100	<0.133	<0.203	**1,280**	**136 I V**
	12/5/2007	<0.305	<0.338	<0.257	**1.78**	<0.336	<0.100	<0.133	<0.203	**1,060**	**72 I**
	3/6/2008	<0.305	<0.338	<0.257	**1.34**	<0.336	<0.100	<0.133	<0.203	**170**	**172**
	6/17/2008	<0.270	<0.240	<0.280	<0.860	<0.420	<0.952	<0.952	<0.952	**398**	<105 CF2,CF6,U
	9/16/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**300**	<160
	12/17/2008	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**278**	<160
	3/2/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**319**	**359**
	6/9/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**134**	<160
	9/14/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**93.3**	<160
	12/1/2009	<0.40	<0.43	<0.35	<1.2	<0.26	<0.25	<0.25	<0.25	**96.0**	<170

NOTES:

µg/L - Micrograms per liter
GCTL - Groundwater Cleanup Target Level
NADSC - Natural Attenuation Default Source Concentration
All values reported in µg/L unless otherwise noted.
* GCTL and NADSC reported in mg/L
Bold indicates value exceeds the method detection limit.
Shading : Exceeds the GCTL
Exceeds both the GCTL and NADSC
TRPH - Total Recoverable Petroleum Hydrocarbons
NM - Not measured
J and I - Estimated concentration between the laboratory method detection limit and reporting limit.
V - Analyte detected in associated method blank, suspected lab contaminant
? - Rejected during data validation
V - the analyte was detected in both the sample and the associated method blank
L - Off-scale high, actual value is known to be greater than the value given.
CF2 - Confirmatory analysis was past holding time
CF6 - Results confirmed by reanalysis
U - Below detection limit
H2 - Initial analysis within holding time. Reanalysis for the required dilution of confirmation was past holding time
J4 - The sample matrix interfered with the ability to make an accurate determination
B1 - Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank
S10 - Insufficient sample available for reanalysis
a - Result is from Run #2
** - estimated value above calibration range
Data collected prior to March 2008 was provided by other consultants.

APPENDIX A

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY FORM

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

12/21/09

Technical Report for

Solutions-IES, Inc

Cecil Field -Bldg 46; Jacksonville, FL

4030.08A2.NAVF

Accutest Job Number: F69838

Sampling Date: 12/01/09

Report to:

Solutions-IES, Inc
1101 Nowell Rd
Raleigh, NC 27606
keenerj@solutions-ies.com; rebarb@solutions-ies.com

ATTN: Jessica Keener

Total number of pages in report: **66**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Jean Dent-Smith 407-425-6700

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Test results relate only to samples analyzed.

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Accutest Laboratories

Sample Summary

Solutions-IES, Inc

Job No: F69838

Cecil Field -Bldg 46; Jacksonville, FL
Project No: 4030.08A2.NAVF

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F69838-1	12/01/09	10:38	KD	12/02/09	AQ	Ground Water	CEF-046-25I
F69838-2	12/01/09	10:53	KD	12/02/09	AQ	Ground Water	CEF-046-07I
F69838-3	12/01/09	10:45	KD	12/02/09	AQ	Ground Water	CEF-046-01S
F69838-4	12/01/09	12:20	KD	12/02/09	AQ	Ground Water	CEF-046-06D
F69838-5	12/01/09	11:32	KD	12/02/09	AQ	Ground Water	CEF-046-24D
F69838-6	12/01/09	13:02	KD	12/02/09	AQ	Ground Water	CEF-046-02S
F69838-7	12/01/09	14:43	KD	12/02/09	AQ	Ground Water	CEF-046-26I
F69838-8	12/01/09	14:58	KD	12/02/09	AQ	Ground Water	CEF-046-21I
F69838-9	12/01/09	14:55	KD	12/02/09	AQ	Ground Water	CEF-046-05I
F69838-10	12/01/09	00:00	KD	12/02/09	AQ	Trip Blank Water	CEF-046-TB1

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Solutions-IES, Inc **Job No:** F69838

Site: Cecil Field -Bldg. 46; Jacksonville, FL **Report Date** 12/21/2009 1:42:49

9 Samples and 1 Trip Blank were collected on 12/01/2009 and received at Accutest on 12/02/2009 properly preserved, at 3 Deg. C and intact. These Samples received an Accutest job number of F69838. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VB2675

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F69791-2MS, F69791-2MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** VB2676

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F69838-5MS, F69838-5MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix: AQ **Batch ID:** OP31118

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F69838-8MS, F69838-8MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** OP31150

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) F69869-4MS, F69869-4MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recovery(s) for 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene, Acenaphthylene, Anthracene, Fluoranthene, Fluorene, Naphthalene, Phenanthrene are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

Matrix Spike Duplicate Recovery(s) for 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene are outside control limits. Probable cause due to matrix interference. For method performance in a clean matrix, refer to SB.

RPD(s) for MSD for Benzo(k)fluoranthene are outside control limits for sample OP31150-MSD. Probable cause due to matrix interference.

Extractables by GC By Method FLORIDA-PRO

Matrix: AQ **Batch ID:** OP31123

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) F69838-8MS, F69838-8MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix: AQ **Batch ID:** GP14082

All samples were prepared within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F69838-1DUP, F69838-1MS were used as the QC samples for Sulfate.

Matrix Spike Recovery(s) for Sulfate are outside control limits. Spike recovery indicates possible matrix interference. For method performance in a clean matrix, refer to SB.

Matrix: AQ **Batch ID:** GP14106

All samples were prepared within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F69901-1DUP, F69901-1MS were used as the QC samples for Sulfate.

Matrix Spike Recovery(s) for Sulfate are outside control limits. Spike recovery indicates possible matrix interference. For method performance in a clean matrix, refer to SB.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used

Narrative prepared by:

_____ Date: December 21, 2009

Lovelie Metzgar, QA Assistant (signature on file)

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	CEF-046-25I		
Lab Sample ID:	F69838-1	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	10.2	2.0	1.0	mg/l	1	12/13/09 17:07	CC	EPA 300/SW846 9056

RL = Reporting Limit = PQL
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	CEF-046-07I		
Lab Sample ID:	F69838-2	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B064334.D	1	12/07/09	AJ	n/a	n/a	VB2676
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.47	1.0	0.40	ug/l	I
108-88-3	Toluene	0.35 U	1.0	0.35	ug/l	
100-41-4	Ethylbenzene	1.0	1.0	0.43	ug/l	
1330-20-7	Xylene (total)	4.6	3.0	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	48.5	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	98%		86-112%
460-00-4	4-Bromofluorobenzene	102%		84-120%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-07I		
Lab Sample ID:	F69838-2	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8270C BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W048977.D	1	12/03/09	RB	12/03/09	OP31118	SW2464
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.95	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.95	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.95	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.048 U	0.19	0.048	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.048 U	0.19	0.048	ug/l	
207-08-9	Benzo(k)fluoranthene	0.048 U	0.19	0.048	ug/l	
218-01-9	Chrysene	0.095 U	0.19	0.095	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.95	0.24	ug/l	
86-73-7	Fluorene	0.48 U	0.95	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	0.24 U	0.95	0.24	ug/l	
91-57-6	2-Methylnaphthalene	0.24 U	0.95	0.24	ug/l	
91-20-3	Naphthalene	0.24 U	0.95	0.24	ug/l	
85-01-8	Phenanthrene	0.24 U	0.95	0.24	ug/l	
129-00-0	Pyrene	0.24 U	0.95	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		42-108%
321-60-8	2-Fluorobiphenyl	44%		40-106%
1718-51-0	Terphenyl-d14	84%		39-121%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-07I		
Lab Sample ID:	F69838-2	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	FLORIDA-PRO SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ61523.D	1	12/03/09	FEA	12/03/09	OP31123	GIJ2104
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.16 U	0.24	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	64%		38-122%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-07I		
Lab Sample ID:	F69838-2	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	21.0	2.0	1.0	mg/l	1	12/13/09 18:37	CC	EPA 300/SW846 9056

RL = Reporting Limit = PQL
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	CEF-046-01S		
Lab Sample ID:	F69838-3	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B064338.D	1	12/07/09	AJ	n/a	n/a	VB2676
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.75	1.0	0.40	ug/l	I
108-88-3	Toluene	0.89	1.0	0.35	ug/l	I
100-41-4	Ethylbenzene	21.5	1.0	0.43	ug/l	
1330-20-7	Xylene (total)	12.1	3.0	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	13.0	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		87-116%
17060-07-0	1,2-Dichloroethane-D4	108%		76-127%
2037-26-5	Toluene-D8	102%		86-112%
460-00-4	4-Bromofluorobenzene	100%		84-120%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-01S		
Lab Sample ID:	F69838-3	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8270C BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20592.D	1	12/08/09	RB	12/07/09	OP31150	SR1007
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.95	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.95	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.95	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.048 U	0.19	0.048	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.048 U	0.19	0.048	ug/l	
207-08-9	Benzo(k)fluoranthene	0.048 U	0.19	0.048	ug/l	
218-01-9	Chrysene	0.095 U	0.19	0.095	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.95	0.24	ug/l	
86-73-7	Fluorene	0.48 U	0.95	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	5.6	0.95	0.24	ug/l	
91-57-6	2-Methylnaphthalene	8.8	0.95	0.24	ug/l	
91-20-3	Naphthalene	33.9	0.95	0.24	ug/l	
85-01-8	Phenanthrene	0.24 U	0.95	0.24	ug/l	
129-00-0	Pyrene	0.24 U	0.95	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		42-108%
321-60-8	2-Fluorobiphenyl	71%		40-106%
1718-51-0	Terphenyl-d14	49%		39-121%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-01S		
Lab Sample ID:	F69838-3	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	FLORIDA-PRO SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ61524.D	4	12/03/09	FEA	12/03/09	OP31123	GIJ2104
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	4.92	0.96	0.65	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	96%		38-122%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-01S		
Lab Sample ID:	F69838-3	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	224	10	5.0	mg/l	5	12/15/09 01:05	CC	EPA 300/SW846 9056

RL = Reporting Limit = PQL
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	CEF-046-06D		
Lab Sample ID:	F69838-4	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	18100	1000	500	mg/l	500	12/15/09 01:23	CC	EPA 300/SW846 9056

RL = Reporting Limit = PQL
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	CEF-046-24D		
Lab Sample ID:	F69838-5	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B064335.D	1	12/07/09	AJ	n/a	n/a	VB2676
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.40 U	1.0	0.40	ug/l	
108-88-3	Toluene	0.35 U	1.0	0.35	ug/l	
100-41-4	Ethylbenzene	0.43 U	1.0	0.43	ug/l	
1330-20-7	Xylene (total)	1.2 U	3.0	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.26 U	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		87-116%
17060-07-0	1,2-Dichloroethane-D4	104%		76-127%
2037-26-5	Toluene-D8	97%		86-112%
460-00-4	4-Bromofluorobenzene	105%		84-120%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-24D		
Lab Sample ID:	F69838-5	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8270C BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20594.D	1	12/08/09	RB	12/07/09	OP31150	SR1007
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.50 U	1.0	0.50	ug/l	
208-96-8	Acenaphthylene	0.50 U	1.0	0.50	ug/l	
120-12-7	Anthracene	0.50 U	1.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	0.050 U	0.20	0.050	ug/l	
50-32-8	Benzo(a)pyrene	0.050 U	0.20	0.050	ug/l	
205-99-2	Benzo(b)fluoranthene	0.050 U	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.050 U	0.20	0.050	ug/l	
207-08-9	Benzo(k)fluoranthene	0.050 U	0.20	0.050	ug/l	
218-01-9	Chrysene	0.10 U	0.20	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.050 U	0.20	0.050	ug/l	
206-44-0	Fluoranthene	0.25 U	1.0	0.25	ug/l	
86-73-7	Fluorene	0.50 U	1.0	0.50	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.050 U	0.20	0.050	ug/l	
90-12-0	1-Methylnaphthalene	0.25 U	1.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	0.25 U	1.0	0.25	ug/l	
91-20-3	Naphthalene	0.25 U	1.0	0.25	ug/l	
85-01-8	Phenanthrene	0.25 U	1.0	0.25	ug/l	
129-00-0	Pyrene	0.25 U	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		42-108%
321-60-8	2-Fluorobiphenyl	58%		40-106%
1718-51-0	Terphenyl-d14	68%		39-121%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-24D		
Lab Sample ID:	F69838-5	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	FLORIDA-PRO SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ61548.D	1	12/04/09	FEA	12/03/09	OP31123	GIJ2105
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.191	0.24	0.17	mg/l	I

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		38-122%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-24D		
Lab Sample ID:	F69838-5	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	1980	50	25	mg/l	25	12/15/09 01:41	CC	EPA 300/SW846 9056

RL = Reporting Limit = PQL
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	CEF-046-02S		
Lab Sample ID:	F69838-6	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B064314.D	1	12/05/09	AJ	n/a	n/a	VB2675
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.40 U	1.0	0.40	ug/l	
108-88-3	Toluene	0.35 U	1.0	0.35	ug/l	
100-41-4	Ethylbenzene	0.43 U	1.0	0.43	ug/l	
1330-20-7	Xylene (total)	1.2 U	3.0	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.26 U	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		87-116%
17060-07-0	1,2-Dichloroethane-D4	110%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	106%		84-120%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-02S		
Lab Sample ID:	F69838-6	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8270C BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W048980.D	1	12/03/09	RB	12/03/09	OP31118	SW2464
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.95	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.95	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.95	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.048 U	0.19	0.048	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.048 U	0.19	0.048	ug/l	
207-08-9	Benzo(k)fluoranthene	0.048 U	0.19	0.048	ug/l	
218-01-9	Chrysene	0.095 U	0.19	0.095	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.95	0.24	ug/l	
86-73-7	Fluorene	0.48 U	0.95	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	0.24 U	0.95	0.24	ug/l	
91-57-6	2-Methylnaphthalene	0.24 U	0.95	0.24	ug/l	
91-20-3	Naphthalene	0.24 U	0.95	0.24	ug/l	
85-01-8	Phenanthrene	0.24 U	0.95	0.24	ug/l	
129-00-0	Pyrene	0.24 U	0.95	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	63%		42-108%
321-60-8	2-Fluorobiphenyl	47%		40-106%
1718-51-0	Terphenyl-d14	78%		39-121%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-02S		
Lab Sample ID:	F69838-6	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	FLORIDA-PRO SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ61526.D	1	12/03/09	FEA	12/03/09	OP31123	GIJ2104
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.16 U	0.24	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	60%		38-122%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-02S		
Lab Sample ID:	F69838-6	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	161	10	5.0	mg/l	5	12/15/09 01:59	CC	EPA 300/SW846 9056

RL = Reporting Limit = PQL
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	CEF-046-26I		
Lab Sample ID:	F69838-7	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B064315.D	1	12/05/09	AJ	n/a	n/a	VB2675
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.40 U	1.0	0.40	ug/l	
108-88-3	Toluene	0.35 U	1.0	0.35	ug/l	
100-41-4	Ethylbenzene	0.43 U	1.0	0.43	ug/l	
1330-20-7	Xylene (total)	1.2 U	3.0	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.26 U	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		87-116%
17060-07-0	1,2-Dichloroethane-D4	114%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	108%		84-120%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-26I		
Lab Sample ID:	F69838-7	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8270C BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W048981.D	1	12/03/09	RB	12/03/09	OP31118	SW2464
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.49 U	0.98	0.49	ug/l	
208-96-8	Acenaphthylene	0.49 U	0.98	0.49	ug/l	
120-12-7	Anthracene	0.49 U	0.98	0.49	ug/l	
56-55-3	Benzo(a)anthracene	0.049 U	0.20	0.049	ug/l	
50-32-8	Benzo(a)pyrene	0.049 U	0.20	0.049	ug/l	
205-99-2	Benzo(b)fluoranthene	0.049 U	0.20	0.049	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.049 U	0.20	0.049	ug/l	
207-08-9	Benzo(k)fluoranthene	0.049 U	0.20	0.049	ug/l	
218-01-9	Chrysene	0.098 U	0.20	0.098	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.049 U	0.20	0.049	ug/l	
206-44-0	Fluoranthene	0.25 U	0.98	0.25	ug/l	
86-73-7	Fluorene	0.49 U	0.98	0.49	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.049 U	0.20	0.049	ug/l	
90-12-0	1-Methylnaphthalene	0.25 U	0.98	0.25	ug/l	
91-57-6	2-Methylnaphthalene	0.25 U	0.98	0.25	ug/l	
91-20-3	Naphthalene	0.25 U	0.98	0.25	ug/l	
85-01-8	Phenanthrene	0.25 U	0.98	0.25	ug/l	
129-00-0	Pyrene	0.25 U	0.98	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	58%		42-108%
321-60-8	2-Fluorobiphenyl	44%		40-106%
1718-51-0	Terphenyl-d14	83%		39-121%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-26I		
Lab Sample ID:	F69838-7	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	FLORIDA-PRO SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ61531.D	1	12/03/09	FEA	12/03/09	OP31123	GIJ2104
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.17 U	0.24	0.17	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	70%		38-122%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-26I		
Lab Sample ID:	F69838-7	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	96.0	2.0	1.0	mg/l	1	12/13/09 20:07	CC	EPA 300/SW846 9056

RL = Reporting Limit = PQL
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	CEF-046-21I		
Lab Sample ID:	F69838-8	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B064316.D	1	12/05/09	AJ	n/a	n/a	VB2675
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.40 U	1.0	0.40	ug/l	
108-88-3	Toluene	0.35 U	1.0	0.35	ug/l	
100-41-4	Ethylbenzene	0.43 U	1.0	0.43	ug/l	
1330-20-7	Xylene (total)	1.2 U	3.0	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.26 U	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		87-116%
17060-07-0	1,2-Dichloroethane-D4	115%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	108%		84-120%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-21I		
Lab Sample ID:	F69838-8	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8270C BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W048982.D	1	12/03/09	RB	12/03/09	OP31118	SW2464
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.95	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.95	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.95	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.048 U	0.19	0.048	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.048 U	0.19	0.048	ug/l	
207-08-9	Benzo(k)fluoranthene	0.048 U	0.19	0.048	ug/l	
218-01-9	Chrysene	0.095 U	0.19	0.095	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.95	0.24	ug/l	
86-73-7	Fluorene	0.48 U	0.95	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	0.24 U	0.95	0.24	ug/l	
91-57-6	2-Methylnaphthalene	0.24 U	0.95	0.24	ug/l	
91-20-3	Naphthalene	0.24 U	0.95	0.24	ug/l	
85-01-8	Phenanthrene	0.24 U	0.95	0.24	ug/l	
129-00-0	Pyrene	0.24 U	0.95	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	63%		42-108%
321-60-8	2-Fluorobiphenyl	48%		40-106%
1718-51-0	Terphenyl-d14	76%		39-121%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-21I		
Lab Sample ID:	F69838-8	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	FLORIDA-PRO SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ61527.D	1	12/03/09	FEA	12/03/09	OP31123	GIJ2104
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.16 U	0.24	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	67%		38-122%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-21I		
Lab Sample ID:	F69838-8	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	68.7	2.0	1.0	mg/l	1	12/13/09 21:19	CC	EPA 300/SW846 9056

RL = Reporting Limit = PQL
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	CEF-046-05I		
Lab Sample ID:	F69838-9	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B064317.D	1	12/05/09	AJ	n/a	n/a	VB2675
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.40 U	1.0	0.40	ug/l	
108-88-3	Toluene	0.35 U	1.0	0.35	ug/l	
100-41-4	Ethylbenzene	0.43 U	1.0	0.43	ug/l	
1330-20-7	Xylene (total)	1.2 U	3.0	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.26 U	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		87-116%
17060-07-0	1,2-Dichloroethane-D4	114%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	110%		84-120%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-05I		
Lab Sample ID:	F69838-9	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	SW846 8270C BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W048985.D	1	12/03/09	RB	12/03/09	OP31118	SW2464
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.95	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.95	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.95	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.048 U	0.19	0.048	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.048 U	0.19	0.048	ug/l	
207-08-9	Benzo(k)fluoranthene	0.048 U	0.19	0.048	ug/l	
218-01-9	Chrysene	0.095 U	0.19	0.095	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.95	0.24	ug/l	
86-73-7	Fluorene	0.48 U	0.95	0.48	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	0.24 U	0.95	0.24	ug/l	
91-57-6	2-Methylnaphthalene	0.24 U	0.95	0.24	ug/l	
91-20-3	Naphthalene	0.24 U	0.95	0.24	ug/l	
85-01-8	Phenanthrene	0.24 U	0.95	0.24	ug/l	
129-00-0	Pyrene	0.24 U	0.95	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	55%		42-108%
321-60-8	2-Fluorobiphenyl	42%		40-106%
1718-51-0	Terphenyl-d14	73%		39-121%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-05I		
Lab Sample ID:	F69838-9	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
Method:	FLORIDA-PRO SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ61532.D	1	12/03/09	FEA	12/03/09	OP31123	GIJ2104
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.16 U	0.24	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		38-122%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-046-05I		
Lab Sample ID:	F69838-9	**Date Sampled:**	12/01/09
Matrix:	AQ - Ground Water	**Date Received:**	12/02/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	1340	50	25	mg/l	25	12/17/09 09:30	CC	EPA 300/SW846 9056

RL = Reporting Limit = PQL
MDL = Method Detection Limit

U = Indicates a result < MDL
I = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	CEF-046-TB1		
Lab Sample ID:	F69838-10	**Date Sampled:**	12/01/09
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/02/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B064318.D	1	12/05/09	AJ	n/a	n/a	VB2675
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.40 U	1.0	0.40	ug/l	
108-88-3	Toluene	0.35 U	1.0	0.35	ug/l	
100-41-4	Ethylbenzene	0.43 U	1.0	0.43	ug/l	
1330-20-7	Xylene (total)	1.2 U	3.0	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.26 U	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		87-116%
17060-07-0	1,2-Dichloroethane-D4	115%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	109%		84-120%

U = Not detected MDL - Method Detection Limit
RL = Reporting Limit = PQL
L = Indicates value exceeds calibration range

I = Result > = MDL but < RL J = Estimated value
V = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # F69838 (32281) PAGE 1 OF 1
Accutest Quote # SKIFF#

Client / Reporting Information

Company Name: Solutions-IES
Address: 1101 Nowell Rd
City: Raleigh State: NC Zip: 27607
Project Contact: Jessica Keener E-mail: JKeener@solutions-ies.com
Phone#: (919) 873-1060
Sampler(s) Name(s) (Printed): KD, EG, TF

Project Information

Project Name: Cecil Field - Bldg 46
Street:
City: Jacksonville State: FL
Project #: 40030.08A2. NAVF
Fax #: (919) 873-1074
Client Purchase Order #:

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection DATE	Collection TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MeOH	Sulfate 300.0	BTEX+MTBE 8260B	PAHs 8270C	TRPH FL PRO							LAB USE ONLY
1	CEF-046-25I	12/1/09	1038	KD	GW	1		X								X										
2	CEF-046-07I		1053	EG		8		X	X			X				X	X	X	X							
3	CEF-046-01S		1045	TF		8		X	X			X				X	X	X	X							
4	CEF-046-06D		1220	TF		1		X								X										
5	CEF-046-24D		1132	KD		8		X	X			X				X	X	X	X							
6	CEF-046-02S		1302	EG		8		X	X			X				X	X	X	X							
7	CEF-046-26I		1443	KD		8		X	X			X				X	X	X	X							
8	CEF-046-21I		1458	EG		8		X	X			X				X	X	X	X							
9	CEF-046-05I		1455	TF		8		X	X			X				X	X	X	X							
	Om																									
10	CEF-046-TB1	↓	—	—	—	3			X					X			X									

TURNAROUND TIME (Business Days)

Approved By: / Rush Code
- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information
- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [x] EDD'S

Comments / Remarks

Kodell - QA/QC 12/1/09

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 Dan Marshall	12/1/09 1650	2 Scott Hill 12/1/09 1650	3 Scott Hill 12/1/09 1955		4 J. Lopez (Accutest)
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		12-2-09 8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 4 Cooler Temperature (s) Celsius: 1.8 3.0 2.4 2.8

F69838: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F69838 CLIENT: Solutions - IES PROJECT: CECIL FIELD Bldg 46

DATE/TIME RECEIVED: 12-2-09 08:30 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 4

METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS:

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [x] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [x] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [x] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? _____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OR LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 2 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 1.4 2.6 2.0 2.4
- [ ] CORRECTED TEMPS: 1.8 3.0 2.4 2.8

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE JC 12-2-09 REVIEWER SIGNATURE/DATE ET 12/2/09

NF 10/09 RECEIPT CONFIRMATION 100609 (2).xls

4.1

4

F69838: Chain of Custody

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GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB2675-MB	B064300.D	1	12/05/09	AJ	n/a	n/a	VB2675

The QC reported here applies to the following samples: **Method:** SW846 8260B

F69838-6, F69838-7, F69838-8, F69838-9, F69838-10

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.2	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	108%	87-116%
17060-07-0	1,2-Dichloroethane-D4	111%	76-127%
2037-26-5	Toluene-D8	103%	86-112%
460-00-4	4-Bromofluorobenzene	107%	84-120%

Method Blank Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB2676-MB	B064329.D	1	12/07/09	AJ	n/a	n/a	VB2676

The QC reported here applies to the following samples: **Method:** SW846 8260B

F69838-2, F69838-3, F69838-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.43	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/l	
108-88-3	Toluene	ND	1.0	0.35	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.2	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	109%	87-116%
17060-07-0	1,2-Dichloroethane-D4	113%	76-127%
2037-26-5	Toluene-D8	101%	86-112%
460-00-4	4-Bromofluorobenzene	109%	84-120%

Blank Spike Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB2675-BS	B064299.D	1	12/05/09	AJ	n/a	n/a	VB2675

The QC reported here applies to the following samples: **Method:** SW846 8260B

F69838-6, F69838-7, F69838-8, F69838-9, F69838-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	23.6	94	83-124
100-41-4	Ethylbenzene	25	23.3	93	87-118
1634-04-4	Methyl Tert Butyl Ether	25	23.2	93	75-116
108-88-3	Toluene	25	23.0	92	86-116
1330-20-7	Xylene (total)	75	69.5	93	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	87-116%
17060-07-0	1,2-Dichloroethane-D4	108%	76-127%
2037-26-5	Toluene-D8	97%	86-112%
460-00-4	4-Bromofluorobenzene	98%	84-120%

Blank Spike Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB2676-BS	B064328.D	1	12/07/09	AJ	n/a	n/a	VB2676

The QC reported here applies to the following samples: **Method:** SW846 8260B

F69838-2, F69838-3, F69838-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	27.3	109	83-124
100-41-4	Ethylbenzene	25	27.0	108	87-118
1634-04-4	Methyl Tert Butyl Ether	25	26.7	107	75-116
108-88-3	Toluene	25	26.2	105	86-116
1330-20-7	Xylene (total)	75	83.3	111	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	87-116%
17060-07-0	1,2-Dichloroethane-D4	106%	76-127%
2037-26-5	Toluene-D8	97%	86-112%
460-00-4	4-Bromofluorobenzene	94%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F69791-2MS	B064309.D	1	12/05/09	AJ	n/a	n/a	VB2675
F69791-2MSD	B064310.D	1	12/05/09	AJ	n/a	n/a	VB2675
F69791-2	B064302.D	1	12/05/09	AJ	n/a	n/a	VB2675

The QC reported here applies to the following samples: **Method:** SW846 8260B

F69838-6, F69838-7, F69838-8, F69838-9, F69838-10

CAS No.	Compound	F69791-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1.0 U		25	24.3	97	25.5	102	5	83-124/11
100-41-4	Ethylbenzene	1.0 U		25	24.0	96	24.9	100	4	87-118/10
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	25.7	103	26.7	107	4	75-116/10
108-88-3	Toluene	1.0 U		25	23.9	96	24.4	98	2	86-116/10
1330-20-7	Xylene (total)	3.0 U		75	72.2	96	74.3	99	3	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F69791-2	Limits
1868-53-7	Dibromofluoromethane	105%	107%	104%	87-116%
17060-07-0	1,2-Dichloroethane-D4	105%	105%	112%	76-127%
2037-26-5	Toluene-D8	98%	96%	104%	86-112%
460-00-4	4-Bromofluorobenzene	102%	99%	109%	84-120%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F69838-5MS	B064339.D	1	12/07/09	AJ	n/a	n/a	VB2676
F69838-5MSD	B064340.D	1	12/07/09	AJ	n/a	n/a	VB2676
F69838-5	B064335.D	1	12/07/09	AJ	n/a	n/a	VB2676

The QC reported here applies to the following samples: **Method:** SW846 8260B

F69838-2, F69838-3, F69838-5

CAS No.	Compound	F69838-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1.0 U		25	23.3	93	23.2	93	0	83-124/11
100-41-4	Ethylbenzene	1.0 U		25	23.5	94	22.9	92	3	87-118/10
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	23.9	96	24.7	99	3	75-116/10
108-88-3	Toluene	1.0 U		25	22.7	91	22.3	89	2	86-116/10
1330-20-7	Xylene (total)	3.0 U		75	71.2	95	69.6	93	2	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F69838-5	Limits
1868-53-7	Dibromofluoromethane	106%	107%	105%	87-116%
17060-07-0	1,2-Dichloroethane-D4	105%	108%	104%	76-127%
2037-26-5	Toluene-D8	96%	96%	97%	86-112%
460-00-4	4-Bromofluorobenzene	99%	98%	105%	84-120%

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31118-MB	W048974.D	1	12/03/09	RB	12/03/09	OP31118	SW2464

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

F69838-2, F69838-6, F69838-7, F69838-8, F69838-9

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.50	ug/l	
120-12-7	Anthracene	ND	1.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.050	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.050	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.050	ug/l	
218-01-9	Chrysene	ND	0.20	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.050	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.25	ug/l	
86-73-7	Fluorene	ND	1.0	0.50	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.050	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-20-3	Naphthalene	ND	1.0	0.25	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.25	ug/l	
129-00-0	Pyrene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	86%	42-108%
321-60-8	2-Fluorobiphenyl	78%	40-106%
1718-51-0	Terphenyl-d14	88%	39-121%

Method Blank Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31118-MB	R20565.D	1	12/07/09	RB	12/03/09	OP31118	SR1006

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

F69838-2, F69838-6, F69838-7, F69838-8, F69838-9

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.50	ug/l	
120-12-7	Anthracene	ND	1.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.050	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.050	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.050	ug/l	
218-01-9	Chrysene	ND	0.20	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.050	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.25	ug/l	
86-73-7	Fluorene	ND	1.0	0.50	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.050	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-20-3	Naphthalene	ND	1.0	0.25	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.25	ug/l	
129-00-0	Pyrene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	86%	42-108%
321-60-8	2-Fluorobiphenyl	80%	40-106%
1718-51-0	Terphenyl-d14	97%	39-121%

Method Blank Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31150-MB	R20591.D	1	12/08/09	RB	12/07/09	OP31150	SR1007

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

F69838-3, F69838-5

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.50	ug/l	
120-12-7	Anthracene	ND	1.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.050	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.050	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.050	ug/l	
218-01-9	Chrysene	ND	0.20	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.050	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.25	ug/l	
86-73-7	Fluorene	ND	1.0	0.50	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.050	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-20-3	Naphthalene	ND	1.0	0.25	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.25	ug/l	
129-00-0	Pyrene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	52%	42-108%
321-60-8	2-Fluorobiphenyl	46%	40-106%
1718-51-0	Terphenyl-d14	87%	39-121%

Method Blank Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31150-MB	R20665.D	1	12/10/09	RB	12/07/09	OP31150	SR1011

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

F69838-3, F69838-5

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.50	ug/l	
120-12-7	Anthracene	ND	1.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.050	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.050	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.050	ug/l	
218-01-9	Chrysene	ND	0.20	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.050	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.25	ug/l	
86-73-7	Fluorene	ND	1.0	0.50	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.050	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-20-3	Naphthalene	ND	1.0	0.25	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.25	ug/l	
129-00-0	Pyrene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	54%	42-108%
321-60-8	2-Fluorobiphenyl	49%	40-106%
1718-51-0	Terphenyl-d14	96%	39-121%

Blank Spike Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31118-BS	W048973.D	1	12/03/09	RB	12/03/09	OP31118	SW2464

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

F69838-2, F69838-6, F69838-7, F69838-8, F69838-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	18.7	75	60-94
208-96-8	Acenaphthylene	25	18.2	73	60-92
120-12-7	Anthracene	25	20.2	81	69-98
56-55-3	Benzo(a)anthracene	2.5	2.1	84	65-102
50-32-8	Benzo(a)pyrene	2.5	2.2	88	74-106
205-99-2	Benzo(b)fluoranthene	2.5	2.1	84	71-104
191-24-2	Benzo(g,h,i)perylene	2.5	2.0	80	60-104
207-08-9	Benzo(k)fluoranthene	2.5	2.1	84	70-104
218-01-9	Chrysene	2.5	2.1	84	69-104
53-70-3	Dibenzo(a,h)anthracene	2.5	2.0	80	63-107
206-44-0	Fluoranthene	25	20.3	81	70-99
86-73-7	Fluorene	25	18.8	75	62-95
193-39-5	Indeno(1,2,3-cd)pyrene	2.5	2.0	80	63-107
90-12-0	1-Methylnaphthalene	25	18.9	76	57-94
91-57-6	2-Methylnaphthalene	25	17.4	70	58-90
91-20-3	Naphthalene	25	18.0	72	58-92
85-01-8	Phenanthrene	25	19.0	76	68-98
129-00-0	Pyrene	25	20.6	82	66-102

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	86%	42-108%
321-60-8	2-Fluorobiphenyl	74%	40-106%
1718-51-0	Terphenyl-d14	80%	39-121%

Blank Spike Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31118-BS	R20564.D	1	12/07/09	RB	12/03/09	OP31118	SR1006

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

F69838-2, F69838-6, F69838-7, F69838-8, F69838-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	19.2	77	60-94
208-96-8	Acenaphthylene	25	17.9	72	60-92
120-12-7	Anthracene	25	21.0	84	69-98
56-55-3	Benzo(a)anthracene	2.5	2.2	88	65-102
50-32-8	Benzo(a)pyrene	2.5	2.1	84	74-106
205-99-2	Benzo(b)fluoranthene	2.5	1.9	76	71-104
191-24-2	Benzo(g,h,i)perylene	2.5	2.2	88	60-104
207-08-9	Benzo(k)fluoranthene	2.5	1.8	72	70-104
218-01-9	Chrysene	2.5	2.1	84	69-104
53-70-3	Dibenzo(a,h)anthracene	2.5	2.0	80	63-107
206-44-0	Fluoranthene	25	22.7	91	70-99
86-73-7	Fluorene	25	20.2	81	62-95
193-39-5	Indeno(1,2,3-cd)pyrene	2.5	2.1	84	63-107
90-12-0	1-Methylnaphthalene	25	19.1	76	57-94
91-57-6	2-Methylnaphthalene	25	17.7	71	58-90
91-20-3	Naphthalene	25	18.2	73	58-92
85-01-8	Phenanthrene	25	19.4	78	68-98
129-00-0	Pyrene	25	19.4	78	66-102

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	78%	42-108%
321-60-8	2-Fluorobiphenyl	78%	40-106%
1718-51-0	Terphenyl-d14	81%	39-121%

Blank Spike Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31150-BS	R20590.D	1	12/08/09	RB	12/07/09	OP31150	SR1007

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

F69838-3, F69838-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	18.4	74	60-94
208-96-8	Acenaphthylene	25	17.2	69	60-92
120-12-7	Anthracene	25	20.2	81	69-98
56-55-3	Benzo(a)anthracene	2.5	2.2	88	65-102
50-32-8	Benzo(a)pyrene	2.5	2.1	84	74-106
205-99-2	Benzo(b)fluoranthene	2.5	2.0	80	71-104
191-24-2	Benzo(g,h,i)perylene	2.5	1.9	76	60-104
207-08-9	Benzo(k)fluoranthene	2.5	1.9	76	70-104
218-01-9	Chrysene	2.5	2.0	80	69-104
53-70-3	Dibenzo(a,h)anthracene	2.5	1.9	76	63-107
206-44-0	Fluoranthene	25	19.3	77	70-99
86-73-7	Fluorene	25	19.8	79	62-95
193-39-5	Indeno(1,2,3-cd)pyrene	2.5	1.9	76	63-107
90-12-0	1-Methylnaphthalene	25	18.9	76	57-94
91-57-6	2-Methylnaphthalene	25	17.6	70	58-90
91-20-3	Naphthalene	25	17.1	68	58-92
85-01-8	Phenanthrene	25	18.6	74	68-98
129-00-0	Pyrene	25	18.0	72	66-102

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	84%	42-108%
321-60-8	2-Fluorobiphenyl	75%	40-106%
1718-51-0	Terphenyl-d14	76%	39-121%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31118-MS	W048983.D	1	12/03/09	RB	12/03/09	OP31118	SW2464
OP31118-MSD	W048984.D	1	12/03/09	RB	12/03/09	OP31118	SW2464
F69838-8	W048982.D	1	12/03/09	RB	12/03/09	OP31118	SW2464

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

F69838-2, F69838-6, F69838-7, F69838-8, F69838-9

CAS No.	Compound	F69838-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	0.95	U	48.1	35.8	74	36.9	77	3	60-94/25
208-96-8	Acenaphthylene	0.95	U	48.1	34.3	71	35.6	74	4	60-92/24
120-12-7	Anthracene	0.95	U	48.1	41.5	86	41.4	86	0	69-98/19
56-55-3	Benzo(a)anthracene	0.19	U	4.81	4.5	94	4.3	89	5	65-102/23
50-32-8	Benzo(a)pyrene	0.19	U	4.81	4.8	100	4.6	96	4	74-106/23
205-99-2	Benzo(b)fluoranthene	0.19	U	4.81	4.5	94	4.4	92	2	71-104/24
191-24-2	Benzo(g,h,i)perylene	0.19	U	4.81	4.3	89	4.3	89	0	60-104/22
207-08-9	Benzo(k)fluoranthene	0.19	U	4.81	4.5	94	4.4	92	2	70-104/22
218-01-9	Chrysene	0.19	U	4.81	4.5	94	4.4	92	2	69-104/21
53-70-3	Dibenzo(a,h)anthracene	0.19	U	4.81	4.4	92	4.4	92	0	63-107/21
206-44-0	Fluoranthene	0.95	U	48.1	42.0	87	41.0	85	2	70-99/23
86-73-7	Fluorene	0.95	U	48.1	36.7	76	37.0	77	1	62-95/25
193-39-5	Indeno(1,2,3-cd)pyrene	0.19	U	4.81	4.4	92	4.2	87	5	63-107/24
90-12-0	1-Methylnaphthalene	0.95	U	48.1	35.8	74	36.7	76	2	57-94/26
91-57-6	2-Methylnaphthalene	0.95	U	48.1	33.2	69	34.3	71	3	58-90/23
91-20-3	Naphthalene	0.95	U	48.1	33.4	69	35.3	73	6	58-92/23
85-01-8	Phenanthrene	0.95	U	48.1	37.1	77	37.8	79	2	68-98/23
129-00-0	Pyrene	0.95	U	48.1	42.7	89	43.2	90	1	66-102/25

CAS No.	Surrogate Recoveries	MS	MSD	F69838-8	Limits
4165-60-0	Nitrobenzene-d5	83%	88%	63%	42-108%
321-60-8	2-Fluorobiphenyl	72%	79%	48%	40-106%
1718-51-0	Terphenyl-d14	88%	85%	76%	39-121%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31150-MS	R20603.D	1	12/08/09	RB	12/07/09	OP31150	SR1007
OP31150-MSD	R20604.D	1	12/08/09	RB	12/07/09	OP31150	SR1007
F69869-4	R20602.D	1	12/08/09	RB	12/07/09	OP31150	SR1007

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

F69838-3, F69838-5

CAS No.	Compound	F69869-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	0.95	U	48.1	25.3	53*	24.0	50*	5	60-94/25
208-96-8	Acenaphthylene	0.95	U	48.1	23.3	48*	22.3	46*	4	60-92/24
120-12-7	Anthracene	0.95	U	48.1	31.5	66*	29.8	62*	6	69-98/19
56-55-3	Benzo(a)anthracene	0.19	U	4.81	4.3	89	3.5	73	21	65-102/23
50-32-8	Benzo(a)pyrene	0.19	U	4.81	3.9	81	3.2	67*	20	74-106/23
205-99-2	Benzo(b)fluoranthene	0.19	U	4.81	3.7	77	3.0	62*	21	71-104/24
191-24-2	Benzo(g,h,i)perylene	0.19	U	4.81	3.1	64	2.7	56*	14	60-104/22
207-08-9	Benzo(k)fluoranthene	0.19	U	4.81	3.6	75	2.8	58*	25*	70-104/22
218-01-9	Chrysene	0.19	U	4.81	3.6	75	3.1	64*	15	69-104/21
53-70-3	Dibenzo(a,h)anthracene	0.19	U	4.81	3.1	64	2.7	56*	14	63-107/21
206-44-0	Fluoranthene	0.95	U	48.1	32.6	68*	28.8	60*	12	70-99/23
86-73-7	Fluorene	0.95	U	48.1	27.9	58*	26.5	55*	5	62-95/25
193-39-5	Indeno(1,2,3-cd)pyrene	0.19	U	4.81	3.2	67	2.8	58*	13	63-107/24
90-12-0	1-Methylnaphthalene	0.95	U	48.1	26.0	54*	24.8	52*	5	57-94/26
91-57-6	2-Methylnaphthalene	0.95	U	48.1	24.1	50*	23.2	48*	4	58-90/23
91-20-3	Naphthalene	0.95	U	48.1	23.6	49*	22.9	48*	3	58-92/23
85-01-8	Phenanthrene	0.95	U	48.1	27.7	58*	27.1	56*	2	68-98/23
129-00-0	Pyrene	0.95	U	48.1	33.3	69	28.4	59*	16	66-102/25

CAS No.	Surrogate Recoveries	MS	MSD	F69869-4	Limits
4165-60-0	Nitrobenzene-d5	55%	51%	62%	42-108%
321-60-8	2-Fluorobiphenyl	49%	46%	54%	40-106%
1718-51-0	Terphenyl-d14	73%	56%	72%	39-121%

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31123-MB	IJ61521.D	1	12/03/09	FEA	12/03/09	OP31123	GIJ2104

The QC reported here applies to the following samples: **Method:** FLORIDA-PRO

F69838-2, F69838-3, F69838-5, F69838-6, F69838-7, F69838-8, F69838-9

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	ND	0.25	0.17	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	84%	38-122%

Method Blank Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31123-MB	IJ61547.D	1	12/04/09	FEA	12/03/09	OP31123	GIJ2105

The QC reported here applies to the following samples: **Method:** FLORIDA-PRO

F69838-2, F69838-3, F69838-5, F69838-6, F69838-7, F69838-8, F69838-9

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	ND	0.25	0.17	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	77%	38-122%

Blank Spike Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31123-BS	IJ61520.D	1	12/03/09	FEA	12/03/09	OP31123	GIJ2104

The QC reported here applies to the following samples: **Method:** FLORIDA-PRO

F69838-2, F69838-3, F69838-5, F69838-6, F69838-7, F69838-8, F69838-9

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH (C8-C40)	0.85	0.750	88	54-110

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	85%	38-122%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F69838
Account: SIESNCR Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP31123-MS	IJ61528.D	1	12/03/09	FEA	12/03/09	OP31123	GIJ2104
OP31123-MSD	IJ61529.D	1	12/03/09	FEA	12/03/09	OP31123	GIJ2104
F69838-8	IJ61527.D	1	12/03/09	FEA	12/03/09	OP31123	GIJ2104

The QC reported here applies to the following samples: **Method:** FLORIDA-PRO

F69838-2, F69838-3, F69838-5, F69838-6, F69838-7, F69838-8, F69838-9

CAS No.	Compound	F69838-8 mg/l	Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C8-C40)	0.24	U	1.63	1.46	89	1.38	84	6	54-110/28

CAS No.	Surrogate Recoveries	MS	MSD	F69838-8	Limits
84-15-1	o-Terphenyl	92%	82%	67%	38-122%

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F69838
Account: SIESNCR - Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP14106/GN37844	2.0	0.0	mg/l	50	48.1	96.2	90-110%
Fluoride	GP14106/GN37844	0.20	0.0	mg/l	2.5	2.40	96.0	90-110%
Sulfate	GP14082/GN37787	2.0	0.0	mg/l	50	50.1	100.2	90-110%
Sulfate	GP14106/GN37844	2.0	0.0	mg/l	50	48.6	97.2	90-110%

Associated Samples:
Batch GP14082: F69838-1, F69838-2, F69838-3, F69838-4, F69838-5, F69838-6, F69838-7, F69838-8
Batch GP14106: F69838-9
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F69838
Account: SIESNCR - Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP14106/GN37844	F69901-1	mg/l	48.2	47.4	1.7	0-20%
Fluoride	GP14106/GN37844	F69901-1	mg/l	0.35	0.34	2.9	0-20%
Sulfate	GP14082/GN37787	F69838-1	mg/l	10.2	10.2	0.0	0-20%
Sulfate	GP14106/GN37844	F69901-1	mg/l	128	124	3.2	0-20%

Associated Samples:
Batch GP14082: F69838-1, F69838-2, F69838-3, F69838-4, F69838-5, F69838-6, F69838-7, F69838-8
Batch GP14106: F69838-9
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: F69838
Account: SIESNCR - Solutions-IES, Inc
Project: Cecil Field -Bldg 46; Jacksonville, FL

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP14106/GN37844	F69901-1	mg/l	48.2	50	96.0	95.6	90-110%
Fluoride	GP14106/GN37844	F69901-1	mg/l	0.35	2.5	1.2	34.0N(a)	90-110%
Sulfate	GP14082/GN37787	F69838-1	mg/l	10.2	50	52.3	84.2N(a)	90-110%
Sulfate	GP14106/GN37844	F69901-1	mg/l	128	50	162	68.0N(a)	90-110%

Associated Samples:
Batch GP14082: F69838-1, F69838-2, F69838-3, F69838-4, F69838-5, F69838-6, F69838-7, F69838-8
Batch GP14106: F69838-9
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Accutest Laboratories Southeast
Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

ACCUTEST

Accutest JOB # F69838 (32281) PAGE 1 OF 1

Accutest Quote #

SKIFF#

Client / Reporting Information

Company Name: Solutions-IES
Address: 1101 Nowell Rd
City: Raleigh State: NC Zip: 27607
Project Contact: Jessica Keener E-mail: JKeener@solutions-ies.com
Phone#: (919) 873-1060
Sampler(s) Name(s) (Printed): KD, EG, TF

Project Information

Project Name: Cecil Field - Bldg 46
Street:
City: Jacksonville State: FL
Project #: 4030.08A2. NAVF
Fax #: (919) 873-1074
Client Purchase Order #:

Analytical Information / **Matrix Codes**

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection DATE	Collection TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH+ZNAC	DI WATER	MEOH	Sulfate 300.0	BTEX+MTBE 8260B	PAHs 8270C	TRPH FL PRO							LAB USE ONLY
1	CEF-046-25I	12/1/09	1038	KD	GW	1		X								X										
2	CEF-046-07I		1053	EG		8		X	X			X				X	X	X	X							
3	CEF-046-01S		1045	TF		8		X	X			X				X	X	X	X							
4	CEF-046-06D		1220	TF		1		X								X										
5	CEF-046-24D		1132	KD		8		X	X			X				X	X	X	X							
6	CEF-046-02S		1302	EG		8		X	X			X				X	X	X	X							
7	CEF-046-26I		1443	KD		8		X	X			X				X	X	X	X							
8	CEF-046-21I		1458	EG		8		X	X			X				X	X	X	X							
9	CEF-046-05I		1455	TF		8		X	X			X				X	X	X	X							
	Om																									
10	CEF-046-TB1	↓	—	—	—	3			X					X			X									

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- ☐ 10 Days Standard
- ☐ 7 Day RUSH
- ☐ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY
- ☐ OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- ☐ COMMERCIAL "A" (RESULTS ONLY)
- ☐ COMMERCIAL "B" (RESULTS PLUS QC)
- ☐ REDT1 (EPA LEVEL 3)
- ☐ FULT1 (EPA LEVEL 4)
- ☑ EDD'S

Comments / Remarks

Koall - QA/QC 12/1/09

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 Dan Marshall	12/1/09 1650	2 [signature] 12/01/09 1650	3 [signature] 12/01/09 1955		4 [signature] (ACCUTEST)
Relinquished by: 5	Date Time:	Received By: 6	Relinquished by: 7	Date Time:	Received By: 8 12-2-09

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 4 Cooler Temperature (s) Celsius: 1.8 3.0 2.4 2.8

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F69838 CLIENT: Solutions - IES PROJECT: CECIL FIELD Bldg 46

DATE/TIME RECEIVED: 12-2-09 08:30 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 4

METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS:

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [x] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [x] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [x] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? _____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OR LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 2 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 1.4 2.6 2.0 2.4
- [ ] CORRECTED TEMPS: 1.8 3.0 2.4 2.8

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE JC 12-2-09 REVIEWER SIGNATURE/DATE ET 12/2/09

Sample Receipt Confirmation

Solutions-IES, Inc

Job No: F69838

Cecil Field -Bldg 46; Jacksonville, FL
Project No: 4030.08A2.NAVF

Sample Number	Collected Date	Time	By	Received	TA	Matrix Code	Type	Client Sample ID
F69838-1	12/01/09	10:38	KD	12/02/09	7	AQ	Ground Water	CEF-046-25I
Tests: SO4								
F69838-2	12/01/09	10:53	KD	12/02/09	7	AQ	Ground Water	CEF-046-07I
F69838-3	12/01/09	10:45	KD	12/02/09	7	AQ	Ground Water	CEF-046-01S
Tests: B8270SIMPAH, FLPRO, SO4, V8260BTXM								
F69838-4	12/01/09	12:20	KD	12/02/09	7	AQ	Ground Water	CEF-046-06D
Tests: SO4								
F69838-5	12/01/09	11:32	KD	12/02/09	7	AQ	Ground Water	CEF-046-24D
F69838-6	12/01/09	13:02	KD	12/02/09	7	AQ	Ground Water	CEF-046-02S
F69838-7	12/01/09	14:43	KD	12/02/09	7	AQ	Ground Water	CEF-046-26I
F69838-8	12/01/09	14:58	KD	12/02/09	7	AQ	Ground Water	CEF-046-21I
F69838-9	12/01/09	14:55	KD	12/02/09	7	AQ	Ground Water	CEF-046-05I
Tests: B8270SIMPAH, FLPRO, SO4, V8260BTXM								
F69838-10	12/01/09	00:00	KD	12/02/09	7	AQ	Trip Blank Water	CEF-046-TB1
Tests: V8260BTXM								

Tests are displayed after the samples to which they apply.

APPENDIX B

GROUNDWATER SAMPLING LOGS

SOLUTIONS-IES
GROUNDWATER SAMPLING LOG

Site Name: Building 46 - Cecil Field | **Site Location:** Jacksonville, Florida

Well Number: CEF-046-01S | **Sample ID:** CEF-046-01S | **Date:** 12/1/09

PURGING DATA

Well Diameter (inches):	Tubing Diameter (inches):	Tubing:	Static Depth to water (feet):	Purge Pump Type or Bailer:	Well Screen Interval Depth:
1 (2) 3 4	1/4 (3/8) 1/2	(LDPE) Teflon	10.50	(Peristaltic Pump)	feet to feet

Initial Pump or Tubing Depth in well:	Purging Initiated:	Purging Ended:	Total Volume Purged (Gallons):	Sample Pump Flow Rate (mL/min):
2 ft from bottom	10:05	10:45	.95	97

Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	Purge Rate: (mL/min)	Depth to Water (feet)	pH (SU)	Temp (°C)	Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU's)	ORP (m/v)	Color (describe)	Odor (describe)
10:10	.1	.1	92	11.72	4.44	24.84	616	.69	34.4	58.4	slightly tea	none
10:15	.1	.2	97	11.82	4.52	24.47	615	.34	27.4	32.0	v. slight tea	none
10:20	.1	.3	97	11.92	4.56	24.50	613	.29	28.0	18.4	"	sulfur
10:25	.1	.4	97	11.98	4.88	24.60	599	.22	25.9	-38.5	"	"
10:30	.15	.55	97	11.92	4.96	24.63	581	.19	23.9	-53.1	"	"
10:35	.15	.7	97	11.91	4.90	24.53	564	.16	17.5	-61.3	"	"
10:40	.15	.85	97	11.92	4.80	24.56	552	.13	14.6	-64.7	"	"
10:45	.1	.95	97	11.93	4.77	24.58	545	.13	12.8	-65.5	"	"

Well Capacity (Gallons/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 Diameter Capacity (Gallons/Foot): **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/Affiliation:	Sampler(s) Signature:	Sampling Initiated:	Sampling Ended:
Traci Fulkerson/Tetra Tech	[signature]	10:45	11:35

Field Decontamination:	Field-Filtered:	Filter Size:	Filtration Equipment Type:	Duplicate:
(Y) N	Y (N)	— µm	—	Y (N)

SAMPLE CONTAINER INFORMATION

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Intended Analysis	Sampling Equipment Code
✓	2	AG	1 L	None	PAHs 8270C	PP
✓	2	AG	1 L	H_2SO_4	TRPH FL-PRO	PP
✓	1	PE	500 mL	None	Sulfate 300.0	PP
✓	3	CG	40 mL	HCl	BTEX & MTBE 8260B	RFPP

Remarks: Turned pump as low as possible w/o it shutting off

Field Kits: Fe^{++}: 6 H_2S: 0.424 CO_2: 35 DO: 0.1 A_T: 0

Material Codes: **AG** = Amber Glass **CG** = Clear Glass **PE** = Polyethylene **PP** = Polypropylene **S** = Silicone **T** = Teflon **O** = Other (Specify)

Sampling/Purging: **APP** = After Peristaltic Pump **B** = Bailer **BP** = Bladder Pump **ESP** = Electric Submersible Pump **PP** = Peristaltic Pump

Equipment Codes: **RFPP** = Reverse Flow Peristaltic Pump **SM** = Straw Method (Tubing Gravity Drain) **VT** = Vacuum Trap **O** = Other (Specify)

Stabilization criteria for range of variation of last three consecutive readings: **pH:** + 0.2 units **Temperature:** + 0.2°C **Specific Conductance:** + 5%
Dissolved Oxygen: all readings < 20% saturation; optionally, + 0.2 mg/L or + 10% (whichever is greater)
Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

SOLUTIONS-IES
GROUNDWATER SAMPLING LOG

Site Name: Building 46 - Cecil Field		**Site Location:** Jacksonville, Florida
Well Number: CEF-046-02S	**Sample ID:** CEF-046-02S	**Date:** 12/10/09

PURGING DATA

Well Diameter (inches):	Tubing Diameter (inches):	Tubing:	Static Depth to water (feet):	Purge Pump Type or Bailer:	Well Screen Interval Depth:
1 (2) 3 4	(1/4) 3/8 1/2	(LDPE) Teflon	10.70	Peristaltic Pump	feet to feet

Initial Pump or Tubing Depth in well:	Purging Initiated:	Purging Ended:	Total Volume Purged (Gallons):	Sample Pump Flow Rate (mL/min):
1 ft off bottom	1202	1302	0.7	

Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	Purge Rate: (mL/min)	Depth to Water (feet)	pH (SU)	Temp (°C)	Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU's)	ORP (m/v)	Color (describe)	Odor (describe)
1208	0.1	0.1	200	10.70	6.49	24.75	357	1.05	13.1	128.1	Clear	—
1212	0.2	0.3	140	10.70	6.51	24.61	365	0.79	9.81	128.3	—	—
1216	0.1	0.4	140	10.62	6.51	24.35	374	0.68	10.3	125.7	—	—
1220	0.1	0.5	140	10.62	6.51	24.17	381	0.65	10.5	124.0	—	—
1224	0.1	0.6	140	10.62	6.50	24.10	384	0.63	10.8	122.9	—	—
1228	0.1	0.7	140	10.62	6.51	24.15	387	0.66	10.9	120.8	—	—
1246	0.5	1.2	200	10.62	6.51	24.96	406	0.79	62.0	89.6	—	—
1250	0.2	1.4	140	10.62	6.48	24.87	431	0.70	49.0	90.0	—	—
1254	0.2	1.6	140	10.62	6.47	24.11	496	0.59	49.0	91.6	—	—
1258	0.2	1.8	140	10.62	6.44	24.05	508	0.51	34.0	92.5	—	—
1302	0.2	2.0	140	10.62	6.43	23.95	508	0.51	31.6	91.5	—	—

Well Capacity (Gallons/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 Diameter Capacity (Gallons/Foot): **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/Affiliation:	Sampler(s) Signature:	Sampling Initiated:	Sampling Ended:
Elizabeth Geigenterraine	Elizabeth C. M.	1302	1343

Field Decontamination:	Field-Filtered:	Filter Size:	Filtration Equipment Type:	Duplicate:
Y (N)	Y (N)	N/A µm	N/A	Y (N)

SAMPLE CONTAINER INFORMATION

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Intended Analysis	Sampling Equipment Code
2	2	AG	1 L	None	PAHs 8270C	PP
2	2	AG	1 L	H_2SO_4	TRPH FL-PRO	PP
1	1	PE	500 mL	None	Sulfate 300.0	PP
3	3	CG	40 mL	HCl	BTEX & MTBE 8260B	RFPP

Remarks: Water stopped pumping when sampling, had to repurge

Field Kits: Fe^{++}: 0.3 H_2S: 0 CO_2: 100 DO: 1 A_T: 0

Material Codes: **AG** = Amber Glass **CG** = Clear Glass **PE** = Polyethylene **PP** = Polypropylene **S** = Silicone **T** = Teflon **O** = Other (Specify)

Sampling/Purging: **APP** = After Peristaltic Pump **B** = Bailer **BP** = Bladder Pump **ESP** = Electric Submersible Pump **PP** = Peristaltic Pump

Equipment Codes: **RFPP** = Reverse Flow Peristaltic Pump **SM** = Straw Method (Tubing Gravity Drain) **VT** = Vacuum Trap **O** = Other (Specify)

Stabilization criteria for range of variation of last three consecutive readings: **pH:** + 0.2 units **Temperature:** + 0.2°C **Specific Conductance:** + 5%
Dissolved Oxygen: all readings < 20% saturation; optionally, + 0.2 mg/L or + 10% (whichever is greater)
Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

SOLUTIONS-IES
GROUNDWATER SAMPLING LOG

Site Name: Building 46 - Cecil Field		**Site Location:** Jacksonville, Florida
Well Number: CEF-046-05I	**Sample ID:** CEF-046-05I	**Date:** 12/1/09

PURGING DATA

Well Diameter (inches):	Tubing Diameter (inches):	Tubing:	Static Depth to water (feet):	Purge Pump Type or Bailer:	Well Screen Interval Depth:
1 (2) 3 4	1/4 (3/8) 1/2	LDPE (Teflon)	11.24	(Peristaltic Pump)	feet to feet

Initial Pump or Tubing Depth in well:	Purging Initiated:	Purging Ended:	Total Volume Purged (Gallons):	Sample Pump Flow Rate (mL/min):
2 ft from bottom	14:25	14:55	0.9	150

Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	Purge Rate: (mL/min)	Depth to Water (feet)	pH (SU)	Temp (°C)	Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU's)	ORP (m/v)	Color (describe)	Odor (describe)
14:30	.05	.05	150	11.50	2.85	24.52	1036	1.92	13.2	422.5	very light tea	none
14:35	.1	.15	150	11.49	2.79	25.06	1105	1.54	14.6	423.6	"	slight sulfur
14:40	.15	.3	150	11.49	2.73	25.18	1241	1.20	10.6	423.2	"	"
14:45	.2	.5	150	11.50	2.70	25.21	1298	1.01	8.3	425.3	"	"
14:50	.15	.65	150	11.50	2.68	25.24	1334	1.05	6.3	427.6	"	"
14:55	.25	.9	150	11.52	2.66	25.13	1364	1.15	5.9	431.6	"	"

Well Capacity (Gallons/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 Diameter Capacity (Gallons/Foot): **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/Affiliation:	Sampler(s) Signature:	Sampling Initiated:	Sampling Ended:
Traci Fulkerson/Terraine	[signature]	14:55	15:33

Field Decontamination:	Field-Filtered:	Filter Size:	Filtration Equipment Type:	Duplicate:
(Y) N	Y (N)	— µm	—	Y (N)

SAMPLE CONTAINER INFORMATION

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Intended Analysis	Sampling Equipment Code
✓	2	AG	1 L	None	PAHs 8270C	PP
✓	2	AG	1 L	H_2SO_4	TRPH FL-PRO	PP
✓	1	PE	500 mL	None	Sulfate 300.0	PP
✓	3	CG	40 mL	HCl	BTEX & MTBE 8260B	RFPP

Remarks:

Field Kits: Fe^{++}: 7 H_2S: 0 CO_2: 500 DO: 3 A_T: 0

Material Codes: **AG** = Amber Glass **CG** = Clear Glass **PE** = Polyethylene **PP** = Polypropylene **S** = Silicone **T** = Teflon **O** = Other (Specify)

Sampling/Purging: **APP** = After Peristaltic Pump **B** = Bailer **BP** = Bladder Pump **ESP** = Electric Submersible Pump **PP** = Peristaltic Pump

Equipment Codes: **RFPP** = Reverse Flow Peristaltic Pump **SM** = Straw Method (Tubing Gravity Drain) **VT** = Vacuum Trap **O** = Other (Specify)

Stabilization criteria for range of variation of last three consecutive readings: **pH:** + 0.2 units **Temperature:** + 0.2°C **Specific Conductance:** + 5%
Dissolved Oxygen: all readings < 20% saturation; optionally, + 0.2 mg/L or + 10% (whichever is greater)
Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

SOLUTIONS-IES
GROUNDWATER SAMPLING LOG

Sulfate Only

Site Name: Building 46 - Cecil Field		**Site Location:** Jacksonville, Florida
Well Number: CEF-046-06D	**Sample ID:** CEF-046-06D	**Date:** 12/1/09

PURGING DATA

Well Diameter (inches):	Tubing Diameter (inches):	Tubing:	Static Depth to water (feet):	Purge Pump Type or Bailer:	Well Screen Interval Depth:
1 (2) 3 4	1/4 (3/8) 1/2	(LDPE) Teflon	12.81	(Peristaltic Pump)	feet to feet

Initial Pump or Tubing Depth in well:	Purging Initiated:	Purging Ended:	Total Volume Purged (Gallons):	Sample Pump Flow Rate (mL/min):
2 feet from bottom	11:55	12:20	0.6	112

Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	Purge Rate: (mL/min)	Depth to Water (feet)	pH (SU)	Temp (°C)	Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU's)	ORP (m/v)	Color (describe)	Odor (describe)
12:00	.05	.05	112	13.51	2.19	24.99	11179	.69	5.2	435.9	light tea	sulfur
12:05	.15	.2	112	13.50	2.17	25.04	11170	.47	6.0	436.6	"	"
12:10	.15	.35	112	13.50	2.16	25.14	11060	.28	4.7	437.2	"	"
12:15	.15	.5	112	13.50	2.16	25.18	11028	.25	3.1	437.3	"	"
12:20	.1	.6	112	13.50	2.16	25.12	10967	.21	4.2	437.4	"	"

Well Capacity (Gallons/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 Diameter Capacity (Gallons/Foot): **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/Affiliation:	Sampler(s) Signature:	Sampling Initiated:	Sampling Ended:
Traci Fulkerson/Terraine	[signature]	12:20	12:27

Field Decontamination:	Field-Filtered:	Filter Size:	Filtration Equipment Type:	Duplicate:
(Y) N	Y (N)	— µm	—	Y (N)

SAMPLE CONTAINER INFORMATION

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Intended Analysis	Sampling Equipment Code
✓	1	PE	500 mL	None	Sulfate 300.0	PP

Remarks:

Field Kits:

Material Codes: **AG** = Amber Glass **CG** = Clear Glass **PE** = Polyethylene **PP** = Polypropylene **S** = Silicone **T** = Teflon **O** = Other (Specify)

Sampling/Purging: **APP** = After Peristaltic Pump **B** = Bailer **BP** = Bladder Pump **ESP** = Electric Submersible Pump **PP** = Peristaltic Pump

Equipment Codes: **RFPP** = Reverse Flow Peristaltic Pump **SM** = Straw Method (Tubing Gravity Drain) **VT** = Vacuum Trap **O** = Other (Specify)

Stabilization criteria for range of variation of last three consecutive readings: **pH:** + 0.2 units **Temperature:** + 0.2°C **Specific Conductance:** + 5%
Dissolved Oxygen: all readings < 20% saturation; optionally, + 0.2 mg/L or + 10% (whichever is greater)
Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

SOLUTIONS-IES
GROUNDWATER SAMPLING LOG

Site Name: Building 46 - Cecil Field	**Site Location:** Jacksonville, Florida
Well Number: CEF-046-07I	**Sample ID:** CEF-046-07I **Date:** 12/1/09

PURGING DATA

Well Diameter (inches):	Tubing Diameter (inches):	Tubing:	Static Depth to water (feet):	Purge Pump Type or Bailer:	Well Screen Interval Depth:
1 (2) 3 4	(1/4) 3/8 1/2	LDPE Teflon	10.68	Peristaltic Pump	feet to feet

Initial Pump or Tubing Depth in well:	Purging Initiated:	Purging Ended:	Total Volume Purged (Gallons):	Sample Pump Flow Rate (mL/min):
	1019	1053	1.6	150

Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	Purge Rate: (mL/min)	Depth to Water (feet)	pH (SU)	Temp (°C)	Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU's)	ORP (m/v)	Color (describe)	Odor (describe)
1030	0.1	0.1	250	11.62	3.99	24.74	59	1.47	104.2	64	Clear	N/A
1035	0.3	0.4	200	11.48	4.03	24.94	85	0.76	94.7	11.1	—	—
1038	0.2	0.6	150	11.34	4.03	24.89	82	0.60	105	-14.3	—	—
1041	0.2	0.8	150	11.33	4.04	24.84	82	0.55	98.4	-20.3	—	—
1044	0.2	1.0	150	11.33	3.98	24.84	82	0.52	92.5	-23	—	—
1047	0.2	1.2	150	11.33	3.96	24.82	83	0.50	88.6	-24.2	—	—
1050	0.2	1.4	150	11.33	3.96	24.84	83	0.47	83.4	-32	—	—
1053	0.2	1.6	150	11.33	3.95	24.85	83	0.48	80.3	-31		

Well Capacity (Gallons/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 Diameter Capacity (Gallons/Foot): **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/Affiliation:	Sampler(s) Signature:	Sampling Initiated:	Sampling Ended:
Elizabeth Geisen / Terraine	Elizabeth C. G	1053	1140

Field Decontamination:	Field-Filtered:	Filter Size:	Filtration Equipment Type:	Duplicate:
Y (N)	Y (N)	N/A µm	N/A	Y (N)

SAMPLE CONTAINER INFORMATION

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Intended Analysis	Sampling Equipment Code
2	2	AG	1 L	None	PAHs 8270C	PP
2	2	AG	1 L	H_2SO_4	TRPH FL-PRO	PP
1	1	PE	500 mL	None	Sulfate 300.0	PP
3	3	CG	40 mL	HCl	BTEX & MTBE 8260B	RFPP

Remarks: Retobed well, due to hole in tubing

Field Kits: Fe^{++}: 0.3 H_2S: 0 CO_2: 100 DO: 1 A_T: 50

Material Codes: **AG** = Amber Glass **CG** = Clear Glass **PE** = Polyethylene **PP** = Polypropylene **S** = Silicone **T** = Teflon **O** = Other (Specify)

Sampling/Purging: **APP** = After Peristaltic Pump **B** = Bailer **BP** = Bladder Pump **ESP** = Electric Submersible Pump **PP** = Peristaltic Pump

Equipment Codes: **RFPP** = Reverse Flow Peristaltic Pump **SM** = Straw Method (Tubing Gravity Drain) **VT** = Vacuum Trap **O** = Other (Specify)

Stabilization criteria for range of variation of last three consecutive readings: **pH:** + 0.2 units **Temperature:** + 0.2°C **Specific Conductance:** + 5%
Dissolved Oxygen: all readings < 20% saturation; optionally, + 0.2 mg/L or + 10% (whichever is greater)
Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

SOLUTIONS-IES
GROUNDWATER SAMPLING LOG

Site Name: Building 46 - Cecil Field | **Site Location:** Jacksonville, Florida

Well Number: CEF-046-21I | **Sample ID:** CEF-046-21I | **Date:** 12/1/09

PURGING DATA

Well Diameter (inches):	Tubing Diameter (inches):	Tubing:	Static Depth to water (feet):	Purge Pump Type or Bailer:	Well Screen Interval Depth:
1 (2) 3 4	(1/4) 3/8 1/2	(LDPE) Teflon	11.36	Peristaltic Pump	feet to feet

Initial Pump or Tubing Depth in well:	Purging Initiated:	Purging Ended:	Total Volume Purged (Gallons):	Sample Pump Flow Rate (mL/min):
lift off bottom	1434	1458	0.6	160

Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	Purge Rate: (mL/min)	Depth to Water (feet)	pH (SU)	Temp (°C)	Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU's)	ORP (m/v)	Color (describe)	Odor (describe)
1438	0.1	0.1	160	11.60	4.26	22.93	185	1.64	31.6	135.7	Clear	— —
1442	0.1	0.2	160	11.60	4.16	23.08	188	1.15	6.36	134.4	—	—
1446	0.1	0.3	160	11.60	4.14	23.12	190	0.82	5.22	134.7	—	—
1450	0.1	0.4	160	11.60	4.13	23.22	192	0.53	4.15	135.1	—	—
1454	0.1	0.5	160	11.60	4.12	23.25	193	0.48	3.99	137.7	—	—
1458	0.1	0.6	160	11.60	4.12	23.20	195	0.43	4.23	138.4	—	—

Well Capacity (Gallons/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 Diameter Capacity (Gallons/Foot): **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/Affiliation:	Sampler(s) Signature:	Sampling Initiated:	Sampling Ended:
Elizabeth Geigu/Tetrane	Elizabeth C. S	1458	1540

Field Decontamination:	Field-Filtered:	Filter Size:	Filtration Equipment Type:	Duplicate:
Y (N)	Y (N)	N/A µm	N/A	Y (N)

SAMPLE CONTAINER INFORMATION

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Intended Analysis	Sampling Equipment Code
2	2	AG	1 L	None	PAHs 8270C	PP
2	2	AG	1 L	H_2SO_4	TRPH FL-PRO	PP
1	1	PE	500 mL	None	Sulfate 300.0	PP
3	3	CG	40 mL	HCl	BTEX & MTBE 8260B	RFPP

Remarks:

Field Kits: Fe^{++}: 3 H_2S: 0 CO_2: 32 DO: 1.0 A_T: 0

Material Codes: **AG** = Amber Glass **CG** = Clear Glass **PE** = Polyethylene **PP** = Polypropylene **S** = Silicone **T** = Teflon **O** = Other (Specify)

Sampling/Purging: **APP** = After Peristaltic Pump **B** = Bailer **BP** = Bladder Pump **ESP** = Electric Submersible Pump **PP** = Peristaltic Pump

Equipment Codes: **RFPP** = Reverse Flow Peristaltic Pump **SM** = Straw Method (Tubing Gravity Drain) **VT** = Vacuum Trap **O** = Other (Specify)

Stabilization criteria for range of variation of last three consecutive readings: **pH:** + 0.2 units **Temperature:** + 0.2°C **Specific Conductance:** + 5%
Dissolved Oxygen: all readings < 20% saturation; optionally, + 0.2 mg/L or + 10% (whichever is greater)
Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

SOLUTIONS-IES
GROUNDWATER SAMPLING LOG

Site Name: Building 46 - Cecil Field | **Site Location:** Jacksonville, Florida

Well Number: CEF-046-24D | **Sample ID:** CEF-046-24D | **Date:** 12-1-09

PURGING DATA

Well Diameter (inches):	Tubing Diameter (inches):	Tubing:	Static Depth to water (feet):	Purge Pump Type or Bailer:	Well Screen Interval Depth:
1 (2) 3 4	1/4 (3/8) 1/2	(LDPE) Teflon	11.25	Peristaltic Pump	feet to feet

Initial Pump or Tubing Depth in well:	Purging Initiated:	Purging Ended:	Total Volume Purged (Gallons):	Sample Pump Flow Rate (mL/min):
	1058	1131	1.2	150

Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	Purge Rate: (mL/min)	Depth to Water (feet)	pH (SU)	Temp (°C)	Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU's)	ORP (m/v)	Color (describe)	Odor (describe)
1105	0.2	0.2	150	11.35	3.46	24.03	1.923	1.13	3.48	357.4	clear	none
1110	0.2	~~0.3~~ 0.4	150	11.35	3.84	24.60	1.749	0.87	4.06	306.8	clear	none
1115	0.2	0.6	150	11.35	4.02	24.91	1.721	0.61	4.02	262.6	clear	none
1120	0.2	0.8	150	11.35	4.15	25.04	1.702	0.33	1.26	230.4	clear	none
1125	0.2	1.0	150	11.35	4.17	25.09	1.695	0.20	1.56	218.6	clear	none
1130	0.2	1.2	150	11.35	4.19	25.16	1.691	0.15	1.55	203.1	clear	none

Well Capacity (Gallons/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 Diameter Capacity (Gallons/Foot): **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/Affiliation:	Sampler(s) Signature:	Sampling Initiated:	Sampling Ended:
Kathryn Doll / Solutions-IES	Kathryn Doll	1132	1210

Field Decontamination:	Field-Filtered:	Filter Size:	Filtration Equipment Type:	Duplicate:
Y N	Y (N)	µm		Y (N)

SAMPLE CONTAINER INFORMATION

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Intended Analysis	Sampling Equipment Code
	2	AG	1 L	None	PAHs 8270C	PP
	2	AG	1 L	H_2SO_4	TRPH FL-PRO	PP
	1	PE	500 mL	None	Sulfate 300.0	PP
	3	CG	40 mL	HCl	BTEX & MTBE 8260B	RFPP

Remarks:

Field Kits: Fe^{++}: 10 mg/L H_2S: 0 mg/L CO_2: 150 mg/L DO: ~~[illegible] mg/L~~ 0.1 mg/L A_T: 0 mg/L

Material Codes: **AG** = Amber Glass **CG** = Clear Glass **PE** = Polyethylene **PP** = Polypropylene **S** = Silicone **T** = Teflon **O** = Other (Specify)

Sampling/Purging: **APP** = After Peristaltic Pump **B** = Bailer **BP** = Bladder Pump **ESP** = Electric Submersible Pump **PP** = Peristaltic Pump

Equipment Codes: **RFPP** = Reverse Flow Peristaltic Pump **SM** = Straw Method (Tubing Gravity Drain) **VT** = Vacuum Trap **O** = Other (Specify)

Stabilization criteria for range of variation of last three consecutive readings: **pH:** + 0.2 units **Temperature:** + 0.2°C **Specific Conductance:** + 5%
Dissolved Oxygen: all readings < 20% saturation; optionally, + 0.2 mg/L or + 10% (whichever is greater)
Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

SOLUTIONS-IES
GROUNDWATER SAMPLING LOG

Site Name: Building 46 - Cecil Field | **Site Location:** Jacksonville, Florida

Well Number: CEF-046-025I | **Sample ID:** CEF-046-025I | **Date:** 12-1-09

PURGING DATA

Well Diameter (inches):	Tubing Diameter (inches):	Tubing:	Static Depth to water (feet):	Purge Pump Type or Bailer:	Well Screen Interval Depth:
1 (2) 3 4	1/4 (3/8) 1/2	(LDPE) Teflon	11.56	Peristaltic Pump	feet to feet

Initial Pump or Tubing Depth in well:	Purging Initiated:	Purging Ended:	Total Volume Purged (Gallons):	Sample Pump Flow Rate (mL/min):
	945	1036	1.5	170 mL/min

Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	Purge Rate: (mL/min)	Depth to Water (feet)	pH (SU)	Temp (°C)	Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU's)	ORP (m/v)	Color (describe)	Odor (describe)
1000	0.1	0.1	170	11.56	4.02	22.29	0.112	0.78	3.71	-79.2	clear	sulfur
1005	0.2	0.3	170	11.57	4.46	22.78	0.086	1.56	4.82	-94.9	clear	sulfur
1010	0.2	0.5	170	11.57	4.74	22.83	0.074	1.57	7.94	-118.4	clear	sulfur
1015	0.2	0.7	170	11.57	4.81	22.86	0.059	1.14	3.19	-111.4	clear	sulfur
1020	0.2	0.9	170	11.57	4.84	22.88	0.055	0.95	4.00	-117.9	clear	sulfur
1025	0.2	1.1	170	11.57	4.86	22.95	0.050	0.75	3.34	-113.5	clear	sulfur
1030	0.2	1.3	170	11.57	4.86	23.01	0.049	0.65	2.44	-106.9	clear	sulfur
1035	0.2	1.5	170	11.57	4.85	22.99	0.048	0.56	2.54	-109.3	clear	sulfur

Well Capacity (Gallons/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 Diameter Capacity (Gallons/Foot): **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/Affiliation:	Sampler(s) Signature:	Sampling Initiated:	Sampling Ended:
Kathryn Dell / Solutions-IES	Kathryn Dell	1038	1045

Field Decontamination:	Field-Filtered:	Filter Size:	Filtration Equipment Type:	Duplicate:
Y N	Y N	µm	N/A	Y N

SAMPLE CONTAINER INFORMATION

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Intended Analysis	Sampling Equipment Code
	1	PE	500 mL	None	Sulfate 300.0	PP

Remarks:

Field Kits:

Material Codes: **AG** = Amber Glass **CG** = Clear Glass **PE** = Polyethylene **PP** = Polypropylene **S** = Silicone **T** = Teflon **O** = Other (Specify)

Sampling/Purging: **APP** = After Peristaltic Pump **B** = Bailer **BP** = Bladder Pump **ESP** = Electric Submersible Pump **PP** = Peristaltic Pump

Equipment Codes: **RFPP** = Reverse Flow Peristaltic Pump **SM** = Straw Method (Tubing Gravity Drain) **VT** = Vacuum Trap **O** = Other (Specify)

Stabilization criteria for range of variation of last three consecutive readings: **pH:** + 0.2 units **Temperature:** + 0.2°C **Specific Conductance:** + 5%
Dissolved Oxygen: all readings < 20% saturation; optionally, + 0.2 mg/L or + 10% (whichever is greater)
Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

SOLUTIONS-IES
GROUNDWATER SAMPLING LOG

Site Name: Building 46 - Cecil Field | **Site Location:** Jacksonville, Florida

Well Number: CEF-046-26I | **Sample ID:** CEF-046-26-I | **Date:** 12-1-09

PURGING DATA

Well Diameter (inches):	Tubing Diameter (inches):	Tubing:	Static Depth to water (feet):	Purge Pump Type or Bailer:	Well Screen Interval Depth:
1 (2) 3 4	1/4 (3/8) 1/2	(LDPE) Teflon	12.12	Peristaltic Pump	feet to feet

Initial Pump or Tubing Depth in well:	Purging Initiated:	Purging Ended:	Total Volume Purged (Gallons):	Sample Pump Flow Rate (mL/min):
	1415	1441		150

Time	Volume Purged (gallons)	Cumulative Volume Purged (gallons)	Purge Rate: (mL/min)	Depth to Water (feet)	pH (SU)	Temp (°C)	Cond (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU's)	ORP (m/v)	Color (describe)	Odor (describe)
1420	0.1	0.1	150	~~12.04~~ 12.16	3.65	22.56	0.341	0.65	19.04	88.8	clear	sulfur
1425	0.2	0.3	150	12.15	3.87	22.78	0.280	0.38	9.86	43.0	clear	sulfur
1430	0.2	0.5	150	12.15	3.93	22.75	0.261	0.26	6.26	36.9	clear	sulfur
1435	0.2	0.7	150	12.16	3.95	22.70	0.250	0.22	4.20	32.4	clear	sulfur
1440	0.2	0.9	150	12.16	3.95	22.68	0.249	0.21	4.04	29.8	clear	sulfur

Well Capacity (Gallons/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 Diameter Capacity (Gallons/Foot): **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/Affiliation:	Sampler(s) Signature:	Sampling Initiated:	Sampling Ended:
Kathryn Dell / Solutions-IES	Kathryn Dell	1443	1520

Field Decontamination:	Field-Filtered:	Filter Size:	Filtration Equipment Type:	Duplicate:
Y N	Y (N)	µm		Y (N)

SAMPLE CONTAINER INFORMATION

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Intended Analysis	Sampling Equipment Code
	2	AG	1 L	None	PAHs 8270C	PP
	2	AG	1 L	H_2SO_4	TRPH FL-PRO	PP
	1	PE	500 mL	None	Sulfate 300.0	PP
	3	CG	40 mL	HCl	BTEX & MTBE 8260B	RFPP

Remarks:

Field Kits: Fe^{++}: 10 mg/L H_2S: 1.8 mg/L CO_2: 14 mg/L DO: 1.0 mg/L A_T: 0

Material Codes: **AG** = Amber Glass **CG** = Clear Glass **PE** = Polyethylene **PP** = Polypropylene **S** = Silicone **T** = Teflon **O** = Other (Specify)

Sampling/Purging: **APP** = After Peristaltic Pump **B** = Bailer **BP** = Bladder Pump **ESP** = Electric Submersible Pump **PP** = Peristaltic Pump

Equipment Codes: **RFPP** = Reverse Flow Peristaltic Pump **SM** = Straw Method (Tubing Gravity Drain) **VT** = Vacuum Trap **O** = Other (Specify)

Stabilization criteria for range of variation of last three consecutive readings: **pH:** + 0.2 units **Temperature:** + 0.2°C **Specific Conductance:** + 5%
Dissolved Oxygen: all readings < 20% saturation; optionally, + 0.2 mg/L or + 10% (whichever is greater)
Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

APPENDIX C

AIR SPARGE SYSTEM O&M LOGS

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CEC1

Technician: MILLARD H. SHARP
Date: JUNE 16, 2009
Time In: 4:15PM RETURN OFFICE
Time Out: 12:30PM DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number: 122°F	°F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch — Circle One: H O (A)

Other

Exhaust Fan Setting TS-1	record number: 83°F	°F
Building High Temperature Setting HTS-4	record number: 132°F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number: 90 PSIG		PSI
Line Pressure Gauge	record number: 90 PSIG		PSI
Temperature Gauge	record number: 184°F		°F
Separator Differential Gauge	record number: 1 PSIG		PSI
Oil Filter Differential Gauge	record number: 0 PSID		PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	COMPRESSOR FILTER DARK GRAY

INTERIOR CLEAN AND DRY.

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	2.5	SCFM	90 PSIG	PSI
Valve 2	Opened	Closed	2.0	SCFM	90 PSIG	PSI
Valve 3	Opened	Closed	1.75	SCFM	90 PSIG	PSI
Valve 4	Opened	Closed	1.75	SCFM	90 PSIG	PSI
Valve 5	Opened	Closed	1.0	SCFM	90 PSIG	PSI
Valve 6	Opened	Closed	1.0	SCFM	90 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG		PSI
Auto Drain Functioning?	(Yes)	No	
Compressed Air Filter 1 Indicator	(clean)	change	dirty
Compressed Air Filter 2 Indicator	(clean)	change	dirty
Compressed Air Filter 3 Indicator	(clean)	change	dirty

ALL GAGES MAX GREEN.

Comments: SYSTEM OPERATING ON ARRIVAL, CONDENSATE PAIL FULL TO OVERFLOW - EMPTIED. INTERIOR CLEAN AND DRY. SYSTEM SEEMS TO BE CYCLING AT DECREASED INTERVAL.

TO: MR BRIAN REBAR
FIELD SERVICE MANAGER
SOLUTIONS-IES INC.
919 873-1060
FAX: 919 873-1074

Jun-17-09 06:56A P.01

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: JUNE 24, 2009
Time In: 1113 AM RETURN OFFICE
Time Out: 713 AM DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number: 122 °F	
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch Circle One: H O (A)

Other

Exhaust Fan Setting TS-1 HTS-4	record number: 83 °F	°F
Building High Temperature Setting	record number: 132 °F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number: 90 PSIG		PSI
Line Pressure Gauge	record number: 89 PSIG		PSI
Temperature Gauge	record number: 176 °F		°F
Separator Differential Gauge	record number: 3 PSIG		PSI
Oil Filter Differential Gauge	record number: 1 PSID		PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	

INTERIOR CLEAN AND DRY. COULD CHANGE OUT AIR FILTER IF REPLACEMENT IS SENT.

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	2.5	SCFM	80 PSIG	PSI
Valve 2	(Opened)	Closed	1.5	SCFM	80 PSIG	PSI
Valve 3	(Opened)	Closed	2.0	SCFM	80 PSIG	PSI
Valve 4	(Opened)	Closed	1.5	SCFM	80 PSIG	PSI
Valve 5	(Opened)	Closed	1.0	SCFM	80 PSIG	PSI
Valve 6	(Opened)	Closed	1.0	SCFM	80 PSIG	PSI

Air Tank

Tank Pressure Gauge	89 PSIG		PSI
Auto Drain Functioning?	(Yes)	No	
Compressed Air Filter 1 Indicator	(clean)	change	dirty
Compressed Air Filter 2 Indicator	(clean)	change	dirty MAX
Compressed Air Filter 3 Indicator	(clean)	change	dirty GREEN

Comments: SYSTEM OPERATING ON ARRIVAL. INTERIOR CLEAN AND DRY. EMPTIED FILLED CONDENSATE PAIL. EXTERIOR HOSES NO LEAKS. SYSTEM SEEMS TO BE CYCLING SLOWER THAN USUAL. FLOATS IN SIGHT GLASS S+G RELUCTENTLY MOVE DURING SYSTEM CYCLE.

TO: MR. BRIAN REBAR
FIELD SERVICE MANAGER
SOLUTIONS - IES INC.
919 873-1060
FAX 919 873-1074

Jun-25-09 07:42A P.01

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP — Time In: 1100 — RETURN OFFICE
Date: JUNE 29 2009 — Time Out: 830 am — DEPART OFFICE

Sensaphone Panel

	Circle One		
System On Light	(On)	Off	* SYSTEM ON LIGHT FLASHING HAVE NOT SEEN THIS BEFORE
Phone in Use Light	(On)	Off	
Alarm Light	On	(Off)	
Battery OK Light	(On)	Off	
Temperature Switch	record number:	122°F	°F
Breaker Switch	(up)	down	

Main Control Panel

	Circle One		
Air Compressor Light	(On)	Off	
Process Air High Temperature Light	On	(Off)	
High Pressure Light	On	(Off)	
120 Volt Power Light	(On)	Off	
Building High Temperature Light	On	(Off)	
Motor Fault Light	On	(Off)	

Main Switch — Circle One: H O (A)

Other

Exhaust Fan Setting TS-1	record number:	83°F	°F
Building High Temperature Setting HTS-4	record number:	132°F	°F

Compressor

Start/Stop Light	On	Off	Should be red while in operation
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	88 PSIG	PSI
Temperature Gauge	record number:	172°F	°F
Separator Differential Gauge	record number:	2 PSIG	PSI
Oil Filter Differential Gauge	record number:	1 PSID	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	

INTERIOR CLEAN AND DRY.

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	2.5	SCFM	80 PSIG	PSI
Valve 2	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 3	Opened	Closed	1.0	SCFM	80 PSIG	PSI
Valve 4	Opened	Closed	1.0	SCFM	80 PSIG	PSI
Valve 5	Opened	Closed	0	SCFM	80 PSIG	PSI
Valve 6	Opened	Closed	0	SCFM	80 PSIG	PSI

TINTED ON SIGHT GLASS EXTERIOR DURING SYSTEM CYCLES BUT FLOATS SEEM TO BE STUCK.

Air Tank

Tank Pressure Gauge	90 PSIG		PSI
Auto Drain Functioning?	(Yes)	No	
Compressed Air Filter 1 Indicator	(clean)	change	dirty
Compressed Air Filter 2 Indicator	(clean)	change	dirty
Compressed Air Filter 3 Indicator	(clean)	change	dirty

ALL GAGES MAX GREEN

Comments: SYSTEM NOT OPERATING ON ARRIVAL. STARTED SYSTEM PER PROCEDURE AND ALLOWED TO OPERATE 15 MINUTES PRIOR TO GAGE READINGS. INTERIOR CLEAN AND DRY. EXTERIOR HOSES NO LEAKS. EMPTIED CONDENSATE PAIL.

TO: MR BRIAN REBAR
FIELD SERVICE MANAGER
SOLUTIONS-IES
919 873-1060
FAX 919 873-1074

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: JULY 7 2009
Time In: 1143 PM
Time Out: 10:30 AM
RETURN OFFICE DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number: 122°F	°F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch — Circle One: H O (A)

Other

Exhaust Fan Setting TS-1 HTS-4	record number: 83°F	°F
Building High Temperature Setting	record number: 132°F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number: 90 PSIG		PSI
Line Pressure Gauge	record number: 90 PSIG		PSI
Temperature Gauge	record number: 170°F		°F
Separator Differential Gauge	record number: 3 PSIG		PSI
Oil Filter Differential Gauge	record number: 1 PSID		PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT	(Yes)	No	

Manifolds

GLASS. INTERIOR CLEAN AND DRY. COMPRESSOR AIR FILTER DARK GRAY

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 2	Opened	Closed	1.0	SCFM	80 PSIG	PSI
Valve 3	Opened	Closed	1.8	SCFM	80 PSIG	PSI
Valve 4	Opened	Closed	.5	SCFM	80 PSIG	PSI
Valve 5	Opened	Closed	.5	SCFM	80 PSIG	PSI
Valve 6	Opened	Closed	.5	SCFM	80 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	(clean)	change	dirty	ALL GAGES
Compressed Air Filter 2 Indicator	(clean)	change	dirty	MAY GREEN
Compressed Air Filter 3 Indicator	(clean)	change	dirty	

Comments: SYSTEM OPERATING ON ARRIVAL. EXTERIOR HOSES NO LEAKS INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL. FLOATS IN SIGHT GLASSES 4, 5, + 6 RELUCTANT TO MOVE DURING SYSTEM CYCLE; MUST TAP SIGHT GLASS EXTERIOR TO CAUSE ANY MINOR MOVEMENT

TO: MR BRIAN REDAR
FIELD SERVICE MANAGER
SOLUTION-IES
919 873-1060
FAX 919 873-2024

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: JULY 15, 2009
Time In: 12:00PM RETURN OFFICE
Time Out: 7:00PM DEPART OFFICE - ARRIVE NFF 7:45AM

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number: 122°F	°F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch — Circle One: H O (A)

Other

Exhaust Fan Setting TS-1 HTS-1	record number: 83°F	°F
Building High Temperature Setting	record number: 132°F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number: 90 PSIG		PSI
Line Pressure Gauge	record number: 90 PSIG		PSI
Temperature Gauge	record number: 174°F		°F
Separator Differential Gauge	record number: 3 PSIG		PSI
Oil Filter Differential Gauge	record number: 1 PSID		PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	

Manifolds

INTERIOR CLEAN AND DRY
COMPRESSOR AIR FILTER DARK GRAY

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	2.25	SCFM	80 PSIG	PSI
Valve 2	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 3	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 4	Opened	Closed	.25	SCFM	80 PSIG	PSI
Valve 5	Opened	Closed	.25	SCFM	80 PSIG	PSI
Valve 6	Opened	Closed	.25	SCFM	80 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG		PSI
Auto Drain Functioning?	(Yes)	No	
Compressed Air Filter 1 Indicator	(clean)	change	dirty
Compressed Air Filter 2 Indicator	(clean)	change	dirty
Compressed Air Filter 3 Indicator	(clean)	change	dirty

ALL GAGES MAX GREEN

Comments: SYSTEM OPERATING ON ARRIVAL EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL. FLOATS IN SIGHT GLASSES 4,5,6 HAVE ALMOST NO MOVEMENT DURING SYSTEM CYCLE - TAPPING ON EXTERIOR DOES NOT HELP.

TO: MR BRIAN REBAR
SENIOR PROJECT MANAGER
SOLUTIONS - IES
919 873-1060
FAX 919 873-1074

Jul-17-09 09:23A P.01

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: JULY 21 2009
Time In: 11:15 AM
Time Out: 7:30 AM
RETURN OFFICE DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number:	122°F °F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch
Circle One
H O (A)

Other

Exhaust Fan Setting TS-1 HTS-4	record number:	83°F	°F
Building High Temperature Setting	record number:	132°F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	90 PSIG	PSI
Temperature Gauge	record number:	172°F	°F
Separator Differential Gauge	record number:	3 PSIG	PSI
Oil Filter Differential Gauge	record number:	1 PSID	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	

INTERIOR CLEAN AND DRY, COMPRESSOR AIR FILTER DARK GRAY.

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	2.25	SCFM	80 PSIG	PSI
Valve 2	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 3	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 4	Opened	Closed	0	SCFM	80 PSIG	PSI
Valve 5	Opened	Closed	0	SCFM	80 PSIG	PSI
Valve 6	Opened	Closed	.25	SCFM	80 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	(clean)	change	dirty	ALL GAGES
Compressed Air Filter 2 Indicator	(clean)	change	dirty	MAX GREEN
Compressed Air Filter 3 Indicator	(clean)	change	dirty	

Comments: SYSTEM OPERATING ON ARRIVAL. EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL. FLOATS IN SIGHT GLASS 4,5,6 DO NOT MOVE DURING SYSTEM CYCLE DESPITE REPITIVE TAPPING ON SIGHT GLASS EXTERIOR. #6 SOMETIMES RAPIDLY BOUNCES; READINGS ~~[illegible]~~ PROGRESSIVELY WORSENING FOR PAST THREE WEEKS

TO: MR BRIAN REGAR
SENIOR PROJECT MANAGER
SOLUTIONS -IES
919 873-1060
FAX: 919 873-1074

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: JULY 29, 2009

Time In: 12:00 PM RETURN OFFICE
Time Out: 8:00 AM DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number:	122°F "F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch — Circle One: H O (A)

Other

Exhaust Fan Setting TS-1	record number:	85°F	"F
Building High Temperature Setting HTS-4	record number:	132°F	"F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	90 PSIG	PSI
Temperature Gauge	record number:	174°F	"F
Separator Differential Gauge	record number:	3 PSIG	PSI
Oil Filter Differential Gauge	record number:	0 PSID	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	

INTERIOR CLEAN AND DRY
COMPRESSOR FILTER DARK GRAY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	3.0	SCFM	80 PSIG	PSI
Valve 2	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 3	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 4	Opened	Closed	1.0	SCFM	80 PSIG	PSI
Valve 5	Opened	Closed	.5	SCFM	80 PSIG	PSI
Valve 6	Opened	Closed	.5	SCFM	80 PSIG	PSI — FLOAT RAPIDLY BOUNCES DURING SYSTEM CYCLE BEFORE SETTLING AT 0.5.

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	clean	change	dirty	ALL GAGES MAK GREEN
Compressed Air Filter 2 Indicator	clean	change	dirty	
Compressed Air Filter 3 Indicator	clean	change	dirty	

Comments: SYSTEM OPERATING ON ARRIVAL. EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL. SHUT DOWN SYSTEM TO PERMIT OIL FILTER CHANGE OUT PER DIRECTION. REPLACED COMPRESSOR OIL FILTER, RESTARTED SYSTEM, WAITED 15 MINUTES PRIOR TO GAGE READINGS TO PERMIT SYSTEM TO CYCLE AND STABILIZE.

TO: MR BRIAN REBAR
SENIOR PROJECT MANAGER
SOLUTIONS - IES
919 873-1060
FAX: 919 872-1074

BUILDING 46 AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD
JACKSONVILLE, FL
4080.08a2.CECI

Technician:	B. Pebar	Time In:	1845
Date:	8/6/09	Time Out:	1855

Sensaphone Panel

	Circle One		
System On Light	On	Off	
Phone in Use Light	On	Off	
Alarm Light	On	Off	
Battery OK Light	On	Off	
Temperature Switch	record number:	120	°F
Breaker Switch	up	down	

Main Control Panel

	Circle One		
Air Compressor Light	On	Off	
Process Air High Temperature Light	On	Off	
High Pressure Light	On	Off	
120 Volt Power Light	On	Off	
Building High Temperature Light	On	Off	
Motor Fault Light	On	Off	

Main Switch — Circle One: H O A

Other

Exhaust Fan Setting	record number:	83	°F
Building High Temperature Setting	record number:	130	°F

Compressor

Start/Stop Light	On	Off	Should be red while in operation
Sump Pressure Gauge	record number:	55	PSI
Line Pressure Gauge	record number:	80	PSI
Temperature Gauge	record number:	166	°F
Separator Differential Gauge	record number:	1	PSI
Oil Filter Differential Gauge	record number:	0	PSI
Oil in Sight Glass?	Yes	No	

Manifolds

		Circle One		Flow		Pressure	
Valve 1		Opened	Closed	1.2	SCFM	78	PSI
Valve 2		Opened	Closed	1.6	SCFM	79	PSI
Valve 3		Opened	Closed	1.2	SCFM	82	PSI
Valve 4		Opened	Closed	1.0	SCFM	82	PSI
Valve 5	moves with system cycles	Opened	Closed	0	SCFM	82	PSI
Valve 6	"	Opened	Closed	0	SCFM	81	PSI

Air Tank

Tank Pressure Gauge	80		PSI
Auto Drain Functioning?	Yes	No	
Compressed Air Filter 1 Indicator	clean	change	dirty
Compressed Air Filter 2 Indicator	clean	change	dirty
Compressed Air Filter 3 Indicator	clean	change	dirty

Comments: Turned system on 8/5/09

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: AUGUST 12, 2009
Time In: 12:00PM RETURN OFFICE
Time Out: 8:15am DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number: 122°F	°F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch Circle One: H O (A)

Other

Exhaust Fan Setting TS-1	record number: 83°F	°F
Building High Temperature Setting HTS-4	record number: 132°F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number: 90 PSIG		PSI
Line Pressure Gauge	record number: 90 PSIG		PSI
Temperature Gauge	record number: 174°F		°F
Separator Differential Gauge	record number: 2 PSIG		PSI
Oil Filter Differential Gauge	record number: 0 PSIG		PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	

Manifolds

COMPRESSOR AIR FILTER DARK GRAY. INTERIOR CLEAN AND DRY.

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	3.0	SCFM	90 PSIG	PSI
Valve 2	(Opened)	Closed	2.0	SCFM	90 PSIG	PSI
Valve 3	(Opened)	Closed	1.75	SCFM	90 PSIG	PSI
Valve 4	(Opened)	Closed	0	SCFM	90 PSIG	PSI
Valve 5	(Opened)	Closed	.5	SCFM	90 PSIG	PSI
Valve 6	(Opened)	Closed	.5	SCFM	90 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	(clean)	change	dirty	ALL GAGES
Compressed Air Filter 2 Indicator	(clean)	change	dirty	MAX GREEN
Compressed Air Filter 3 Indicator	(clean)	change	dirty	

Comments: SYSTEM OPERATING ON ARRIVAL. EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL. FLOAT IN SIGHT GLASS 4 APPEARS TO BE STUCK TAPPING SIGHT GLASS DOES NOT HELP. FLOAT IN SIGHT GLASS 6 RAPIDLY BOUNCES DURING SYSTEM CYCLE BETWEEN 0 AND 1 - MEDIUM IS ABOUT 0.5

TO: MR BRIAN REBAR
SENIOR PROJECT MANAGER
SOLUTIONS-IES
919 873-1060
FAX 919 873-1074

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: AUGUST 26, 2009
Time In:
Time Out: 9:00 am DEPARTED BLOUNT ISLAND

Sensaphone Panel

Circle One

System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number: 122 °F	°F
Breaker Switch	(up)	down

Main Control Panel

Circle One

Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch
Circle One
H O (A)

Other

Exhaust Fan Setting TS-1 HTS-4	record number:	83 °F	°F
Building High Temperature Setting	record number:	132 °F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	90 PSIG	PSI
Temperature Gauge	record number:	174 °F	°F
Separator Differential Gauge	record number:	2 PSIG	PSI
Oil Filter Differential Gauge	record number:	0 PSID	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	

COMPRESSOR AIR FILTER DARK GRAY, INTERIOR CLEAN + DRY.

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	2.5	SCFM	90 PSIG	PSI
Valve 2	Opened	Closed	1.75	SCFM	90 PSIG	PSI
Valve 3	Opened	Closed	1.5	SCFM	90 PSIG	PSI
Valve 4	Opened	Closed	0	SCFM	90 PSIG	PSI
Valve 5	Opened	Closed	.75	SCFM	90 PSIG	PSI
Valve 6	Opened	Closed	.75	SCFM	90 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG		PSI
Auto Drain Functioning?	(Yes)	No	
Compressed Air Filter 1 Indicator	(clean)	change	dirty
Compressed Air Filter 2 Indicator	(clean)	change	dirty
Compressed Air Filter 3 Indicator	(clean)	change	dirty

ALL GAGES MAX GREEN

Comments: SYSTEM OPERATING ON ARRIVAL. EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL. SIGHT GLASS 4 FLOAT WILL NOT MOVE DURING SYSTEM CYCLE. SIGHT GLASS 5+6 FLOATS RAPIDLY BOUNCE TO .75 THEN RETURN TO 0 DURING SYSTEM CYCLE.

TO: MR BRIAN REBAR
SENIOR PROJECT MANAGER
SOLUTIONS - IES
919 873-1060
FAX: 919 873-1074

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: SEPTEMBER 2 2009

Time In: 11:30 AM RETURN OFFICE
Time Out: 9:15 AM DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number: 122°F	°F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch
Circle One
H O (A)

Other

Exhaust Fan Setting TS-1	record number:	83°F	°F
Building High Temperature Setting HTS-4	record number:	132°F	°F

Compressor

		Should be red while in operation	
Start/Stop Light	(On)	Off	
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	90 PSIG	PSI
Temperature Gauge	record number:	170°F	°F
Separator Differential Gauge	record number:	2 PSIG	PSI
Oil Filter Differential Gauge	record number:	0 PSIG	PSI
Oil in Sight Glass? DIP TO TOP OF SIGHT GLASS	(Yes)	No	

INTERIOR CLEAN AND DRY. AIR FILTER DARK GREY.

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	2.5	SCFM	90 PSIG	PSI
Valve 2	Opened	Closed	1.75	SCFM	90 PSIG	PSI
Valve 3	Opened	Closed	1.75	SCFM	90 PSIG	PSI
Valve 4	Opened	Closed	0	SCFM	90 PSIG	PSI
Valve 5	Opened	Closed	1.5	SCFM	90 PSIG	PSI
Valve 6	Opened	Closed		SCFM	90 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	(clean)	change	dirty	ALL GAGES
Compressed Air Filter 2 Indicator	(clean)	change	dirty	MAX GREEN
Compressed Air Filter 3 Indicator	(clean)	change	dirty	

Comments: SYSTEM OPERATING ON ARRIVAL. EXTERIOR NOSES NO LEAKS. EMPTIED CONDENSATE PAIL. INTERIOR CLEAN AND DRY. SAND IN SIGHT GLASS 3. FLOAT IN SIGHT GLASS 4 DOES NOT MOVE DURING SYSTEM CYCLE. FLOAT IN SIGHT GLASS 6 RAPIDLY BOUNCES DURING SYSTEM CYCLE.

TO: MR BRIAN KEBAR
SENIOR PROJECT MANAGER
SOLUTIONS-IES
919 873-1060
FAX 919 873-1074

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: SEPTEMBER 8 2009
Time In: 11:30am RETURN OFFICE
Time Out: 8:15AM DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number: 122°F	°F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch
Circle One
H O (A)

Other

Exhaust Fan Setting TS-1 HTS-4	record number: 83°F	°F
Building High Temperature Setting	record number: 132°F	°F

Compressor

Start/Stop Light	(On) Off	Should be red while in operation
Sump Pressure Gauge	record number: 90 PSIG	PSI
Line Pressure Gauge	record number: 90 PSIG	PSI
Temperature Gauge	record number: 170°F	°F
Separator Differential Gauge	record number: 2 PSIG	PSI
Oil Filter Differential Gauge	record number: 0 PSID	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes) No	

COMPRESSOR FILTER DARK GRAY INTERIOR CLEAN AND DRY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	2.5	SCFM	90 PSIG	PSI
Valve 2	(Opened)	Closed	2.0	SCFM	90 PSIG	PSI
Valve 3	(Opened)	Closed	1.80	SCFM	90 PSIG	PSI
Valve 4	(Opened)	Closed	0	SCFM	90 PSIG	PSI
Valve 5	(Opened)	Closed	1.5	SCFM	90 PSIG	PSI
Valve 6	(Opened)	Closed	1.0	SCFM	90 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	(clean)	change	dirty	ALL GAGES MAX GREEN
Compressed Air Filter 2 Indicator	(clean)	change	dirty	
Compressed Air Filter 3 Indicator	(clean)	change	dirty	

Comments: SYSTEM OPERATING ON ARRNAL. EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL. FLOAT IN SIGHT GLASS 4 DOES NOT MOVE DURING SYSTEM CYCLE. FLOAT IN SIGHT GLASS 6 RAPIDLY BOUNCES DURING SYSTEM CYCLE. SHUT DOWN SYSTEM FOR DIRECTION.

TO: MR BRIAN REBAR
SENIOR PROJECT MANAGER
SOLUTIONS-IES
919 873-1060
FAX: 919 873-1074

BUILDING 46 AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD
JACKSONVILLE, FL
4080.08a2.CECI

Technician:	Sean Jones	Time In:	8:00 - on-site
Date:	9-14-09	Time Out:	~~11:25~~

11:25 - Complete w/ m
Begin sampling

Sensaphone Panel

	Circle One	
System On Light	On	Off
Phone in Use Light	On	Off
Alarm Light	On	Off
Battery OK Light	On	Off
Temperature Switch	record number: 122°	°F
Breaker Switch	up	down

Main Control Panel

	Circle One	
Air Compressor Light	On	Off
Process Air High Temperature Light	On	Off
High Pressure Light	On	Off
120 Volt Power Light	On	Off
Building High Temperature Light	On	Off
Motor Fault Light	On	Off

Main Switch — Circle One: H O A

Other

Exhaust Fan Setting TSI	record number:	85°F	°F
Building High Temperature Setting HTBug	record number:	122°F	°F

Compressor

Start/Stop Light	On	Off	Should be red while in operation
Sump Pressure Gauge	record number:	55 PSIG	PSI
Line Pressure Gauge	record number:	80 PSIG	PSI
Temperature Gauge	record number:	170° F	°F
Separator Differential Gauge	record number:	0 PSIG	PSI
Oil Filter Differential Gauge	record number:	0 PSID	PSI
Oil in Sight Glass? Oil in top of glass	Yes	No	

Manifolds

		Circle One		Flow		Pressure	
Valve 1		Opened	Closed	2.0	SCFM	~~78~~ PU	PSI
Valve 2	Tapped on valve & 3-6 next to 0	Opened	Closed	5.0	SCFM	80	PSI
Valve 3		Opened	Closed	~~2.5~~ 0	SCFM	84	PSI
Valve 4		Opened	Closed	~~1.8~~ 0	SCFM	84	PSI
Valve 5		Opened	Closed	0	SCFM	84	PSI
Valve 6		Opened	Closed	0	SCFM	84	PSI

Air Tank

Tank Pressure Gauge	90 PSI		PSI
Auto Drain Functioning?	Yes	No	
Compressed Air Filter 1 Indicator	clean	change	dirty
Compressed Air Filter 2 Indicator	clean	change	dirty
Compressed Air Filter 3 Indicator	clean	change	dirty

All gauges may green

Comments: 3 Air filters left (inside black plastic casing, inside compressor) = 00521-060
Emptied condensate pot. Reprogrammed Sensaphone to Sean Jones, Brian Baker & Solutions IE/ office phone number.

5 gal of oil in trailer. Oil filter change on next visit

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: SEPT 30 2009
Time In: 10:30 AM
Time Out: 8:00 AM
RETURNING OFFICE DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number:	120°F °F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch Circle One: H O (A)

Other

Exhaust Fan Setting TSH	record number:	83°F	°F
Building High Temperature Setting HTSH	record number:	132°F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	90 PSIG	PSI
Temperature Gauge	record number:	164°F	°F
Separator Differential Gauge	record number:	1 PSIG	PSI
Oil Filter Differential Gauge	record number:	0 PSID	PSI
Oil in Sight Glass? OIL TO TOP OF	(Yes)	No	

Manifolds

SIGHT GLASS INTERIOR CLEAN AND DRY

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	3.5	SCFM	90 PSIG	PSI
Valve 2	Opened	Closed	2.75	SCFM	90 PSIG	PSI
Valve 3	Opened	Closed	2.0	SCFM	90 PSIG	PSI
Valve 4	Opened	Closed	0	SCFM	90 PSIG	PSI
Valve 5	Opened	Closed	2.0	SCFM	90 PSIG	PSI
Valve 6	Opened	Closed	1.0	SCFM	90 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG PSI			
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	clean	change	dirty	ALL GAGES
Compressed Air Filter 2 Indicator	clean	change	dirty	MAY GREEN
Compressed Air Filter 3 Indicator	clean	change	dirty	

Comments: SYSTEM OPERATING ON ARRIVAL. EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL. SIGHT GLASS & FLOAT DOES NOT MOVE DURING SYSTEM CYCLE. SIGHT GLASS & FLOAT RAPIDLY BOUNCES DURING SYSTEM CYCLE.

TOINR BRIAN REBAR
SENIOR PROJECT MANAGER
SOLUTIONS-IES
919 873-1060
FAX 919 873-1074

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP — Time In: 12:00PM RETURN OFFICE
Date: SEPT 21, 2009 — Time Out: 8:45AM DEPART OFFICE

Sensaphone Panel

Circle One

System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number: 120°F	°F
Breaker Switch	(up)	down

Main Control Panel

Circle One

Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch — Circle One: H O (A)

Other

Exhaust Fan Setting TS-1	record number: 83°F	°F
Building High Temperature Setting HTV-4	record number: 132°F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number: 90 PSIG		PSI
Line Pressure Gauge	record number: 90 PSIG		PSI
Temperature Gauge	record number: 173°F		°F
Separator Differential Gauge	record number: 1 PSIG		PSI
Oil Filter Differential Gauge	record number: 0 PSID		PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS. INTERIOR CLEAN AND DRY. FILTER DARK GRAY	(Yes)	No	

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	3.5	SCFM	84 PSIG	PSI
Valve 2	Opened	Closed	2.5	SCFM	84 PSIG	PSI
Valve 3	Opened	Closed	.5	SCFM	84 PSIG	PSI
Valve 4	Opened	Closed	0	SCFM	84 PSIG	PSI - FLOAT DOES NOT MOVE DURING SYSTEM CYCLE.
Valve 5	Opened	Closed	1.75	SCFM	83 PSIG	PSI
Valve 6	Opened	Closed	.5	SCFM	84 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	clean	change	dirty	ALL GAGES MAY GREEN.
Compressed Air Filter 2 Indicator	clean	change	dirty	
Compressed Air Filter 3 Indicator	clean	change	dirty	

Comments: SYSTEM OPERATING ON ARANAL. EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY. FOUND OPERATING NOTEBOOK ON TOP OF FOAM PACKING. FOUND LOCK ON TOP OF CONDENSATE RAIL. FOUND ROLL OF PAPER TOWELS WEDGED ABOVE CONTROL PANEL. FOUND SENSAPHONE MANUAL LOOSE INSIDE PANEL. FOUND LIGHT SWITCH COVER BROKEN AND 2 HALVES ON FLOOR. REMOVED DISCARDED REFUSE FROM TRAILER AND EMPTIED CONDENSATE RAIL.

TO: MR BRIAN REBAR
SENIOR PROJECT MANAGER
SOLUTIONS-IES
919 873-1060
FAX 919 873-1074

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CEC1

Technician: MILLARD H. SHARP
Date: OCTOBER 13 2009
Time In: 12:00 PM — ACTMAN OFFICE
Time Out: 9:00 am — DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number: 120°F	°F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch — Circle One: H O (A)

Other

Exhaust Fan Setting TS-1	record number: 83°F	°F
Building High Temperature Setting HTS-4	record number: 132°F	°F

Compressor

Start/Stop Light	(On) Off	Should be red while in operation
Sump Pressure Gauge	record number: 90 PSIG	PSI
Line Pressure Gauge	record number: 90 PSIG	PSI
Temperature Gauge	record number: 169°F	°F
Separator Differential Gauge	record number: 1 PSIG	PSI
Oil Filter Differential Gauge	record number: 0 PSID	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes) No	

INTERIOR CLEAN AND DRY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	3.0	SCFM	90 PSIG	PSI
Valve 2	(Opened)	Closed	2.0	SCFM	90 PSIG	PSI
Valve 3	(Opened)	Closed	1.75	SCFM	90 PSIG	PSI
Valve 4	(Opened)	Closed	0	SCFM	90 PSIG	PSI
Valve 5	(Opened)	Closed	1	SCFM	90 PSIG	PSI
Valve 6	(Opened)	Closed	.75	SCFM	90 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	(clean)	change	dirty	MAX
Compressed Air Filter 2 Indicator	(clean)	change	dirty	GREEN
Compressed Air Filter 3 Indicator	(clean)	change	dirty	

Comments: SYSTEM OPERATING ON ARRIVAL, INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL. EXTERIOR HOSES NO LEAKS. DURING SYSTEM CYCLE SIGHT GLASS 4 FLOAT WILL NOT MOVE, SIGHT GLASS 5 FLOAT MOMENTARILY RAISES TO .1, SIGHT GLASS 6 FLOAT RAPIDLY BOUNCES TO .75.

TO: MR BRIAN RSBAR
SENIOR PROJECT MANAGER
SOLUTIONS-IES
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AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: OCTOBER 9 2009
Time In: 1:00PM RETURN OFFICE
Time Out: DEPART OFFICE 10:00AM

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number:	120°F °F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch — Circle One: H O (A)

Other

Exhaust Fan Setting TS-1	record number:	83°F	°F
Building High Temperature Setting HTS-4	record number:	132°F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	90 PSIG	PSI
Temperature Gauge	record number:	176°F	°F
Separator Differential Gauge	record number:	1 PSIG	PSI
Oil Filter Differential Gauge	record number:	0 PSID	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	

INTERIOR CLEAN AND DRY. AIR FILTER DARK GRAY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	3.5	SCFM	90 PSIG	PSI
Valve 2	Opened	Closed	2.5	SCFM	90 PSIG	PSI
Valve 3	Opened	Closed	2.0	SCFM	90 PSIG	PSI
Valve 4	Opened	Closed	0	SCFM	90 PSIG	PSI
Valve 5	Opened	Closed	.75	SCFM	90 PSIG	PSI
Valve 6	Opened	Closed	1.0	SCFM	90 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG		PSI
Auto Drain Functioning?	(Yes)	No	
Compressed Air Filter 1 Indicator	(clean)	change	dirty
Compressed Air Filter 2 Indicator	(clean)	change	dirty
Compressed Air Filter 3 Indicator	(clean)	change	dirty

ALL GAGES MAX GREEN

Comments: SYSTEM OPERATING ON ARRIVAL. EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL. SIGHT GLASS 4 FLOAT CONTINUES TO NOT MOVE DURING SYSTEM CYCLE. SIGHT GLASS 6 FLOAT RAPIDLY BOUNCES DURING SYSTEM CYCLE.

TO: MR BRIAN REBAR
SENIOR PROJECT MANAGER
SOLUTIONS-IES
919 873-1060
FAX 919 873-1074

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP | Time In: 12:00 PM ROTHMAN OFFICE
Date: OCTOBER 27, 2009 | Time Out: 8:15 AM DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number: 120°F	°F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch — Circle One: H O (A)

Other

Exhaust Fan Setting TS-1	record number:	83°F	°F
Building High Temperature Setting ATS-4	record number:	132°F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	90 PSIG	PSI
Temperature Gauge	record number:	170°F	°F
Separator Differential Gauge	record number:	1 PSIG	PSI
Oil Filter Differential Gauge	record number:	0 PSID	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	

INTERIOR CLEAN AND DRY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	3.0	SCFM	82 PSIG	PSI
Valve 2	Opened	Closed	2.0	SCFM	82 PSIG	PSI
Valve 3	Opened	Closed	1.75	SCFM	83 PSIG	PSI
Valve 4	Opened	Closed	0	SCFM	82 PSIG	PSI
Valve 5	Opened	Closed	1.0	SCFM	83 PSIG	PSI
Valve 6	Opened	Closed	1.0	SCFM	84 PSIG	PSI

THATS DIFFERENT!

Air Tank

Tank Pressure Gauge	90 PSIG		PSI
Auto Drain Functioning?	(Yes)	No	
Compressed Air Filter 1 Indicator	(clean)	change	dirty
Compressed Air Filter 2 Indicator	(clean)	change	dirty
Compressed Air Filter 3 Indicator	(clean)	change	dirty

MAY GREEN

Comments: SYSTEM OPERATING ON ARRIVAL. EMPTIED CONDENSATE PAIL. INTERIOR CLEAN AND DRY. EXTERIOR HOSES NO LEAKS. SIGHT GLASS & FLOAT STILL DOES NOT MOVE DURING SYSTEM CYCLE. SIGHT GLASS & FLOAT CONTINUES TO RAPIDLY BOUNCE MOMENTARILY DURING SYSTEM CYCLE.

TO: MR BRIAN REBAR
SENIOR PROJECT MANAGER
SOLUTIONS-IES
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FAX: 919 873-1074

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: OCTOBER 21 2009
Time In:
Time Out: 8:00AM DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number:	120°F °F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch Circle One: H O (A)

Other

Exhaust Fan Setting TS-1 HTS-4	record number:	83°F	°F
Building High Temperature Setting	record number:	132°F	°F

Compressor

Start/Stop Light	(On) Off	Should be red while in operation	
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	90 PSIG	PSI
Temperature Gauge	record number:	164°F	°F
Separator Differential Gauge	record number:	1 PSIG	PSI
Oil Filter Differential Gauge	record number:	0 PSID	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes) No		

INTERIOR CLEAN AND DRY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	3.5	SCFM	90 PSIG	PSI
Valve 2	Opened	Closed	2.5	SCFM	90 PSIG	PSI
Valve 3	Opened	Closed	1.75	SCFM	90 PSIG	PSI
Valve 4	Opened	Closed	0	SCFM	90 PSIG	PSI
Valve 5	Opened	Closed	1.5	SCFM	90 PSIG	PSI
Valve 6	Opened	Closed	1.0	SCFM	90 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	clean	change	dirty	ALL MAY GREEN
Compressed Air Filter 2 Indicator	clean	change	dirty	
Compressed Air Filter 3 Indicator	clean	change	dirty	

Comments: SYSTEM OPERATING ON ARRIVAL EXTERIOR HOSES NO LEAKS. EMPTIED CONDENSATE PAIL INTERIOR CLEAN AND DRY. FLOAT IN SIGHT GLASS 4 CONTINUES TO NOT MOVE DURING SYSTEM CYCLE. FLOAT IN SIGHT GLASS 6 RAPIDLY BOUNCES DURING SYSTEM CYCLE

TO: MR BRIAN REDAR
SENIOR PROJECT MANAGER
SOLUTIONS - IES
919 873-1060
FAX: 919 873-1074

P.01
OCT-21-09 11:55A

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: NOVEMBER 9, 2009
Time In: 1113 am — RETURN OFFICE
Time Out: 8100 am — BOMAY OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number:	120 °F °F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch — Circle One: H O (A)

Other

Exhaust Fan Setting (TS1 / HTS4)	record number:	83 °F	°F
Building High Temperature Setting	record number:	132 °F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	90 PSIG	PSI
Temperature Gauge	record number:	172 °F	°F
Separator Differential Gauge	record number:	1 PSID	PSI
Oil Filter Differential Gauge	record number:	0 PSIG	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	

COMPRESSOR FILTER DARK GREY. INTERIOR CLEAN AND DRY.

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	3.0	SCFM	80 PSIG	PSI
Valve 2	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 3	Opened	Closed	1.50	SCFM	83 PSIG	PSI
Valve 4	Opened	Closed	1.75	SCFM	83 PSIG	PSI
Valve 5	Opened	Closed	1.75	SCFM	82 PSIG	PSI
Valve 6	Opened	Closed	1.0	SCFM	85 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	clean	change	dirty	
Compressed Air Filter 2 Indicator	clean	change	dirty	MAY
Compressed Air Filter 3 Indicator	clean	change	dirty	GREEN

Comments: SYSTEM OPERATING ON ARRIVAL. INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL. EXTERIOR HOSES NO LEAKS. MOISTURE IN SIGHT GLASS. SIGHT GLASS & FLOAT RAPIDLY BOUNCES DURING SYSTEM CYCLE.

TO: MR BRIAN REBAR
SENIOR PROJECT MANAGER
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919 873-1060
FAX 919 873-1074

NOV-09-09 12:03P P.01

BUILDING 46 AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD
JACKSONVILLE, FL
4080.08a2.CECI

Technician:	R. Feber	Time In:	1900
Date:	11/3/09	Time Out:	1920

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	On	(Off)
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number:	120°F °F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch
Circle One
H O A

Other

Exhaust Fan Setting	record number:	83°F	°F
Building High Temperature Setting	record number:	132	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation	
Sump Pressure Gauge	record number:		55	PSI
Line Pressure Gauge	record number:		82	PSI
Temperature Gauge	record number:		164	°F
Separator Differential Gauge	record number:		1	PSI
Oil Filter Differential Gauge	record number:		1	PSI
Oil in Sight Glass?	(Yes)	No		

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	2-4	SCFM	80	PSI
Valve 2	Opened	Closed	0.8-2	SCFM	80	PSI
Valve 3	Opened	Closed	1.5-1.5	SCFM	82	PSI
Valve 4	Opened	Closed	1.5-1.5	SCFM	81	PSI
Valve 5	Opened	Closed	1.5-1.5	SCFM	81	PSI
Valve 6	Opened	Closed	0-1	SCFM	80	PSI

Air Tank

Tank Pressure Gauge	85		PSI
Auto Drain Functioning?	(Yes)	No	
Compressed Air Filter 1 Indicator	(clean)	change	dirty
Compressed Air Filter 2 Indicator	(clean)	change	dirty
Compressed Air Filter 3 Indicator	(clean)	change	dirty

Comments: need to order more filters

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: NOVEMBER 23 2009
Time In: 11:45am RETURN OFFICE
Time Out: 8:00am DOWNEAST OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number:	120°F °F
Breaker Switch	(Up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch
Circle One
H O (A)

Other

Exhaust Fan Setting TS-1 HTS-4	record number:	83°F	°F
Building High Temperature Setting	record number:	132°F	°F

Compressor

Start/Stop Light	(On) Off	Should be red while in operation	
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	90 PSIG	PSI
Temperature Gauge	record number:	164°F	°F
Separator Differential Gauge	record number:	1 PSID	PSI
Oil Filter Differential Gauge	record number:	0 PSIG	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes) No		

INDERLINE CLEAN AND DRY. COMPRESSOR FILTER DARK GRAY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	3.0	SCFM	80 PSIG	PSI
Valve 2	Opened	Closed	1.5	SCFM	80 PSIG	PSI
Valve 3	Opened	Closed	1.5	SCFM	80 PSIG	PSI
Valve 4	Opened	Closed	1.5	SCFM	84 PSIG	PSI
Valve 5	Opened	Closed	2.0	SCFM	84 PSIG	PSI
Valve 6	Opened	Closed	1.25	SCFM	82 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	clean	change	dirty	ALL GAGES
Compressed Air Filter 2 Indicator	clean	change	dirty	MAY GREEN
Compressed Air Filter 3 Indicator	clean	change	dirty	

Comments: SYSTEM OPERATING ON ARRIVAL. EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY EMPTY CONDENSATE MAIL. SAND BEGINNING TO ACCUMULATE INSIDE SIGHT GLASSES 1, 2, 3, 5. BOAT IN SIGHT GLASS 6 RAPIDLY BOUNCES DURING SYSTEM CYCLE. SHUTDOWN SYSTEM AFTER INSPECTION PER DIRECTION AND TURNED OFF CIRCUIT BREAKER ON EXTERIOR POWER POLE.

TO: MR BRIAN KEBAR
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FAX: 919 873-1074

AIR SPARGE SYSTEM OPERATION AND MAINTENANCE FORM
CECIL FIELD - BUILDING 46
JACKSONVILLE, FL
4080.08A2.CECI

Technician: MILLARD H. SHARP
Date: NOVEMBER 16, 2009
Time In: 12:30 pm
Time Out: 9:00 am
RETURN OFFICE DEPART OFFICE

Sensaphone Panel

	Circle One	
System On Light	(On)	Off
Phone in Use Light	(On)	Off
Alarm Light	On	(Off)
Battery OK Light	(On)	Off
Temperature Switch	record number:	120 °F °F
Breaker Switch	(up)	down

Main Control Panel

	Circle One	
Air Compressor Light	(On)	Off
Process Air High Temperature Light	On	(Off)
High Pressure Light	On	(Off)
120 Volt Power Light	(On)	Off
Building High Temperature Light	On	(Off)
Motor Fault Light	On	(Off)

Main Switch
Circle One
H O (A)

Other

Exhaust Fan Setting TS-1	record number:	83 °F	°F
Building High Temperature Setting NTS-4	record number:	132 °F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number:	90 PSIG	PSI
Line Pressure Gauge	record number:	90 PSIG	PSI
Temperature Gauge	record number:	170 °F	°F
Separator Differential Gauge	record number:	1 PSID	PSI
Oil Filter Differential Gauge	record number:	0 PSIG	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	

INTERIOR CLEAN AND DRY. COMPRESSOR FILTER DARK GRAY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	3.5	SCFM	80 PSIG	PSI
Valve 2	Opened	Closed	2.0	SCFM	82 PSIG	PSI
Valve 3	Opened	Closed	1.75	SCFM	83 PSIG	PSI
Valve 4	Opened	Closed	2.0	SCFM	82 PSIG	PSI
Valve 5	Opened	Closed	1.25	SCFM	80 PSIG	PSI
Valve 6	Opened	Closed	1.25	SCFM	80 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG			PSI
Auto Drain Functioning?	(Yes)	No		
Compressed Air Filter 1 Indicator	clean	change	dirty	ALL GAGES
Compressed Air Filter 2 Indicator	clean	change	dirty	MAY GREEN
Compressed Air Filter 3 Indicator	clean	change	dirty	

Comments: SYSTEM OPERATING ON ARRIVAL. EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY. EMPTIED CONDENSATE PAIL, SAND BEGINNING TO ACCUMULATE INSIDE SIGHT GLASSES 1, 2, 3. FLOATS IN SIGHT GLASSES 4-6 RARELY FLOAT TO VALVE DURING SYSTEM CYCLE THAN RETURN TO "0" WHEN SYSTEM IS NOT CHARGING.

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