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NAS CECIL FIELD, FL
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SECOND QUARTER 2009 LONG TERM MONITORING AND OPERATION AND MAINTENANCE STATUS REPORT FOR BUILDING 46 NAS CECIL FIELD FL

11/9/2009

SOLUTIONS-IES INC

SECOND QUARTER 2009
LONG-TERM MONITORING AND
OPERATION & MAINTENANCE
STATUS REPORT

BUILDING 46
FORMER NAS CECIL FIELD
JACKSONVILLE, FL

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

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November 9, 2009

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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) services 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 performs quarterly groundwater monitoring in March, June, September and December, and weekly O&M of the air sparge (AS) system. This Second Quarter Monitoring Report summarizes the O&M activities performed at the site from March 2009 through June 2009, and the groundwater sampling activities conducted on June 9, 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 release(s) from the USTs resulted in fuel-related impacts to unsaturated 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 biodegradation of contaminants of concern. Nutrient injection was discontinued in April 2004 when the aquifers anaerobic state was no longer conducive to biodegradation. 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 sparge wells

illustrated in **Figure 2** (CEF-046-BD-1, -2, -3, -4, -6 and -7), surrounding the two hot spots (monitoring wells CEF-046-01S and CEF-046-07I), as instructed by the RAC contractor (CH2M Hill).

Solutions-IES was initially unable to inject air into wells BD-3 and BD-7. Attempts made to try 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.

During the Base Closure Team (BCT) Partnering meeting, the team agreed to remove upgradient monitoring wells CEF-046-9I, CEF-046-12I, CEF-046-13I, CEF-046-14D and CEF-046-15I, and cross-gradient well CEF-046-25I from the monitoring program. These wells have not had any detection of constituents of concern over the GCTLs since at least 2006 and are either located upgradient or cross-gradient from the source area. Also, the laboratory analyses for monitoring well CEF-046-6D was reduced to only include sulfate as no constituents of concern have been detected above the GCTLs since 2000.

2.0 GROUNDWATER MONITORING SUMMARY

At this time, there are 8 active monitoring wells on the site (**Figure 2**). They are screened at depths ranging between approximately 13 and 90 feet below ground surface (ft bgs). The monitoring wells were sampled on June 9, 2009.

Monitoring Well	Screened Interval
CEF-046-01S	Shallow
CEF-046-02S	Shallow
CEF-046-05I	Intermediate
CEF-046-06D	Deep
CEF-046-07I	Intermediate
CEF-046-21I	Intermediate
CEF-046-24D	Deep
CEF-046-26I	Intermediate

Water levels were recorded and samples were collected from the wells listed above for laboratory analysis of BTEX, MTBE, polycyclic aromatic hydrocarbons (PAHs), TRPH, sulfate, natural attenuation (NA) parameters and field parameters.

2.1 MONITORING WELL OBSERVATIONS

The integrity of the monitoring wells included in the long-term monitoring plan was evaluated during this sampling event. The field team noted no extensive damage (i.e., the need for well replacement or repair) to the wells during the June 2009 event. However, well CFF-046-05I was missing a well cap, which was replaced. In addition, several of the wells have minor issues including missing bolts from the well covers and missing locks.

2.2 WATER LEVEL MEASUREMENTS

Water level measurements are recorded quarterly at the Building 46 site. The top of casing elevations, depth to groundwater and calculated groundwater elevations are provided in **Table 1**. A groundwater contour map, generated using the groundwater elevations in the intermediate wells, as measured during the June 2009 event is included as **Figure 3**. According to water level measurements obtained on June 9, 2009, groundwater flows south-southwest in the intermediate zone at the site. This groundwater flow direction is consistent with previous sampling events. There are insufficient data points to contour the shallow and deep aquifers.

2.3 GROUNDWATER SAMPLING

2.3.1 Methodology

Groundwater sampling was conducted at the Building 46 site on June 9, 2009. Eight monitoring wells were purged and sampled using low-flow methodology. The wells were purged immediately before sampling using a low-flow peristaltic pump, at an approximate rate equal to or less than the groundwater recharge rate until field parameters (temperature, pH, conductivity and dissolved oxygen [DO]) stabilized. Samples were collected for field analysis of carbon dioxide, alkalinity, ferrous iron, hydrogen sulfide and DO using CHEMetrics® field test kits. Additional, low-level DO readings were obtained with the field meter. Oxidation-reduction potential (ORP) readings were also recorded during purging.

Groundwater sampling was conducted in general accordance with applicable state and local guidelines, and the Solutions-IES Work Plan (February 2008; Revision 01 dated September 24, 2008). All samples collected were stored on ice and delivered to Accutest Laboratory, a Florida-certified and National Environmental Laboratory Accreditation Program (NELAP) certified laboratory, located in Orlando,

Florida, via courier, under chain-of-custody procedures.

Results of the field measurements are summarized in **Table 2**. Copies of the groundwater sampling logs, including all field parameter measurements are provided in **Appendix A**.

2.3.2 Laboratory Analyses

Eight monitoring wells were sampled. Seven 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 FL PRO
- Sulfate by EPA Method 300.0

One groundwater sample collected from monitoring well CEF-046-06D was only analyzed for sulfate by EPA Method 300.0

A Level II data report was provided by the laboratory and can be found in **Appendix B**.

2.4 INVESTIGATION DERIVED WASTE (IDW)

Purge, wash and rinse water was collected in 5-gallon containers and transferred to a labeled 55-gallon drum (Drum ID SIES-001-6102009). The drum was staged in the IDW Storage Building (Building 536). The NAS Jacksonville Public Works Department (PWD-JAX) was notified on June 9, 2009, that the drum was being kept in the building. The non-hazardous data package for disposal of the June 2009 IDW was forwarded to PWD-JAX on July 10, 2009.

3.0 AIR SPARGE SYSTEM O&M SUMMARY

The AS system became operational on September 17, 2008. Since that time, weekly O&M system checks have been performed by Solutions-IES' subcontractor Enviro-Resources Corporation. Weekly O&M forms can be found in **Appendix C**.

Routine maintenance has been performed during weekly visits. No major operational problems were encountered with the system since the system was started in September 2008. The system ran for approximately 87 of the 98 day reporting period. The system shut down briefly due to a loss of power on four different occasions which are believed to be associated with thunderstorms. The system was turned

off on June 3, 2009, to let aquifer conditions stabilize before the groundwater monitoring event was conducted. The AS system was restarted on June 9, 2009, after the oil filter was changed and the quarterly groundwater sampling event was completed.

4.0 SAMPLING AND ANALYTICAL RESULTS

4.1 DATA VALIDATION

Accutest data analysts validated all data according to laboratory standard operating procedures (SOPs). The laboratory case narrative indicated a number of QC notes for volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). Most QC irregularities were recognized as matrix interference and sample nonhomogeneity. The validation process also resulted in several data qualifiers. These are shown with the analyte concentrations in **Table 3**.

A limited data validation was also performed by Solutions-IES. This limited data validation evaluated data completeness, holding time compliance, laboratory blank contamination and detection limits. No issues were identified.

4.2 FIELD AND NATURAL ATTENUATION PARAMETERS

As part of the June 2009 quarterly sampling event, groundwater samples were analyzed in the field for the natural attenuation parameters: DO, alkalinity, carbon dioxide, hydrogen sulfide, and ferrous iron. In addition, field parameters including temperature, pH, conductivity and ORP were measured and recorded during well purging. The results of the field measurements are summarized in **Table 2**.

Field measurements indicate that DO concentrations at the Building 46 site are relatively low with a range from 0.39 to 1.49 mg/L. A DO measurement was not reported for well CEF-046-06D because the meter was not functioning properly. DO measurements were collected using a CHEMetrics® field kit at the time of sample collection.

ORP is a measure of electron activity of the groundwater. Positive ORP values indicate that an oxidative environment exists in the aquifer and negative ORP values indicate a reducing environment. The ORP measurements collected at the site range from 7.9 to 508.1. In general, ORP values were consistent with historical results.

The pH at the site generally ranges from 2.04 to 6.05 which is consistent with previous pH measurements at this site. In general, pH values have decreased since March 2009 with the exception of CEF-046-21I where it increased from 2.39 to 4.16. Conductivity and temperature measurements were recorded to ensure that representative samples were collected.

Carbon dioxide readings that are elevated above background values are an indication that biodegradation of BTEX contaminants may be occurring. This in turn may increase the alkalinity as carbon dioxide can dissolve carbonate minerals that may be present in the aquifer material. Alkalinity and carbon dioxide values measured in June 2009 are generally consistent with historical values.

Under anaerobic conditions, ferric iron may be used as an electron acceptor during the process of biological degradation of petroleum compounds. The ferric iron, which is not directly measurable in groundwater due to its low solubility, is reduced to ferrous iron during this process. Ferrous iron is much more soluble and elevated levels indicate that iron reduction may be occurring. This coupled with decreased levels of BTEX can be used as an indicator that anaerobic biodegradation of the BTEX compounds may also be occurring. Similarly, sulfate can be reduced to sulfide under anaerobic conditions. Elevated concentrations of hydrogen sulfide are an indirect measure of the total sulfide concentrations in groundwater. If hydrogen sulfide concentrations increase along with a decrease in sulfate and BTEX compounds, anaerobic biodegradation of the contaminants may be occurring under sulfate reducing conditions.

In general, readings of ferrous iron and hydrogen sulfide recorded in June 2009 are consistent with March 2009 values for the site. No substantial change was identified since the restart of the system in September 2008.

4.3 LABORATORY ANALYTICAL RESULTS

Five of the 8 wells sampled contained concentrations of constituents above the GCTLs this reporting period: CEF-046-01S, CEF-046-05I, CEF-046-06D, CEF-046-07I and CEF-046-24D. The constituents included benzene, MTBE, TRPH and sulfate. Sulfate was reported in well CEF-046-06D at a concentration of 19,000mg/L which exceeds the Natural Attenuation Default Source Concentration (NADSC) of 2,500 mg/L. No other constituents were detected at concentrations above the NADSC values in June 2009. Monitoring well locations and constituent concentrations in excess of the regulatory

limits are shown on **Figure 4.** A summary of historical sampling results can be found in **Table 3** and a copy of the laboratory analytical report is included in **Appendix B**.

The following were detected during the June 2009 sampling event:

- Benzene was detected above the GCTL of 1 μg/L in well CEF-046-07I (5.0 μg/L).
- MTBE was detected above the GCTL of 20 μg/L in well CEF-046-01S (29.8 μg/L) and well CEF-046-07I (185 μg/L).
- TRPH was detected above the GCTL of 5,000 μg/L in well CEF-046-01S (19,400 μg/L).
- Sulfate was detected above the GCTL of 250 mg/L in wells CEF-046-01S (570 μg/L), CEF-046-05I (1,030 μg/L) and CEF-046-24D (755μg/L), and above the NADSC of 2,500 mg/L in CEF-046-06D (19,000 μg/L).

Benzene was not detected above the GCTL in well CEF-046-01S for the first time since 2001. Historical trends in sulfate concentrations over time in select wells are show in **Figure 5** and historic BTEX and PAH concentrations for monitoring well CEF-046-01S are shown in **Figure 6** and **Figure 7**, respectively.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The June 2009 quarterly groundwater sampling event was conducted in general accordance with the Solutions-IES Work Plan (February 2008) and modifications to the monitoring well network as approved by the BCT. Water level data suggest that groundwater in the intermediate zone at this site flows to the south-southwest.

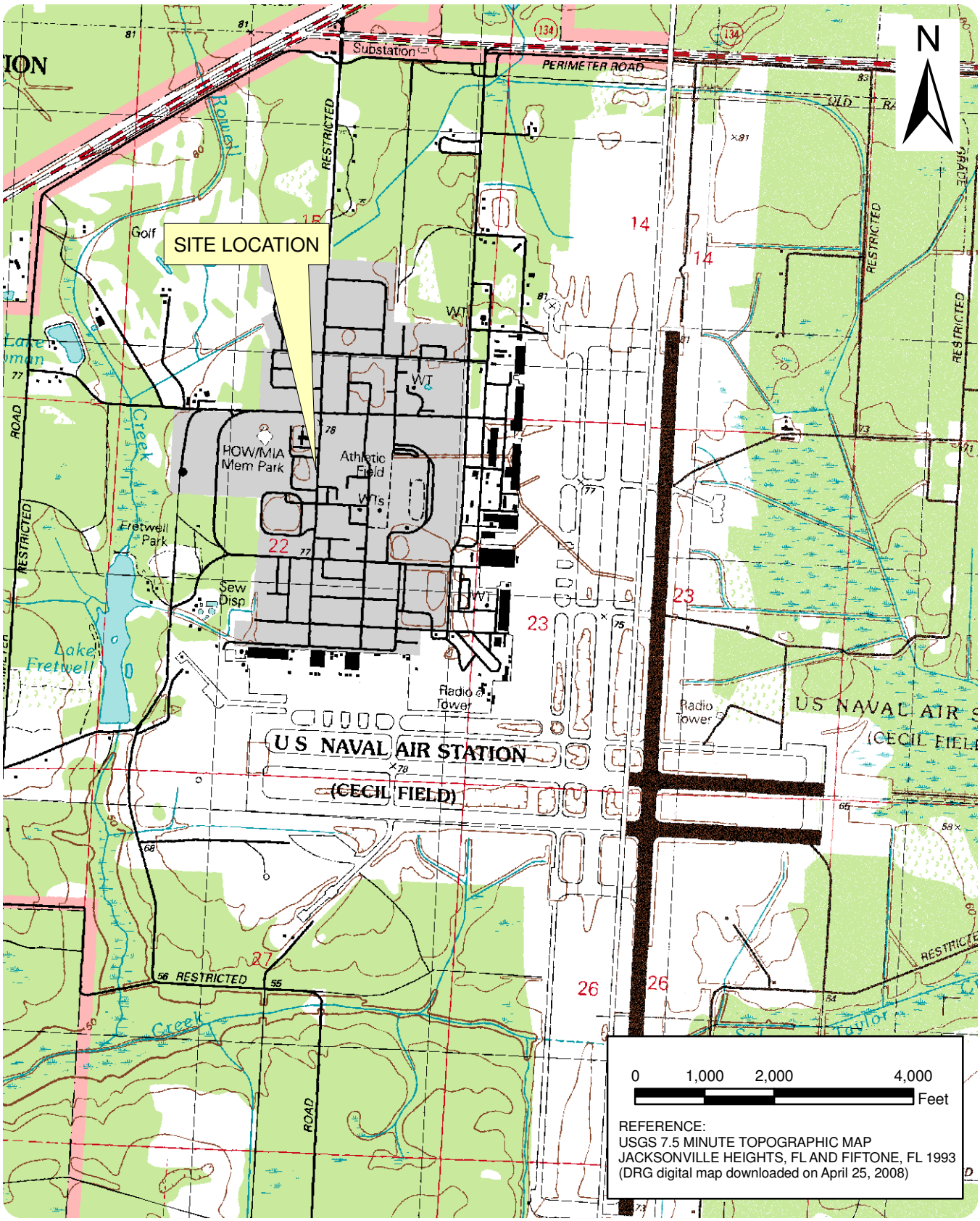
Monitoring wells CEF-046-01S and CEF-046-07I are the wells with the most impacts and are located in the source area that is targeted by the AS system. Benzene, ethylbenzene, xylenes, naphthalene, 1-methylnaphthalene and 2-methylnaphthalene concentrations in CEF-046-01S have all decreased to below the GCTLs since the new AS system was started in September 2008. Monitoring well CEF-046-07I has also shown a substantial decrease in benzene concentrations since September 2008. Sulfate in well CEF-046-06D is the only constituent that is elevated above the NADSC at the site. The AS system will continue to be monitored weekly and the next quarterly groundwater sampling event will be conducted in September 2009.

6.0 REFERENCES

HLA, 1998. *Site Assessment Report, Building 46, Tanks 46R, 46D, 46SUL, and 46UL, Base Realignment and Closure Miscellaneous Tank Sites, Naval Air Station Cecil Field, Jacksonville, Florida.* Prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina.

Solutions-IES, Inc., 2008. *Work Plan-Long Term Monitoring and Operation & Maintenance,* Former Naval Air Station Cecil Field, Jacksonville, Florida. February 2008..

FIGURES



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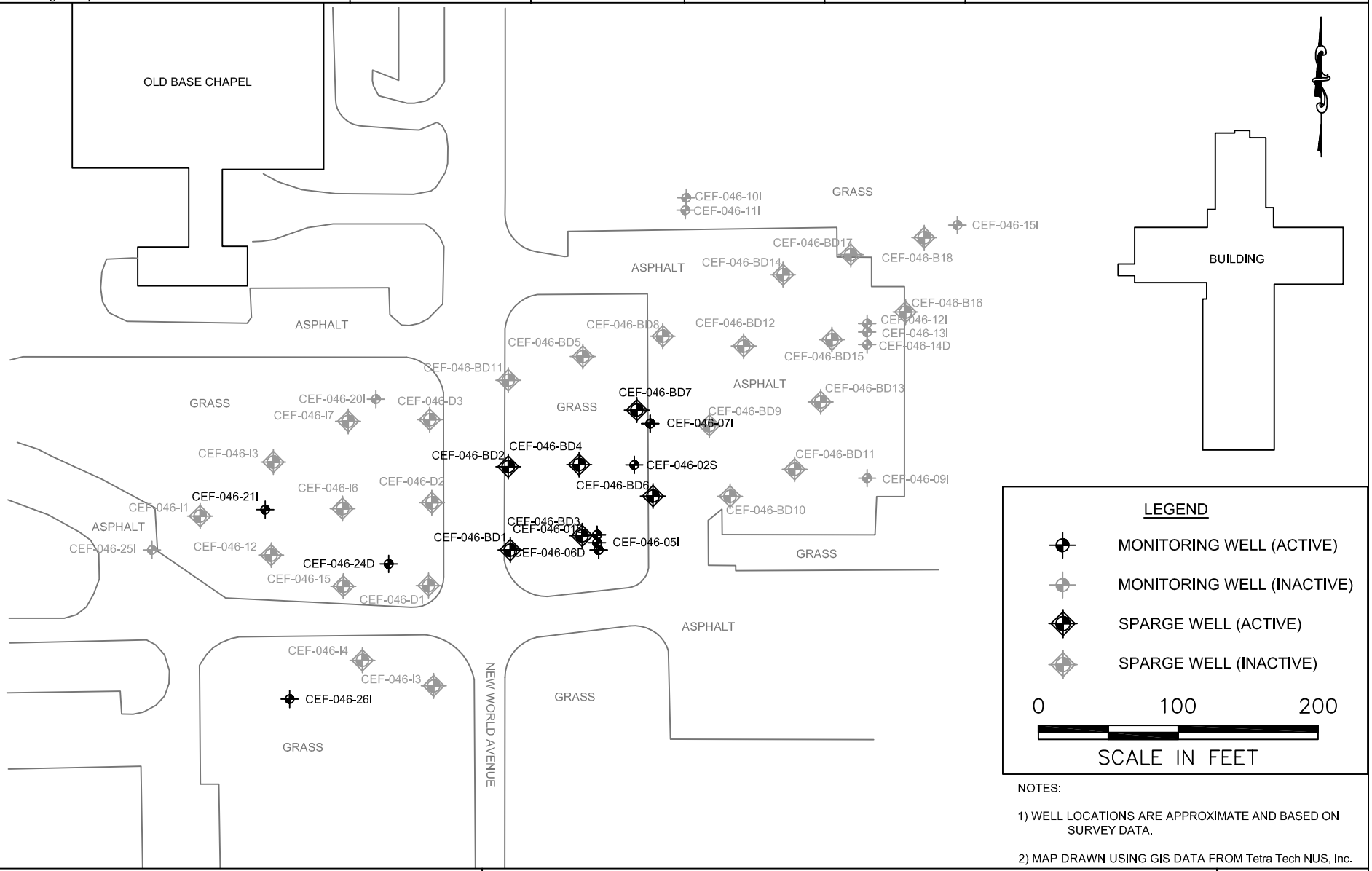
SITE LOCATION MAP
BUILDING 46 - NAS CECIL FIELD
JACKSONVILLE, FL

FIGURE:
1

FILE	DATE	PROJECT MANAGER	CHECKED BY	DRAFTER	PROJECT NUMBER
Figure 2.pdf	08/06/2009	BMR	JLD	PRL	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
JUNE 2009

FIGURE:

2

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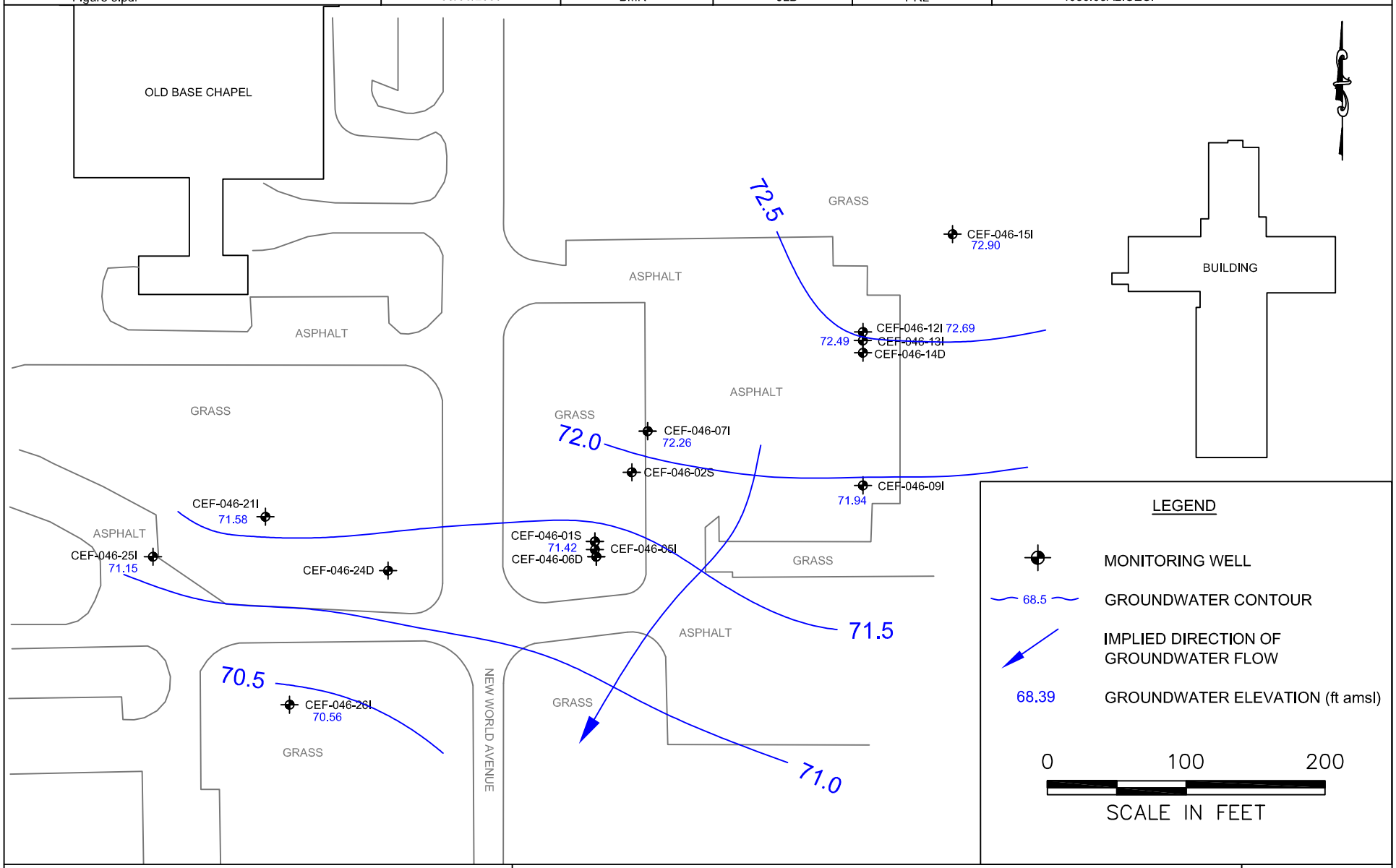
Figure 3.pdf	08/06/2009	BMR	JLD	PRL	4080.08A2.CECI



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

FIGURE:
3

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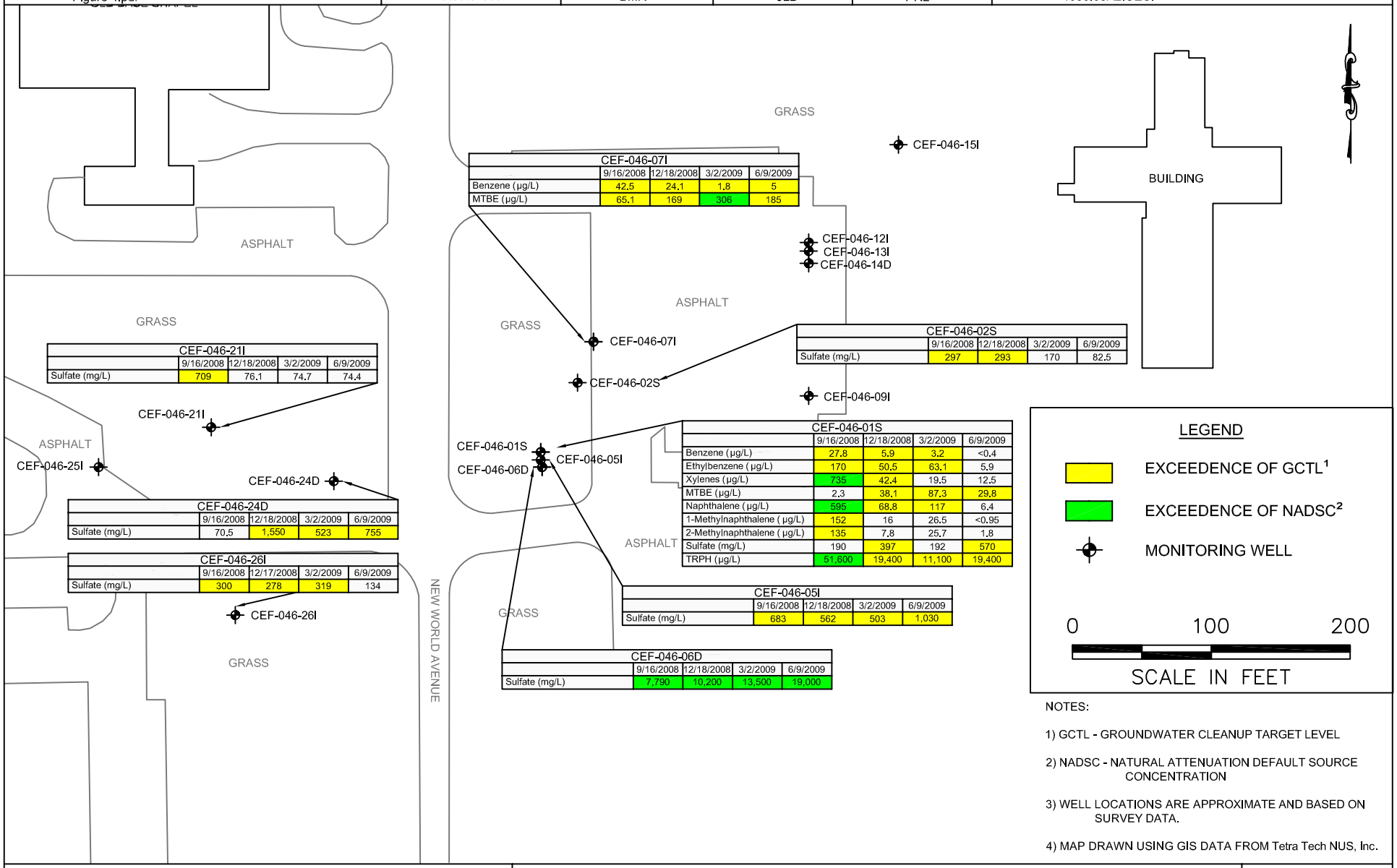

CEF-046-07I	9/16/2008	12/18/2008	3/2/2009	6/9/2009
Benzene (µg/L)	42.5	24.1	1.8	5
MTBE (µg/L)	65.1	169	306	185

CEF-046-02S	9/16/2008	12/18/2008	3/2/2009	6/9/2009
Sulfate (mg/L)	297	293	170	82.5

CEF-046-21I	9/16/2008	12/18/2008	3/2/2009	6/9/2009
Sulfate (mg/L)	709	76.1	74.7	74.4

CEF-046-01S	9/16/2008	12/18/2008	3/2/2009	6/9/2009
Benzene (µg/L)	27.8	5.9	3.2	<0.4
Ethylbenzene (µg/L)	170	50.5	63.1	5.9
Xylenes (µg/L)	735	42.4	19.5	12.5
MTBE (µg/L)	2.3	38.1	87.3	29.8
Naphthalene (µg/L)	595	68.8	117	6.4
1-Methylnaphthalene (µg/L)	152	16	26.5	<0.95
2-Methylnaphthalene (µg/L)	135	7.8	25.7	1.8
Sulfate (mg/L)	190	397	192	570
TRPH (µg/L)	51,600	19,400	11,100	19,400

CEF-046-24D	9/16/2008	12/18/2008	3/2/2009	6/9/2009
Sulfate (mg/L)	70.5	1,550	523	755

CEF-046-26I	9/16/2008	12/17/2008	3/2/2009	6/9/2009
Sulfate (mg/L)	300	278	319	134

CEF-046-05I	9/16/2008	12/18/2008	3/2/2009	6/9/2009
Sulfate (mg/L)	683	562	503	1,030

CEF-046-06D	9/16/2008	12/18/2008	3/2/2009	6/9/2009
Sulfate (mg/L)	7,790	10,200	13,500	19,000

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
JUNE 2009

FIGURE:

4

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Figure 5
Historical Sulfate Concentrations in Select Wells
June 2005 - June 2009

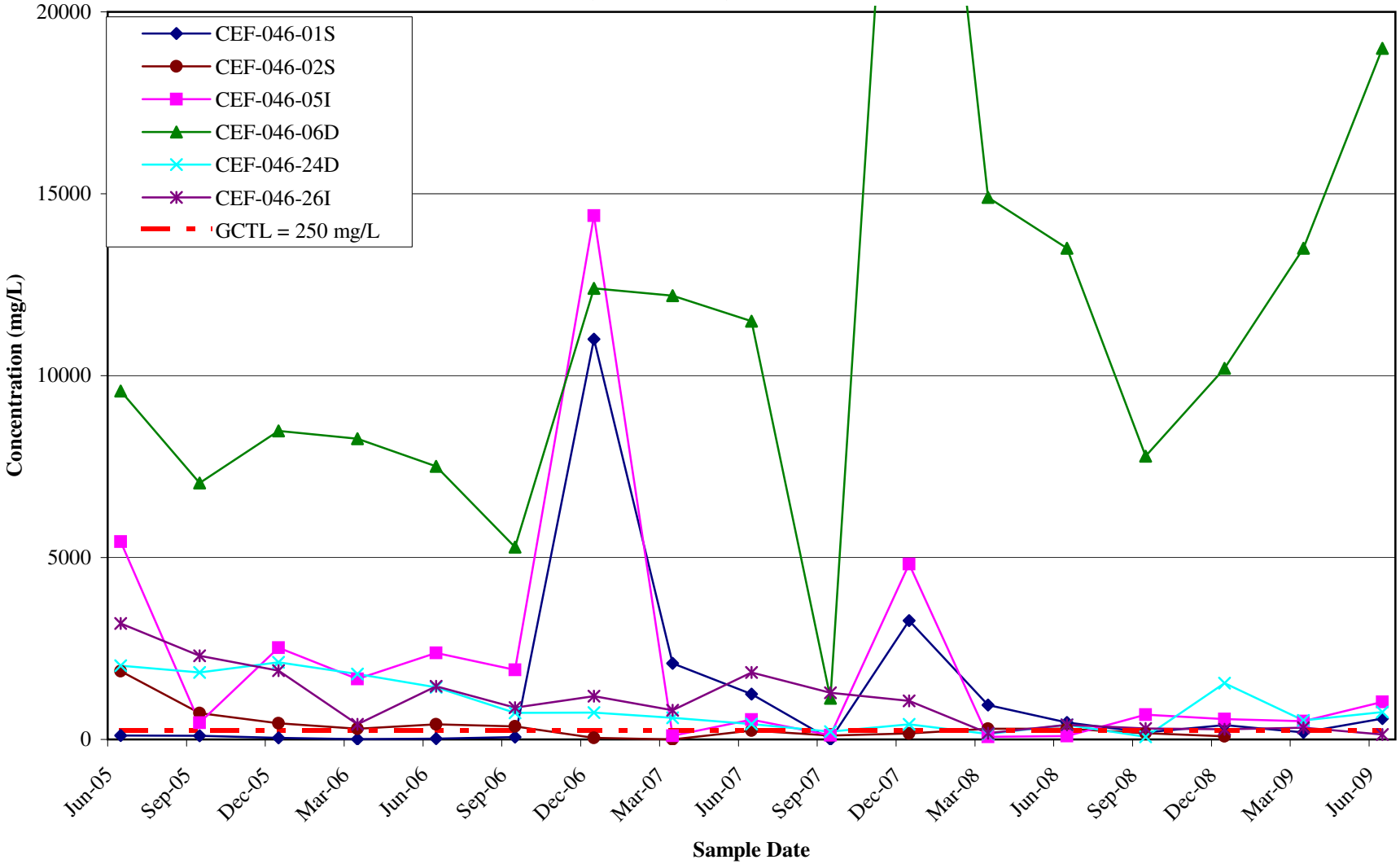


Figure 6
Historical BTEX Concentrations in CEF-046-01S
March 2003 - June 2009

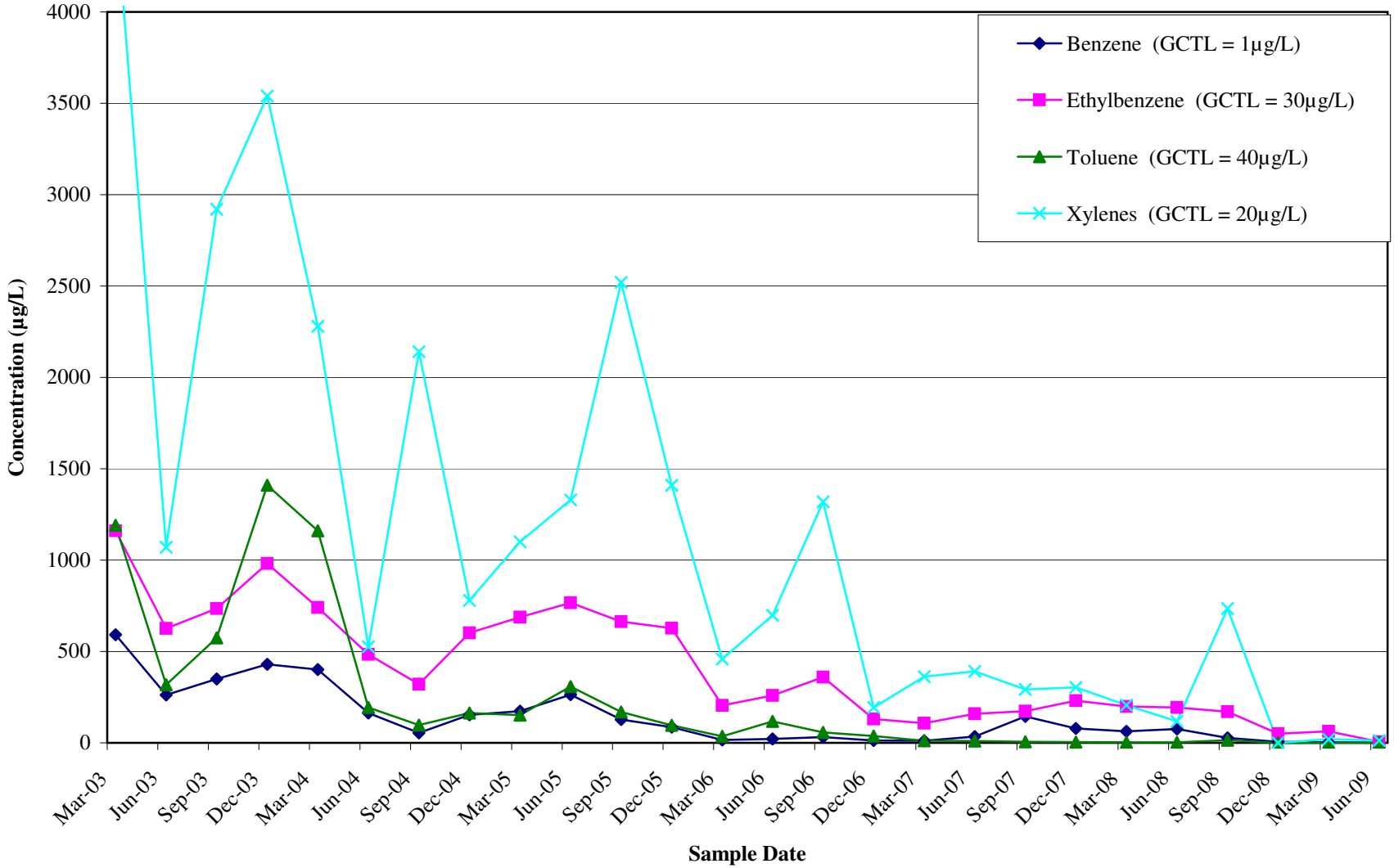
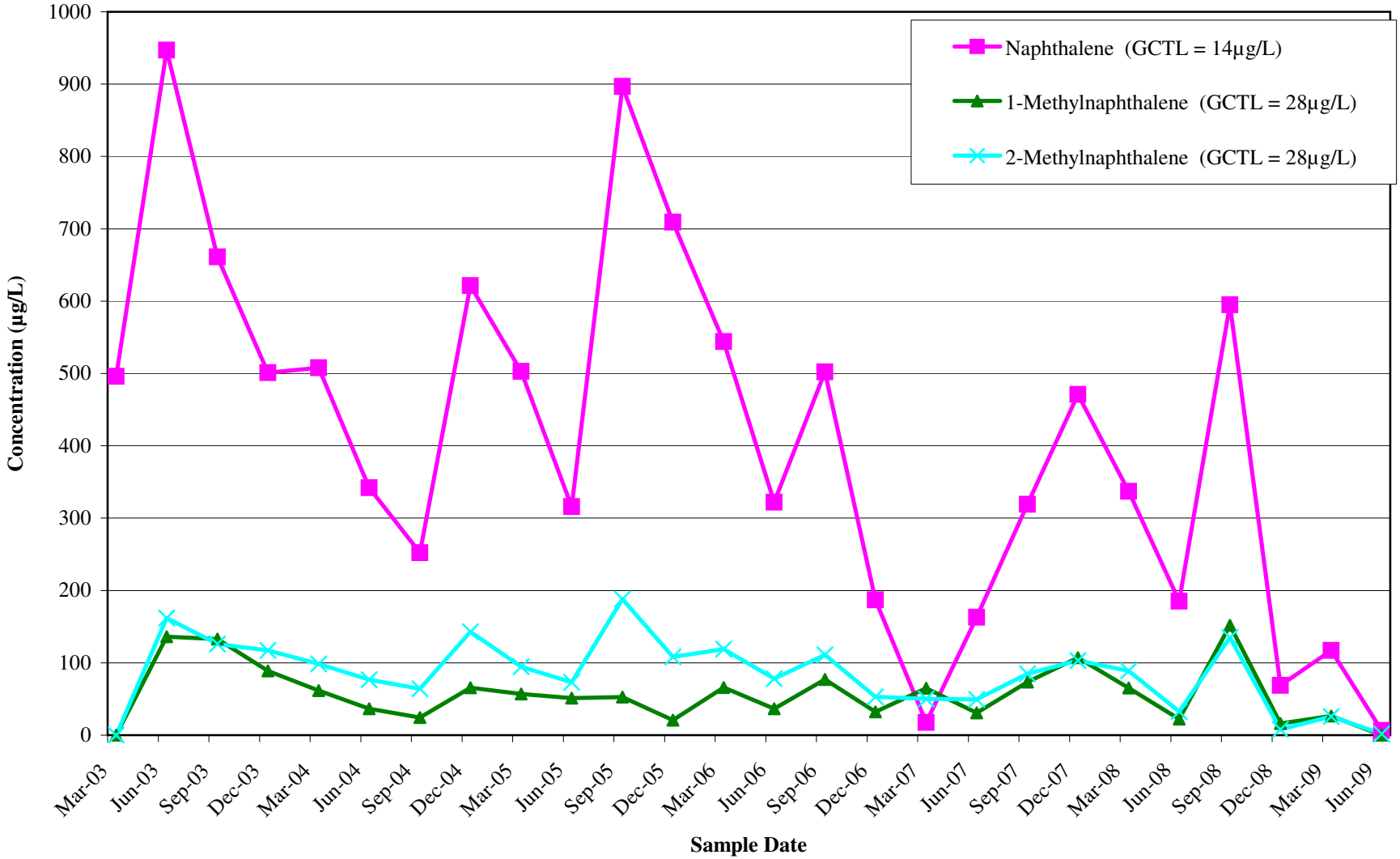


Figure 7
Historical PAH Constituents in CEF-046-01S
March 2003 - June 2009



TABLES

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

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	12/21/00	14.24	79.08	4.94	74.14
	03/14/03			2.55	76.53
	06/09/03			2.40	76.68
	09/03/03			3.42	75.66
	12/11/03			5.20	73.88
	03/18/04			5.92	73.16
	06/08/04			7.80	71.28
	09/21/04			3.42	75.66
	12/01/04			7.06	72.02
	03/13/05			9.00	70.08
	06/09/05			9.04	70.04
	09/06/05			6.95	72.13
	12/06/05			8.79	70.29
	03/29/06			9.31	69.77
	06/09/06			10.95	68.13
	09/24/06			12.60	66.48
	12/08/06			12.52	66.56
	03/01/07			12.10	66.98
	06/15/07			12.02	67.06
	09/12/07			11.32	67.76
	12/05/07			10.16	68.92
	03/05/08			9.80	69.28
	06/17/08			10.47	68.61
	09/16/08			5.42	73.66
	12/17/08			9.96	69.12
	03/02/09			10.45	68.63
	06/09/09			5.79	73.29
CEF-046-02S	12/21/00	13.88	79.08	5.02	74.06
	03/14/03			2.55	76.53
	06/05/03			3.75	75.33
	09/03/03			2.70	76.38
	12/11/03			5.04	74.04
	03/18/04			6.02	73.06
	06/08/04			7.80	71.28
	09/21/04			3.75	75.33
	12/01/04			7.02	72.06
	03/13/05			8.86	70.22
	06/09/05			8.95	70.13
	09/06/05			6.70	72.38
	09/21/05			6.60	72.48
	12/06/05			8.23	70.85
	03/30/06			9.22	69.86
	06/09/06			10.83	68.25
	09/24/06			11.54	67.54
	12/08/06			12.32	66.76
	03/01/07			11.98	67.10
	06/15/07			12.00	67.08
	09/12/07			11.28	67.80
	12/05/07			10.07	69.01
	03/05/08			9.68	69.40
	06/17/08			10.37	68.71
	09/16/08			5.60	73.48
	12/17/08			9.85	69.23
	03/02/09			10.32	68.76
	06/09/09			5.91	73.17
CEF-046-03S	12/06/05	15.00	79.14	9.19	69.95
CEF-046-04S	12/06/05	15.00	79.29	8.85	70.44
CEF-046-05I	12/21/00	49.65	79.18	5.81	73.37
	03/14/03			3.40	75.78
	06/05/03			4.90	74.28
	09/03/03			6.25	72.93
	12/11/03			6.64	72.54
	03/18/04			7.89	71.29
	06/08/04			9.40	69.78
	09/21/04			5.71	73.47
	12/01/04			9.23	69.95
	03/13/05			10.11	69.07
	06/09/05			10.45	68.73
	09/06/05			8.63	70.55
	12/06/05			10.01	69.17
	03/29/06			10.68	68.50
	06/09/06			11.95	67.23
	09/24/06			12.62	66.56
	12/08/06			14.82	64.36
	03/01/07			12.85	66.33
	06/15/07			12.93	66.25
	09/12/07			12.27	66.91
	12/05/07			11.10	68.08
	03/05/08			10.98	68.20
	06/17/08			11.49	67.69
	09/16/08			7.41	71.77
	12/17/08			10.85	68.33
	03/02/09			11.34	67.84
	06/09/09			7.76	71.42

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

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)
	12/21/00			7.40	71.77
	03/14/03			6.50	72.67
	06/09/03			8.00	71.17
	09/03/03			5.82	73.35
	12/10/03			7.30	71.87
	03/16/04			10.60	68.57
	06/08/04			11.69	67.48
	09/21/04			7.46	71.71
	12/01/04			9.72	69.45
	03/13/05			10.58	68.59
	06/09/05			10.20	68.97
	09/06/05			9.66	69.51
	12/06/05			10.95	68.22
CEF-046-06D	03/29/06	79.82	79.17	10.78	68.39
	06/09/06			12.24	66.93
	09/24/06			9.21	69.96
	12/08/06			16.90	62.27
	03/01/07			13.21	65.96
	06/15/07			13.40	65.77
	09/12/07			12.99	66.18
	12/05/07			11.49	67.68
	03/05/08			11.23	67.94
	06/17/08			11.95	67.22
	09/16/08			9.71	69.46
	12/17/08			13.19	65.98
	03/02/09			13.34	65.83
	06/09/09			10.25	68.92
	12/21/00			5.45	73.57
	03/14/03			3.30	75.72
	06/09/03			3.20	75.82
	09/03/03			2.80	76.22
	12/11/03			5.84	73.18
	03/18/04			7.40	71.62
	06/08/04			8.80	70.22
	09/21/04			4.95	74.07
	12/01/04			8.60	70.42
	03/13/05			9.71	69.31
	06/09/05			9.40	69.62
	09/06/05			7.19	71.83
	12/06/05			9.00	70.02
CEF-046-07I	03/30/06	29.68	79.02	9.91	69.11
	06/09/06			11.30	67.72
	09/24/06			11.82	67.20
	12/08/06			10.35	68.67
	03/01/07			12.82	66.20
	06/15/07			12.95	66.07
	09/12/07			11.74	67.28
	12/05/07			10.22	68.80
	03/05/08			9.97	69.05
	06/17/08			10.68	68.34
	09/16/08			6.47	72.55
	12/17/08			10.19	68.83
	03/02/09			10.61	68.41
	06/09/09			6.76	72.26
CEF-046-08I	12/06/05	30.50	78.91	9.10	69.81
	12/21/00			5.67	73.38
	03/14/03			2.55	76.50
	06/04/03			4.10	74.95
	09/03/03			3.32	75.73
	12/11/03			5.79	73.26
	03/16/04			7.20	71.85
	06/08/04			8.92	70.13
	09/21/04			5.29	73.76
	12/01/04			8.44	70.61
	03/13/05			9.58	69.47
	06/09/05			9.78	69.27
	09/06/05			7.86	71.19
	12/06/05			9.40	69.65
CEF-046-09I	03/30/06	48.81	79.05	9.95	69.10
	06/09/06			11.32	67.73
	09/24/06			11.89	67.16
	12/08/06			12.90	66.15
	03/01/07			12.26	66.79
	06/15/07			12.26	66.79
	09/12/07			11.61	67.44
	12/05/07			10.51	68.54
	03/05/08			10.20	68.85
	06/17/08			10.88	68.17
	09/16/08			6.97	72.08
	12/17/08			10.30	68.75
	03/02/09			10.66	68.39
	06/09/09			7.11	71.94

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

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-046-10I	12/06/05	30.50	80.18	9.08	71.10
CEF-046-11I	12/06/05	50.50	80.23	9.73	70.50
CEF-046-12I	12/21/00	29.61	78.73	5.23	73.50
	03/14/03			2.10	76.63
	06/05/03			3.30	75.43
	09/03/03			2.90	75.83
	12/11/03			5.45	73.28
	03/18/04			6.45	72.28
	06/08/04			8.10	70.63
	09/21/04			4.30	74.43
	12/01/04			7.25	71.48
	03/13/05			8.70	70.03
	06/09/05			8.80	69.93
	09/06/05			6.80	71.93
	12/06/05			8.35	70.38
	03/29/06			8.93	69.80
	06/09/06			10.54	68.19
	09/25/06			11.13	67.60
	12/08/06			12.00	66.73
	03/01/07			11.51	67.22
	06/15/07			11.48	67.25
	09/12/07			10.80	67.93
	12/05/07			9.61	69.12
	03/05/08			9.22	69.51
	06/17/08			9.57	69.16
	09/16/08			5.98	72.75
	12/17/08			9.41	69.32
	03/02/09			9.71	69.02
	06/09/09			6.04	72.69
CEF-046-13I	12/21/00	39.56	78.87	5.43	73.44
	03/14/03			2.31	76.56
	06/05/03			3.50	75.37
	09/03/03			3.10	75.77
	12/11/03			5.90	72.97
	03/18/04			6.85	72.02
	06/08/04			8.61	70.26
	09/21/04			4.65	74.22
	12/01/04			7.60	71.27
	03/13/05			8.91	69.96
	06/09/05			9.10	69.77
	09/06/05			7.15	71.72
	12/06/05			8.64	70.23
	03/29/06			9.17	69.70
	06/09/06			10.95	67.92
	09/25/06			11.36	67.51
	12/08/06			12.32	66.55
	03/01/07			11.73	67.14
	06/15/07			11.72	67.15
	09/12/07			11.08	67.79
	12/05/07			9.90	68.97
	03/05/08			9.52	69.35
	06/17/08			10.24	68.63
	09/16/08			6.34	72.53
	12/17/08			9.67	69.20
	03/02/09			9.98	68.89
	06/09/09			6.38	72.49
CEF-046-14D	12/21/00	78.79	78.88	6.86	72.02
	03/14/03			4.20	74.68
	06/04/03			6.15	72.73
	09/03/03			5.15	73.73
	12/10/03			7.20	71.68
	03/16/04			8.72	70.16
	06/08/04			9.75	69.13
	09/21/04			5.34	73.54
	12/01/04			7.66	71.22
	03/13/05			8.54	70.34
	06/09/05			9.74	69.14
	09/06/05			8.09	70.79
	12/06/05			8.42	70.46
	03/26/06			9.50	69.38
	06/09/06			10.70	68.18
	09/24/06			11.14	67.74
	12/08/06			13.74	65.14
	03/01/07			11.56	67.32
	06/15/07			11.52	67.36
	09/12/07			11.08	67.80
	12/05/07			9.76	69.12
	03/05/08			9.39	69.49
	06/17/08			10.21	68.67
	09/16/08			7.04	71.84
	12/17/08			9.88	69.00
	03/02/09			10.00	68.88
	06/09/09			6.91	71.97

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

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)
	12/21/00			6.33	73.42
	03/13/03			3.47	76.28
	06/04/03			4.54	75.21
	09/03/03			4.22	75.53
	12/10/03			6.53	73.22
	03/16/04			7.40	72.35
	06/08/04			9.22	70.53
	09/21/04			5.20	74.55
	12/01/04			8.07	71.68
	03/13/05			9.31	70.44
	06/09/05			9.54	70.21
	09/06/05			7.69	72.06
	12/06/05			9.10	70.65
CEF-046-15I	03/30/06	29.77	79.75	9.95	69.80
	06/09/06			11.46	68.29
	09/24/06			11.95	67.80
	12/08/06			12.85	66.90
	03/01/07			12.30	67.45
	06/15/07			12.17	67.58
	09/12/07			11.59	68.16
	12/05/07			10.46	69.29
	03/05/07			9.91	69.84
	06/17/08			10.74	69.01
	09/16/08			6.91	72.84
	12/17/08			10.28	69.47
	03/02/09			10.40	69.35
	06/09/09			6.85	72.90
CEF-046-16I	12/06/05	50.00	79.42	8.96	70.46
CEF-046-17D	12/06/05	80.50	79.15	8.78	70.37
CEF-046-18I	12/07/05	30.50	78.54	9.44	69.10
CEF-046-19I	12/07/05	50.50	78.88	10.55	68.33
CEF-046-20I	12/07/05	30.50	79.34	9.60	69.74
	12/21/00			6.02	73.31
	03/13/03			2.79	76.54
	06/05/03			4.18	75.15
	09/03/03			3.70	75.63
	12/11/03			7.50	71.83
	03/18/04			8.35	70.98
	06/08/04			10.10	69.23
	09/21/04			5.80	73.53
	12/01/04			9.15	70.18
	03/13/05			10.60	68.73
	06/10/05			10.90	68.43
	09/06/05			NR	NR
	12/07/05			10.11	69.22
CEF-046-21I	03/29/06	29.70	79.33	10.60	68.73
	06/09/06			12.18	67.15
	09/24/06			12.97	66.36
	12/08/06			13.81	65.52
	03/01/07			13.36	65.97
	06/15/07			13.43	65.90
	09/12/07			12.67	66.66
	12/05/07			11.43	67.90
	03/05/08			11.34	67.99
	06/17/08			11.87	67.46
	09/16/08			7.42	71.91
	12/17/08			10.96	68.37
	03/02/09			11.36	67.97
	06/09/09			7.75	71.58
CEF-046-22I	12/07/05	50.50	79.22	9.91	69.31
CEF-046-23D	12/07/05	92.50	NA	11.18	NA
	12/21/00			7.30	71.44
	03/14/03			13.78	64.96
	06/05/03			6.40	72.34
	09/03/03			4.97	73.77
	12/10/03			7.40	71.34
	03/16/04			8.95	69.79
	06/08/04			10.68	68.06
	09/21/04			6.31	72.43
	12/01/04			9.11	69.63
	03/13/05			9.92	68.82
	06/09/05			10.28	68.46
	09/06/05			8.93	69.81
	12/07/05			9.92	68.82
CEF-046-24D	03/29/06	90.45	78.74	10.15	68.59
	06/09/06			11.69	67.05
	09/24/06			12.12	66.62
	12/08/06			13.69	65.05
	03/01/07			12.43	66.31
	06/15/07			12.66	66.08
	09/12/07			11.87	66.87
	12/05/07			10.75	67.99
	03/05/08			10.46	68.28
	06/17/08			11.25	67.49
	09/16/08			7.99	70.75
	12/17/08			11.01	67.73
	03/02/09			11.19	67.55
	06/09/09			8.16	70.58

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

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)
	12/21/00			6.25	72.92
	03/13/03			2.49	76.68
	06/04/03			3.98	75.19
	09/03/03			3.50	75.67
	12/10/03			5.98	73.19
	03/16/04			8.30	70.87
	06/08/04			10.03	69.14
	09/21/04			5.61	73.56
	12/01/04			9.11	70.06
	03/13/05			10.46	68.71
	06/09/05			10.56	68.61
	09/06/05			8.93	70.24
	12/07/05			10.10	69.07
CEF-046-25I	03/29/06	50.45	79.17	10.50	68.67
	06/09/06			12.19	66.98
	09/24/06			12.98	66.19
	12/08/06			13.89	65.28
	03/01/07			13.42	65.75
	06/15/07			13.60	65.57
	09/12/07			12.85	66.32
	12/05/07			11.58	67.59
	03/05/08			11.51	67.66
	06/17/08			12.14	67.03
	09/16/08			7.69	71.48
	12/17/08			11.06	68.11
	03/02/09			11.53	67.64
	06/09/09			8.02	71.15
	12/21/00			7.09	72.34
	03/14/03			3.82	75.61
	06/05/03			4.30	75.13
	09/03/03			3.73	75.70
	12/11/03			6.65	72.78
	03/18/04			8.05	71.38
	06/08/04			10.40	69.03
	09/21/04			6.56	72.87
	12/01/04			10.20	69.23
	03/13/05			11.50	67.93
	06/09/05			11.50	67.93
	09/06/05			9.90	69.53
	12/07/05			11.01	68.42
CEF-046-26I	03/29/06	47.76	79.43	11.00	68.43
	06/09/06			12.90	66.53
	09/24/06			13.60	65.83
	12/08/06			14.54	64.89
	03/01/07			14.08	65.35
	06/15/07			14.23	65.20
	09/12/07			13.43	66.00
	12/05/07			12.22	67.21
	03/05/08			12.25	67.18
	06/17/08			12.76	66.67
	09/16/08			8.53	70.90
	12/17/08			11.80	67.63
	03/02/09			12.30	67.13
	06/09/09			8.87	70.56
CEF-046-27D	12/07/05	90.00	78.94	10.65	68.29
CEF-046-28I	12/07/05	50.00	79.38	11.21	68.17
CEF-046-29I	12/07/05	50.00	79.88	11.75	68.13
CEF-046-30I	12/07/05	50.00	79.66	11.10	68.56
CEF-046-31I	12/07/05	50.00	90.02	12.20	77.82

Notes:
ft bgs - feet below ground surface
ft amsl - feet above mean sea level
ft btoc - feet below top of casing
NR - Not recorded

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)	Dissolved Oxygen (mg/L)*		Oxidation - Reduction Potential (mV)	Temperature (^{o}C)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)
				Meter	CHEMetrics						
CEF-046-01S	12/21/00	6.20	512	1.05	NM	NM	22.70	NM	200	1.4	1.0
	03/14/03	7.54	2520	0.89	NM	-204.0	20.77	ND	100	2.2	5.0
	06/09/03	6.39	1730	ND	NM	-238.0	25.28	Interference	140	3.2	5.0
	09/03/03	6.27	201	2.03	NM	-364.0	27.53	Interference	205	1.0	5.0
	12/11/03	5.98	234	ND	ND	-332.0	23.15	400	250	1.4	5.0
	03/18/04	6.48	220	NM	ND	-278.0	22.33	Interference	175	2.0	5.0
	06/08/04	6.00	1920	0.04	ND	-296.0	26.24	Interference	130	1.0	5.0
	09/21/04	7.42	122	0.00	ND	-234.0	27.97	Interference	100	5.4	5.0
	12/01/04	6.39	2404	0.15	ND	-356.90	26.07	362	205	ND	5.0
	03/13/05	6.23	1467	0.18	ND	-347.60	24.63	170	275	2.8	5.0
	06/09/05	6.24	1223	0.71	ND	-347.10	26.88	140	195	1.8	5.0
	09/06/05	6.52	927	0.20	ND	-367.70	27.64	140	120	1.6	5.0
	12/06/05	6.92	507	0.22	ND	-269.80	23.49	123	85	1.6	5.0
	03/29/06	5.73	355	0.24	ND	-129.80	24.21	280	ND	2.6	5.0
	06/09/06	4.30	405	0.50	ND	-130.00	25.49	83	375	1.5	1.0
	9/24/2006***	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/08/06	3.29	10302	0.59	ND	5.10	22.01	426	ND	4.4	5.0
	03/01/07	4.04	5013	0.78	ND	48.8	21.88	205	ND	4.8	2.0
	06/15/07	4.33	4081	0.22	ND	-11.9	30.62	Interference	ND	5.5	2.0
	09/12/07	4.56	2279	0.83	ND	-10.3	29.77	Interference	ND	6.5	1.0
	12/05/07	5.07	2671	3.04	ND	-140.7	25.99	Interference	ND	3.0	5.0
	03/06/08	4.81	2146	0.23	ND	-98.2	24.44	Interference	10	3.6	5.0
	06/17/08	4.87	1135	1.08	ND	-36.5	27.87	Interference	Interference	6.0	5.0+
	09/16/08	5.90	373	0.19	ND	-120.7	27.28	Interference	60	11.0	3.0
	12/18/08	4.80	921	0.44	0.1	43.2	23.55	110	1000+	10+	5.0
	03/02/09	5.52	867	0.03	0.1	-187.4	19.10	70	18	4.0	1.06
	06/09/09	3.59	992	0.79	0.2	95.5	27.50	70	0.0	6.0	0.0
CEF-046-02S	12/21/00	6.20	962	1.06	NM	NM	23.20	352	720	1.0	ND
	03/14/03	7.08	1620	1.60	NM	-112.0	20.88	310	165	2.2	0.1
	06/05/03	6.44	1860	ND	NM	NM	24.66	228	195	2.2	0.3
	09/03/03	6.25	1480	0.03	NM	-132.0	27.94	245	160	2.0	0.3
	12/11/03	6.47	1070	0.40	0.6	-258.0	23.85	218	190	1.0	1.0
	03/18/04	6.80	123	NM	ND	-111.0	20.09	231	190	1.4	0.7
	06/08/04	5.73	855	0.16	3.0	-145.0	25.17	154	95	4.8	ND
	09/21/04	7.06	142	0.03	ND	-153.0	26.76	157	130	3.8	2.0
	12/01/04	6.45	2454	0.06	ND	-215.20	25.63	88	100	0.6	5.0
	03/13/05	5.92	2547	0.07	ND	-181.60	22.86	207	60	2.2	1.0
	06/09/05	6.14	2530	0.59	ND	-199.90	24.39	127	55	5.0	0.5
	09/06/05	6.68	3436	0.04	ND	-295.10	27.26	184	90	3.8	1.0
	09/21/05	6.61	2954	0.49	NM	-125.00	26.67	NM	NM	NM	NM
	12/06/05	6.41	1839	0.33	ND	-25.00	24.31	175	65	3.0	0.1
	03/30/06	5.84	3300	0.24	ND	-10.00	24.29	167	60	5.2	ND
	06/09/06	4.75	994	0.66	ND	-47.90	25.94	67	60	4.4	0.1
	09/25/06	5.81	1175	0.39	ND	-85.10	26.25	237	75	4.0	0.7
	12/08/06	6.02	1232	0.73	ND	-9.50	23.77	162	50	2.4	2.0
	03/01/07	5.17	841	0.41	ND	-7.70	22.96	229	40	4.2	0.7
	06/15/07	5.90	244	0.23	ND	28.10	25.33	332	5	2.0	0.5
	09/12/07	6.21	551	0.41	ND	-56.40	27.80	148	105	3.4	ND
	12/05/07	6.18	1147	0.38	ND	4.70	25.23	189	ND	ND	0.1
	03/06/08	5.92	358	0.34	ND	28.00	22.40	260	60	1.2	0.1
	06/17/08	5.87	478	0.69	ND	-37.70	25.13	297	125	0.8	0.2
	09/16/08	6.46	567	0.12	ND	-77.30	27.06	Interference	400	0.0	0.3
	12/18/08	6.39	655	0.60	0.30	0.40	23.75	70	50	0.4	0.2
	03/02/09	6.48	456	0.52	0.6	177.2	18.61	35	35	0.1	0.0
	06/09/09	6.05	564	1.49	0.4	7.9	26.26	35	170	0.0	0.0

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)	Dissolved Oxygen (mg/L)*		Oxidation - Reduction Potential (mV)	Temperature (^{o}C)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)
				Meter	CHEMetrics						
CEF-046-05I	12/21/00	5.60	140	1.10	NM	NM	23.20	183	100	1.8	1.0
	03/14/03	3.54	5810	2.05	NM	393.0	25.23	ND	ND	4.2	ND
	06/05/03	2.00	4840	0.23	NM	407.0	26.92	Interference	ND	9.9	ND
	09/03/03	2.74	4450	0.04	NM	320.0	27.29	Interference	ND	10.0	ND
	12/11/03	2.84	4480	4.01	ND	331.0	22.90	568	ND	6.0	ND
	03/18/04	2.48	4074	NM	ND	NM	25.00	172	ND	4.2	ND
	06/08/04	2.28	5216	0.10	15.0	503.60	27.25	93	ND	15.0	ND
	09/21/04	6.04	103	0.05	ND	-61.80	26.85	171	5	4.8	0.1
	12/01/04	4.48	638	0.23	ND	267.70	26.86	Interference	ND	7.2	0.1
	03/13/05	4.21	2300	0.00	ND	283.00	27.41	579	ND	9.2	ND
	06/09/05	2.71	5151	0.06	ND	319.90	29.89	390	ND	10.0	ND
	09/06/05	2.91	946	0.18	ND	513.50	26.98	145	ND	3.8	ND
	12/06/05	2.62	4721	2.15	ND	554.10	24.95	94	ND	ND	ND
	03/29/06	2.36	3174	0.21	ND	418.90	25.71	478	ND	4.8	ND
	06/09/06	2.69	4061	0.67	ND	406.40	29.66	535	ND	6.0	0.1
	09/24/06	2.91	3865	0.24	ND	361.70	28.12	Interference	5	9.8	ND
	12/08/06	2.66	12471	1.50	ND	353.30	21.20	Interference	ND	5.0	1.0
	03/01/07	3.21	463	1.10	ND	536.50	23.61	102	5	0.6	ND
	06/15/07	1.31	660	0.83	ND	566.00	27.51	460	ND	3.0	0.1
	09/12/07	2.92	2156	1.24	ND	339.50	27.99	Interference	ND	6.0	0.3
	12/05/07	3.03	3368	2.35	1.5	328.10	26.00	Interference	ND	5.0	ND
	03/06/08	2.86	327	0.84	ND	57.60	24.82	99	ND	1.2	ND
	06/17/08	3.85	298	0.32	ND	68.80	27.32	116	5	3.6	0.1
	09/16/08	3.54	499	0.38	ND	218.70	25.91	Interference	0.0	9.2	0.1
	12/18/08	2.90	850	2.13	2.00	238.00	25.80	400	0.0	0.0	0.0
	03/02/09	3.07	925	3.09	4.0	501.5	22.88	350	0.0	1.0	0.0
	06/09/09	3.40	1102	1.22	2.0	435.0	27.31	500	0.0	5.0	0.0
CEF-046-06D	12/21/00	9.71	180	6.51	NM	NM	23.50	8	120	0.4	0.3
	03/14/03	3.23	8600	2.64	NM	404.00	25.71	ND	ND	4.2	ND
	06/09/03	2.69	9740	0.09	NM	77.00	27.97	Interference	ND	7.0	ND
	09/03/03	2.70	8759	0.37	NM	335.00	27.71	Interference	ND	10.0	ND
	12/10/03	2.62	790	ND	0.8	376.00	23.95	Interference	ND	5.4	ND
	03/16/04	2.53	746	6.00	ND	NM	24.60	263	ND	ND	3.0
	06/08/04	2.42	8973	0.09	15.0	431.60	26.46	Interference	ND	9.8	ND
	09/21/04	2.37	10411	0.23	ND	434.30	26.45	109	ND	9.8	0.1
	12/01/04	2.59	18791	0.15	ND	437.10	27.16	118	ND	7.6	0.1
	03/13/05	2.44	9000	0.14	ND	414.00	26.45	176	ND	10.0	ND
	06/09/05	2.49	8012	0.15	ND	431.90	26.79	Interference	ND	10.0	ND
	09/06/05	2.48	7592	0.99	ND	608.90	28.41	154	ND	4.2	0.1
	12/06/05	2.52	10154	5.44	ND	515.70	25.87	99	ND	10.0	ND
	03/29/06	2.21	9429	1.82	1.8	598.90	26.23	241	200	4.6	ND
	06/09/06	2.49	8276	0.71	ND	564.50	28.89	128	ND	2.5	0.1
	09/24/06	2.56	8092	0.33	ND	508.10	28.70	Interference	60	10.0	ND
	12/08/06	2.42	9589	4.80	3.2	344.60	19.58	Interference	ND	4.4	ND
	03/01/07	2.50	10085	0.51	ND	633.90	24.74	Interference	100	0.6	ND
	06/15/07	1.88	8965	0.45	ND	532.80	27.37	Interference	ND	1.0	0.1
	09/12/07	2.43	10362	0.71	ND	408.80	28.74	239	ND	9.5	ND
	12/05/07	2.48	16340	2.07	1.75	408.50	25.88	Interference	ND	5.5	ND
	03/06/08	2.38	10573	0.59	ND	439.70	21.74	Interference	ND	4.2	ND
	06/17/08	2.51	11134	0.98	ND	409.20	22.24	Interference	ND	10.0+	ND
	09/16/08	3.08	4656	0.37	ND	419.70	23.55	Interference	50	28.0	0.3
	12/18/08	2.30	8289	3.68	2.0	432.00	28.31	Interference	0.0	10+	0.0
	03/02/09	2.61	8190	0.26	0.2	480.1	24.24	Interference	0.0	10+	0.0
	06/09/09	2.04	9863	10.32 *	NM	498.7	27.61	NM	NM	NM	NM

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)	Dissolved Oxygen (mg/L)* Meter	Dissolved Oxygen (mg/L)* CHEMetrics	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-046-07I	12/21/00	4.90	510	1.11	NM	NM	25.40	317	60	0.6	0.3
	03/14/03	3.23	250	5.24	NM	360.00	23.41	121	ND	1.8	ND
	06/09/03	3.80	191	1.05	NM	278.00	26.12	233	ND	2.2	ND
	09/03/03	4.51	226	0.12	NM	81.00	27.32	143	ND	4.0	2.0
	12/11/03	5.19	180	0.67	ND	-170.00	23.07	70	25	3.7	2.0
	03/18/04	4.89	230	NM	ND	120.00	24.42	75	15	4.0	ND
	06/08/04	3.67	89	0.24	ND	256.00	25.91	99	ND	4.4	ND
	09/21/04	3.55	85	0.00	ND	163.00	26.80	68	5	10.0	ND
	12/01/04	5.62	175	0.06	ND	-50.60	26.45	217	10	5.8	1.0
	03/13/05	4.90	130	0.12	ND	-79.20	25.78	122	35	4.0	2.0
	06/09/05	4.04	439	0.67	ND	-39.50	26.99	148	ND	3.8	2.0
	09/06/05	3.65	461	0.15	ND	253.60	26.26	140	ND	4.6	0.1
	12/06/05	3.90	188	0.40	ND	258.30	23.64	113	ND	3.0	0.1
	03/30/06	4.40	244	0.38	ND	120.70	23.92	128	20	5.0	0.1
	06/09/06	2.04	126	0.68	ND	37.20	25.43	176	70	5.8	0.7
	09/25/06	4.84	108	0.25	ND	3.40	25.61	105	15	4.8	2.0
	12/08/06	3.39	485	2.30	4.2	468.20	23.41	181	ND	0.1	ND
	03/01/07	4.63	134	0.35	ND	-3.20	24.18	108	65	3.2	0.7
	06/15/07	4.83	98	0.20	ND	-69.60	26.19	176	ND	2.4	1.0
	09/12/07	4.92	83	0.57	ND	-41.90	28.28	98	5	3.5	2.0
	12/05/07	4.95	112	0.50	ND	-11.70	25.66	148	ND	2.0	2.0
	03/06/08	4.50	75	0.45	ND	-70.10	23.89	113	4	3.4	1.0
	06/17/08	4.02	63	0.60	ND	-64.20	24.81	145	15	2.6	1.0
	09/16/08	4.61	31	0.13	ND	-70.20	26.41	150	20	2.6	2.0
	12/18/08	4.37	58	0.40	0.30	68.00	23.98	1000+	1000+	0.2	2.0
	03/02/09	3.55	291	1.02	0.7	426.2	22.46	110	0.0	7	0.0
	06/09/09	3.91	116	0.47	0.5	353.0	25.45	50	0.0	2	0.0
CEF-046-21I	12/20/00	4.86	47	1.35	NM	NM	23.20	9.4	60	0.8	ND
	03/13/03	3.75	713	2.35	NM	397.00	23.94	0.0	ND	3.0	ND
	06/05/03	3.12	798	0.00	NM	251.00	24.22	Interference	ND	3.9	0.7
	09/03/03	3.34	406	2.82	NM	449.00	26.30	115	ND	1.6	ND
	12/11/03	3.58	476	3.43	2.0	407.00	23.07	89	ND	1.6	ND
	03/18/04	3.81	162	2.10	1.0	NM	23.00	91	ND	2.4	ND
	06/08/04	3.39	147	0.86	13.0	406.00	23.91	78	ND	1.4	ND
	09/21/04	2.61	147	0.44	ND	317.00	24.62	69	ND	0.8	ND
	12/01/04	3.89	334	2.30	ND	439.10	24.76	54	ND	0.3	ND
	03/13/05	3.66	175	0.10	0.10	311.20	23.58	112	ND	0.8	ND
	06/09/05	3.61	114	1.21	0.00	319.00	23.57	45	5	1.4	ND
	09/06/05	4.22	103	0.26	ND	79.30	25.31	75	5	1.0	ND
	12/07/05	4.36	218	2.03	3.60	219.80	23.24	35	ND	4.5	3.0
	03/29/06	3.54	72	0.43	ND	83.90	23.97	31	10	1.0	0.3
	06/09/06	3.70	56	0.15	NM	209.70	25.52	NM	NM	NM	NM
	09/24/06	3.83	95	0.47	ND	-45.30	25.78	156	20	2.4	0.1
	12/08/06	3.99	121	0.57	ND	284.10	20.08	140	5	1.8	0.1
	03/01/07	3.15	136	0.49	ND	126.40	22.41	142	ND	0.8	0.5
	06/15/07	3.23	159	0.51	ND	650.00	26.36	Interference	ND	3.6	0.1
	09/12/07	4.42	139	0.58	ND	167.60	25.28	199	5	3.2	ND
	12/05/07	4.35	238	2.42	2.00	221.10	23.16	171	ND	2.8	0.1
	03/06/08	3.98	176	0.66	ND	389.50	20.92	98	ND	1.8	0.1
	06/17/08	4.29	194	0.10	ND	58.10	23.85	253	15	4.2	1.0
	9/16/08`	4.03	103	0.53	ND	140.10	26.42	249	5	3.6	0.0
	12/18/08	3.84	179	0.27	0.30	-210.00	23.51	70	0.0	7.0	0.0
	03/02/09	2.39	228	0.81	0.20	206.10	21.36	70	0.0	3.0	0.2
	06/09/09	4.16	223	0.39	0.30	168.80	24.48	70	0.0	4.5	0.0

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)	Dissolved Oxygen (mg/L)*		Oxidation - Reduction Potential (mV)	Temperature (^{o}C)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)
				Meter	CHEMetrics						
CEF-046-24D	12/20/00	6.15	129	0.13	NM	NM	21.90	16.4	60	2.3	0.1
	03/14/03	3.70	2530	2.23	NM	402.00	27.46	ND	ND	4.0	ND
	06/05/03	0.36	3160	0.36	NM	250.00	28.22	Interference	ND	5.9	ND
	09/03/03	3.20	2110	0.21	NM	282.00	27.68	Interference	ND	5.4	ND
	12/10/03	3.24	200	0.30	ND	308.00	26.18	Interference	ND	3.8	ND
	03/16/04	3.45	1285	0.60	ND	NM	27.60	Interference	ND	4.2	0.1
	06/08/04	3.09	1564	0.20	ND	386.40	27.04	Interference	ND	7.2	0.1
	09/21/04	3.74	1218	0.44	ND	17.20	26.06	Interference	ND	9.6	0.3
	12/01/04	3.74	2133	0.33	ND	211.60	24.52	Interference	ND	8.5	0.3
	03/13/05	6.16	1200	0.12	ND	58.00	25.70	Interference	5	7.4	1.0
	06/09/05	4.26	4395	0.06	ND	106.40	26.31	Interference	5	10.0	0.5
	09/06/05	4.12	2946	0.17	ND	161.20	26.94	Interference	ND	9.0	1.0
	12/07/05	4.38	8358	0.96	0.96	207.30	23.42	72	ND	5.2	0.3
	03/29/06	4.34	3362	0.46	ND	97.90	24.67	Interference	5	5.2	ND
	06/09/06	3.66	2810	0.41	ND	212.10	26.11	Interference	ND	10.0	0.1
	09/24/06	4.09	2319	0.50	ND	20.40	26.75	Interference	ND	5.0	0.1
	12/08/06	3.48	1664	0.43	ND	265.90	21.23	Interference	ND	3.1	0.1
	03/01/07	3.24	1353	0.42	ND	180.70	23.24	Interference	ND	4.2	0.1
	06/15/07	4.05	1017	0.61	ND	182.70	25.46	Interference	ND	4.0	0.1
	09/12/07	4.69	762	0.94	ND	123.10	26.54	Interference	5	3.6	ND
	12/05/07	4.81	1093	2.45	2.30	21.70	23.96	Interference	40	2.5	ND
	03/06/08	3.44	771	0.54	ND	286.70	23.36	Interference	ND	2.2	0.5
	06/17/08	3.82	730	0.11	ND	77.70	25.01	Interference	10	3.0	0.7
	09/16/08	4.76	484	0.22	ND	42.10	25.20	Interference	10	19.0	0.3
	12/18/08	2.19	1108	1.17	0.00	40.30	24.76	300	0.0	10+	0.0
	03/02/09	2.97	1022	0.78	0.4	444.70	21.57	250	0.0	10+	0.0
	06/09/09	2.82	1353	0.54	0.5	508.10	25.93	325	0.0	10+	0.0
CEF-046-26I	12/20/00	8.53	99	0.03	NM	NM	23.10	24.2	NM	1.4	NM
	03/14/03	6.34	63	4.66	NM	3.00	26.88	ND	ND	4.6	5.0
	06/05/03	3.31	2880	0.00	NM	-2.00	24.60	Interference	ND	9.0	5.0
	09/03/03	3.40	1990	0.12	NM	111.00	25.14	Interference	ND	7.8	5.0
	12/11/03	3.52	224	0.00	ND	151.00	22.18	Interference	ND	3.0	5.0
	03/18/04	3.51	268	NM	ND	203.00	22.45	Interference	ND	5.0	5.0
	06/08/04	2.43	3460	0.32	4.0	284.00	24.34	Interference	ND	4.0	1.0
	09/21/04	3.69	280	0.00	ND	91.00	23.88	Interference	ND	10.0	5.0
	12/01/04	2.62	6045	0.11	ND	371.60	23.43	Interference	ND	3.33	5.0
	03/13/05	2.90	5353	0.12	ND	250.30	24.33	Interference	ND	10.0	2.0
	06/09/05	2.54	6025	0.82	ND	297.10	24.22	Interference	ND	10.0	5.0
	09/06/05	3.40	5927	0.06	ND	74.90	24.57	Interference	ND	6.2	3.0
	12/07/05	3.50	6642	0.43	ND	225.50	22.19	Interference	ND	8.0	5.0
	03/29/06	2.84	3147	0.46	ND	498.40	23.82	Interference	ND	8.0	ND
	06/09/06	2.72	2493	0.23	ND	281.80	24.46	Interference	ND	9.2	5.0
	09/24/06	3.78	1952	0.42	ND	-63.80	26.59	Interference	ND	8.2	2.0
	12/08/06	3.24	1682	0.69	ND	100.60	20.74	Interference	ND	4.5	5.0
	03/01/07	2.32	1746	0.58	ND	280.60	22.32	Interference	ND	4.8	0.1
	06/15/07	3.77	2088	0.56	ND	22.40	24.77	Interference	ND	6.6	2.0
	09/12/07	3.41	1769	0.47	ND	37.40	26.15	Interference	ND	2.8	2.0
	12/05/07	3.40	2466	3.34	ND	2.00	24.43	Interference	ND	4.4	5.0
	03/06/08	3.40	1314	0.38	ND	21.30	21.99	Interference	ND	3.6	5.0
	06/17/08	3.56	811	0.72	ND	-2.50	24.35	Interference	5	6.6	5.0
	09/16/08	3.79	327	0.16	ND	-54.80	24.92	Interference	5	9.0	2.0
	12/17/08	4.12	648	1.54	0.05	-2.00	24.01	350	0	10+	1.0
	03/02/09	3.69	584	0.27	0.2	123.90	22.83	160	0	10+	1.06
	06/09/09	2.47	331	1.22	0.0	37.20	22.95	150	0	10+	1.06

NOTES:
SU - standard units
µS/cm - microsiemens per centimeter
mV - millivolts
mg/L - milligrams per liter
NM - not measured
ND - not detected
***Well went dry after pumping 0.7 gallons, final readings not obtained.
* DO meter not functioning properly

TABLE 3
LABORATORY ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	Benzene	Ethylbenzene	Toluene	Xylenes (Total)	Methyl-*tert*-butyl-ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Sulfate (mg/L)	TRPH
GCTL (µg/L)		1	30	40	20	20	14	28	28	250 *	5000
NADSC (µg/L)		100	300	400	200	200	140	280	280	2500 *	50000
CEF-046-01S	12/21/00	13000	2900	40000	19000	NM	550	NM	NM	NM	23000
	01/25/01	0.28	0.44	1.4	3.2	<1.0	<1.0	NM	NM	NM	290
	03/14/03	592.0	1160.0	1190.0	4580.0	619	496	<4.0	<4.0	NM	77000
	06/09/03	262.0	626.0	318.0	1070.0	511	947	136	162	NM	33200
	09/03/03	350.0	735.0	575.0	2920.0	365	661	133	126	NM	38300
	12/11/03	430.0	982.0	1410.0	3540.0	432	501	89	117	NM	39600
	03/18/04	401.0	741.0	1160.0	2280.0	486	508	61.5	98.5	NM	16200
	06/08/04	163.0	484.0	194.0	526.0	310	342	36.6	76.5	NM	15400
	09/21/04	54.8Y	321Y	97.4Y	2140Y	276Y	252 J3Y	24.2 J3Y	64.2 J3Y	NM	33300Y
	12/01/04	153.0	601.5	163.9	779.0	216.1	621.4	65.6	143	NM	25200
	03/13/05	174.0	687.0	152.0	1100.0	334	503	56.9	94.5	NM	23000
	06/09/05	263.0	767.0	308.0	1330.0	270	316	51.3	73.0	109	41100
	09/06/05	127.0	664.0	169.0	2520.0	133	897	52.6	188	97.9	51000
	12/06/05	85.9	627.0	95.8	1410.0	644	709	20.9I	108	42.8	35500
	03/29/06	15.2	205.0	36.2	458.0	267	544	65.8	119	4.37	35300
	06/09/06	21.9	259.0	118.0	698.0	187	322	36.7	78	24.5	17100
	09/24/06	31.6	359.0	57.1	1320.0	140	502	76.9	111	63.0	12300
	12/09/06	12.8	131.0	37.3	194.0	23.1	187	32.2	53	11000	4130
	03/01/07	12.0	107.0	11.4	363.0	104	17.7	64.8	50.1	2090	6770
	06/15/07	34.0	159.0	9.8	391.0	150	163	30.7	49.6	1250	7430
	09/21/07	145.0	173.0	5.1	292.0	142	319	73.4	84.9	1080 MHA	11200V
	12/05/07	78.4	230.0	3.8	304.0	77.3	471	107	103.0	3270	52700
	03/06/08	63.0	199	3.09	207	97.1	337	65.1	89.0	946	36500
	06/18/08	75.9 J4	194 J4	2.61	117 J4	78.4 J4	185	22.2	32.6	469	39600 B1,S10,V
	09/16/08	27.8	170	14.8	735	2.3 I	595	152	135.0	190	51600
	12/18/08	5.9	50.5 a	<1.8	42.4 a, I	38.1 a	68.8	16.0	7.8	397	19400
	03/02/09	3.2	63.1	0.39 I	19.5	87.3	117	26.5	25.7	192	11100
	06/09/09	<0.40	5.9	1.6	12.5	29.8	6.4	<0.95	1.8 I	570	19400
CEF-046-02S	12/21/00	300	72	51	200	NA	230	NM	NM	NM	3100
	01/25/01	7.3	0.96	1.5	3.3	7.1	11	NM	NM	NM	540
	03/14/03	<1.0	<1.0	<1.0	<1.0	156	<2.0	<2.0	<2.0	NM	1370
	06/05/03	<1.00	<1.0	<1.0	<1.0	54.5	<0.10	<0.10	<0.10	NM	339
	09/03/03	<1.00	<1.0	<1.0	<1.0	21.3	0.24	<0.10	<0.10	NM	339
	12/11/03	<1.00	<1.0	<1.0	<3.0	21.7	<0.10	<0.10	<0.10	NM	796
	03/18/04	12.4	<1.0	<1.0	3.7	24.3	1.4	0.16	0.21	NM	436
	06/08/04	3.72	<1.00	<1.00	<1.00	26.1	0.643 I	<2.04	<2.04	NM	530
	09/21/04	<1.00Y	<1.00Y	<1.00Y	<1.00Y	8.32Y	<2.17 J3Y	<2.17 J3Y	<2.17 J3Y	NM	0.26Y
	12/01/04	118	134.6	0.5700 I	136	135.8	81.30	4.56 I	<0.214	NM	2450
	03/13/05	54.6	1.04 I	0.210 I	1.64	47.8	96.50	7.77	0.439 I	NM	1600
	06/09/05	25.9	< 0.201	< 0.142	< 0.220	17.2	<0.101	< 0.133	< 0.210	664	1850
	09/06/05	<0.143	<0.201	<0.142	< 0.220	3.95	26.0	1.12 I	<0.203	843	NM
	09/21/05	NM	NM	NM	NM	NM	NM	NM	NM	NM	341
	12/06/05	<0.143	<0.201	<0.142	<0.220	4.47	<0.100	<0.133	<0.203	1880	654
	03/30/06	0.460 I	0.420 I	<0.176	<0.298	3.41	8.9	0.810 I	<0.203	722	1170
	06/09/06	<0.305	<0.338	<0.257	<0.433	2.00	<0.100	<0.133	<0.203	442	623
	09/25/06	<0.305	<0.338	<0.257	<0.433	1.69	<0.100	<0.133	<0.203	297	794
	12/08/06	3.18	0.600 I	<0.257	1.46	2.44	<0.100	<0.133	<0.203	415	431
	03/01/07	<0.305	<0.338	<0.257	<0.433	1.06	3.44 I	2.73 I	<0.203	360	316
	06/15/07	<0.305	<0.338	<0.338	<0.433	3.28	<0.100	<0.133	<0.203	41.0	231
	09/12/07	<0.305	<0.338	0.380 I	<0.433	<0.336	<0.100	<0.133	<0.203	<40.0	157 I V
	12/05/07	<0.305	<0.338	<0.257	<0.433	1.02	<0.100	<0.133	<0.203	245	32 I
	03/06/08	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	104	<18
	06/18/08	<0.270	0.240 I	<0.280	<0.860	<0.420	<0.909	<0.909	<0.909	163	298 V,CF2,CF6
	09/16/08	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	297	244
	12/18/08	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	293	218 I
	03/02/09	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	170	<170
	06/09/09	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	82.5	<160

TABLE 3
LABORATORY ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	Benzene	Ethylbenzene	Toluene	Xylenes (Total)	Methyl-*tert*-butyl-ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Sulfate (mg/L)	TRPH
GCTL (µg/L)		1	30	40	20	20	14	28	28	250 *	5000
NADSC (µg/L)		100	300	400	200	200	140	280	280	2500 *	50000
CEF-046-05I	12/21/00	**850**	**38**	**13**	**150**	NM	**1.6**	NM	NM	NM	<550
	01/25/01	**180**	**7.4**	**3.1**	**31**	<1.0	<1.0	NM	NM	NM	<520
	03/14/03	<1.0	<1.0	<1.0	**9.0**	<1.0	<2.0	<2.0	<2.0	NM	<200
	06/05/03	<1.00	<1.0	<1.0	**5.2**	**4.6**	<0.10	<0.10	<0.10	NM	<106
	09/03/03	<1.00	<1.0	<1.0	**6.6**	**66.2**	<0.10	<0.10	<0.10	NM	**333**
	12/11/03	<1.00	<1.0	<1.0	**4.1**	**70**	<0.10	<0.10	<0.10	NM	**456**
	03/18/04	**1.4**	<1.0	**1.1**	**3.9**	**28.4**	<0.10	<0.10	<0.10	NM	**242**
	06/08/04	<1.00	<1.00	<1.00	<1.00	**2.3**	<2.04	<2.04	<2.04	NM	<200
	09/21/04	<1.00Y	**1.61Y**	<1.00Y	**2.93Y**	<1.00Y	<2.20 J3Y	<2.20 J3Y	<2.20 J3Y	NM	<200Y
	12/01/04	<0.143	**0.4400 I**	<0.1417	<0.220	<0.2359	<0.23	<0.206	<0.216	NM	**120 I V**
	03/13/05	**1.75 I**	<0.201	<0.142	**1.23 I**	**3.56**	<0.112	<0.148	<0.233	NM	<18
	06/09/05	< 0.143	< 0.201	< 0.142	**0.950 I**	**8.65**	<0.101	< 0.133	< 0.210	**5440**	**19 I**
	09/06/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	**462**	<18
	12/06/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	**2520**	<18
	03/29/06	<0.140	<0.126	<0.176	<0.298	<0.236	<0.100	<0.133	<0.203	**1660**	<18
	06/09/06	0.340 I	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**2380**	**129 I**
	09/24/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**1910**	**56 I**
	12/09/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**14400**	**18 I**
	03/01/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	**3.23 I**	**3.05 I**	**99.2**	<18
	06/15/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**545**	**140 I**
	09/12/07	<0.305	<0.338	<0.257	<0.433	<0.336 J4	<0.100	<0.133	<0.203	**116**	**92 I V**
	12/05/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**4820**	**59 I**
	03/06/08	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**72.0**	<18
	06/18/08	<0.270	<0.240	<0.280	<0.860	<0.420	<1.00	<1.00	<1.00	**91.0**	<105
	09/16/08	<0.4	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**683**	**333**
	12/18/08	<0.4	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**562**	<160
	03/02/09	<0.4	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**503**	<170
	06/09/09	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**1030**	<160
CEF-046-06D	12/21/00	**2.8**	**9.9**	**6**	**18**	NM	**3.5**	NM	NM	NM	<560
	02/08/01	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	NM	NM	NM	<500
	03/14/03	<1.0	<1.0	<1.0	6.0	<1.0	<2.0	<2.0	<2.0	NM	**274**
	06/09/03	<1.00	<1.0	<1.0	8.7	<1.0	<1.0	<1.0	<1.0	NM	<200
	09/03/03	<1.00	<1.0	<1.0	3.3	<1.0	<1.0	<1.0	<1.0	NM	<225
	12/10/03	<1.00	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<1.0	NM	<200
	03/16/04	<1.00	<1.0	<1.0	<3.0	<1.0	<0.10	<0.10	<0.10	NM	<100
	06/08/04	<1.00	<1.00	<1.00	<1.00	<1.00	<2.04	<2.04	<2.04	NM	<200
	09/21/04	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<2.15 J3Y	<2.15 J3Y	<2.15 J3Y	NM	<220Y
	12/01/04	<0.143	**1.180 I**	<0.1417	**1.35 I**	<0.2359	<0.23	<0.208	<0.219	NM	**140 I V**
	03/13/05	<0.143	<0.201	<0.142	**1.78 I**	<0.236	<0.112	<0.148	<0.233	NM	<18
	06/09/05	<0.143	<0.201	<0.142	**1.01 I**	<0.236	<0.101	<0.133	<0.210	**9580**	**24 I**
	09/06/05	<0.143	<0.201	<0.142	**0.340 I**	<0.236	<0.100	<0.133	<0.203	**7050**	<18
	12/06/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	**8480**	<18
	03/29/06	<0.140	<0.126	<0.176	<0.298	<0.236	<0.100	<0.133	<0.203	**8270**	<18
	06/09/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**7510**	**135 I**
	09/24/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.0133	<0.203	**5290**	**36 I**
	12/09/06	<0.305	<0.338	<0.257	**1.22**	<0.336	**0.370 I**	<0.133	<0.203	**12400**	**74 I**
	03/01/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	**12200**	<18
	06/15/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	**0.230 I**	**0.220 I**	**11500**	**168 I**
	09/12/07	<0.305	<0.338	**0.290 I**	**1.51**	<0.336	<0.100	**0.230 I**	**0.220 I**	**1130**	**103 I V**
	12/05/07	<0.305	<0.338	<0.257	**1.56**	<0.336	<0.452	**0.210 I**	**0.280 I**	**34600**	**91 I**
	03/06/08	<0.305	<0.338	<0.257	**1.63**	<0.336	<0.100	<0.133	<0.203	**14900**	<18
	06/18/08	<0.270	<0.240	<0.280	**1.55 I**	<0.420	<1.00	<1.00	<1.00	**13500**	**225 V,CF2,CV6**
	09/16/08	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**7790**	**238**
	12/18/08	<0.40	<0.43	<0.35	**2.4 I**	<0.26	<0.24	<0.24	<0.24	**10200**	**238 I**
	03/02/09	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	**13500**	**235 I**
	06/09/09	NM	NM	NM	NM	NM	NM	NM	NM	**19000**	NM

TABLE 3
LABORATORY ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	Benzene	Ethylbenzene	Toluene	Xylenes (Total)	Methyl-*tert*-butyl-ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Sulfate (mg/L)	TRPH
GCTL (µg/L)		1	30	40	20	20	14	28	28	250 *	5000
NADSC (µg/L)		100	300	400	200	200	140	280	280	2500 *	50000
CEF-046-07I	12/21/00	9100	2800	17000	15000	NM	260	NM	NM	NM	13000
	02/22/01	6500	1400	10000	7900	6100	120	NM	NM	NM	17000
	03/14/03	945	150	86.5	904	4380	<2.0	<2.0	<2.0	NM	5480
	06/09/03	678	123	51.6	752	4190	32.4	0.42	0.24	NM	4080
	09/03/03	832	158	<10.0	697	5140	123	6.12	7.92	NM	2530
	12/11/03	734	111	5	290	5820	96.2	4.76	6.28	NM	5410
	03/18/04	386	66	8.5 ?	414	3460	2.15	<0.10	<0.10	NM	1900
	06/08/04	208	42.7	11.3	330	3080	3.34	<2.04	<2.04	NM	650
	09/21/04	494Y	38.1Y	9.99Y	387Y	2190Y	0.242 J3, IY	<2.20 J3Y	<2.20 J3Y	NM	980Y
	12/01/04	833	144.9	10.30	631	1943	131.2	5.18	8.13	NM	1770
	03/13/05	775	176	3.26	269	1480	128	5.39	7.40	NM	1570
	06/09/05	394	127	2.79	199	628	<0.101	<0.133	<0.210	279	1380
	09/06/05	92.9	41.3	2.52	95.6	1730	<0.100	<0.133	<0.203	167	1280
	12/06/05	651	144	11.3 I	357	2140	28.6	<0.148	<0.226	54.6	970
	03/30/06	146	26.0	0.650 I	29	1290	33.7	0.900 I	1.10 I	37.1	<18
	06/09/06	207	33.2	0.310 I	11.4	652	60.7	2.67 I	1.24 I	33.0	832
	09/25/06	162	25.4	0.310 I	5.07	296L	75.1	2.96 I	0.510 I	28.6	544
	12/08/06	<0.305	0.490 I	<0.257	<0.433	372	<0.100	<0.133	<0.203	139.0	<18
	03/01/07	74.0	11.8 I	<5.14	<8.65	450	29.1	3.72 I	<0.203	35.0	224
	06/15/07	115	15.0	0.360 I	2.81	338	20.0	1.04 I	<0.203	25.2	397
	09/12/07	81.9	9.91	0.290 I	0.840 I	198	18.8	1.01 I	<0.203	18.3	314 V
	12/05/07	84.1	12.4	0.380 I	0.970 I	213	30.8	1.45 I	<0.203	147	221
	03/06/08	64.2	11.0	<0.257	0.830	147 J4	13.6	1.20	<0.203	14.7	132
	06/18/08	43.4	8.28	<0.280	<0.860	81.9	13.0	1.81 I	<1.00	14.0	376 V,CF2,CF6
	09/16/08	42.5	6.40	<0.35	<1.2	65.1	7.9	1.30	<0.24	15.5	365
	12/18/08	24.1	2.3	<0.35	<1.2	169 a	<0.24	<0.24	<0.24	21.7	<160
	03/02/09	1.8	<0.43	<0.35	<1.2	306 a	<0.24	<0.24	<0.24	116	<160
	06/09/09	5.0	0.45 I	<0.35	<1.2	185	<0.24	<0.24	<0.24	38	<160
CEF-046-21I	12/20/00	<1.0	<1.0	<1.0	<1.0	NM	<1.1	NM	NM	NM	<550
	01/25/01	0.25	<1.0	0.7	<1.0	<1.0	<1.0	NM	NM	NM	300
	03/13/03	<1.0	<1.0	<1.0	<1.0	<1.0	<2.2	<2.2	<2.2	NM	<200
	06/05/03	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<100
	09/03/03	<1.00	<1.0	<1.0	<1.0	<1.0	0.18	0.27	0.2	NM	308
	12/11/03	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<200
	03/18/04	<1.00	<1.0	<1.0	<3.0	<1.0	<0.10	<0.10	<0.10	NM	<222
	06/08/04	<1.00	<1.00	<1.00	<1.00	<1.00	<2.04	<2.04	<2.04	NM	<200
	09/21/04	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<2.20Y	<2.20 J3Y	<2.20 J3Y	NM	<220Y
	12/01/04	<0.143	<0.2010	<0.1417	<0.220	<0.2359	<0.23	<0.206	<0.216	NM	100 I V
	03/13/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.101	<0.133	<0.210	NM	<18
	06/09/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.101	<0.133	<0.210	14.1	< 18
	09/06/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	29.5	< 18
	12/07/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.111	<0.148	<0.226	10.6	<20
	03/29/06	<0.140	<0.126	<0.176	<0.298	<0.236	<0.100	<0.133	<0.203	14.9	<18
	06/09/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	12.6	76 I
	09/24/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	26.2	35 I
	12/08/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	34.2	<18
	03/01/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	31.9	<18
	06/15/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	61.4	156 I
	09/12/07	<0.305	<0.338	0.410 I	<0.433	<0.336	<0.100	<0.133	<0.203	27.7	238 V
	12/05/07	<0.305	<0.0338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	28.0	<18
	03/06/08	<0.305	<0.0338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	34.9	<18
	06/18/08	<0.270	<0.240	<0.280	<0.860	<0.420	<1.00	<1.00	<1.00	51.1	<110 CF2,CF6,U
	09/16/08	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	709	<160
	12/18/08	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	76.1	<160
	03/02/09	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	74.7	<160
	06/09/09	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	74.4	<160

TABLE 3
LABORATORY ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	Benzene	Ethylbenzene	Toluene	Xylenes (Total)	Methyl-*tert*-butyl-ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Sulfate (mg/L)	TRPH
GCTL (µg/L)		1	30	40	20	20	14	28	28	250 *	5000
NADSC (µg/L)		100	300	400	200	200	140	280	280	2500 *	50000
CEF-046-24D	12/20/00	<1.0	<1.0	0.47	0.41	NM	<1.1	NM	NM	NM	<500
	01/25/01	8.3	0.81	1	2	<1.0	<1.0	NM	NM	NM	<510
	03/14/03	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	NM	<200
	06/05/03	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<100
	09/03/03	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<225
	12/10/03	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<200
	03/16/04	<1.00	<1.0	<1.0	<3.0	<1.0	<0.10	<0.10	<0.10	NM	<100
	06/08/04	<1.00	<1.00	<1.00	<1.00	<1.00	<2.20	<2.20	<2.20	NM	<200
	09/21/04	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<2.04Y	<2.04 J3Y	<2.04 J3Y	NM	<200Y
	12/01/04	<0.143	<0.2010	<0.1417	<0.220	<0.2359	0.40 I	<0.200	<0.210	NM	130 I V
	03/13/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.101	<0.133	<0.210	NM	<18
	06/09/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.101	<0.133	<0.210	2030	< 20
	09/06/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	1840	<18
	12/07/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	2120	<22
	03/29/06	<0.140	<0.126	<0.176	<0.298	<0.236	<0.100	<0.133	<0.203	1800	<18
	06/09/06	<0.305	<0.388	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	1430	125 I
	09/24/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	732	31 I
	12/08/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	737	34 I
	03/01/07	<0.305	<0.338	<0.257	<0.433	<0.336	3.42 I	<0.133	<0.203	596	<18
	06/15/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	420	109 I
	09/12/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	217	40 I V
	12/05/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	414	245
	03/06/08	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	151	<18
	06/17/08	<0.270	<0.240	<0.280	<0.860	<0.420	<0.952	<0.952	<0.952	398	184 H2,I
	09/16/08	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	70.5	<160
	12/18/08	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	1550 **	214 I
	03/02/09	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	523	<160
	06/09/09	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	755	<160
CEF-046-26I	12/20/00	1300	78	41	310	NM	<1.1	NM	NM	NM	<530
	01/25/01	2400	270	100	820	<5.0	<1.0	NM	NM	NM	890
	03/14/03	866	23.3	5.4	199	15.9	<2.0	<2.0	<2.0	NM	628
	06/05/03	845	30	<10.0	314	21	<0.10	<0.10	<0.10	NM	598
	09/03/03	902	24	<10.0	347	17.0	<0.10	<0.10	<0.10	NM	488
	12/11/03	693	16.5	7.9	198	19.4	<0.10	<0.10	<0.10	NM	954
	03/18/04	870	8.3	6.3 ?	162	20.3	<2.20	<2.20	<2.20	NM	380
	06/08/04	832	87.9	47.7	371	25.4	0.13	<0.10	<0.10	NM	524
	09/21/04	184Y	27.7Y	7.84Y	233Y	141Y	<2.04Y	<2.04 J3Y	<2.04 J3Y	NM	280Y
	12/01/04	168	16.67	6.42	128	12.05	0.56 I	<0.206	<0.216	NM	1500
	03/13/05	5.17	2.03	0.420 I	17.6	1.83 I	0.216 I	<0.133	<0.210	NM	59 I
	06/09/05	9.21	4.68	0.570 I	42.4	2.33	<0.101	<0.133	<0.210	3190	1730
	09/06/05	1.16 I	0.900 I	<0.142	13.3	<0.236	<0.100	<0.133	<0.203	2300	67 I
	12/07/05	6.72	0.740 I	<0.142	11.5	0.480 I	<0.100	<0.133	<0.203	1890	<18
	03/29/06	1.00	0.490 I	<0.176	9.64	1.89	<0.100	<0.133	<0.203	415	390
	06/09/06	0.460 I	<0.338	<0.257	5.35	0.380 I	<0.100	<0.133	<0.203	1460	107 I
	09/24/06	0.490 I	<0.338	<0.257	4.10	<0.336	<0.100	<0.133	<0.203	876	19 I
	12/08/06	0.730 I	<0.338	<0.257	3.96	<0.336	<0.100	<0.133	<0.203	1190	20 I
	03/01/07	0.850 I	<0.338	<0.257	3.57	<0.336	<0.100	<0.133	<0.203	804	<18
	06/15/07	0.340 I	<0.338	<0.257	1.62	0.440 I	<0.100	<0.133	<0.203	1840	167 I
	09/12/07	0.350 I	<0.338	0.290 I	1.13	<0.336	<0.100	<0.133	<0.203	1280	136 I V
	12/05/07	<0.305	<0.338	<0.257	1.78	<0.336	<0.100	<0.133	<0.203	1060	72 I
	03/06/08	<0.305	<0.338	<0.257	1.34	<0.336	<0.100	<0.133	<0.203	170	172
	06/17/08	<0.270	<0.240	<0.280	<0.860	<0.420	<0.952	<0.952	<0.952	398	<105 CF2,CF6,U
	09/16/08	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	300	<160
	12/17/08	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	278	<160
	03/02/09	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	319	359
	06/09/09	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	134	<160

TABLE 3
LABORATORY ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	Benzene	Ethylbenzene	Toluene	Xylenes (Total)	Methyl-*tert*-butyl-ether	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Sulfate (mg/L)	TRPH
GCTL (µg/L)		1	30	40	20	20	14	28	28	250 *	5000
NADSC (µg/L)		100	300	400	200	200	140	280	280	2500 *	50000

Notes:
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
NE - Not established
Concentration exceeds the GCTL value
Concentration exceeds the NADSC value
Bold - analyte was detected above the method detection limit
TRPH - Total Recoverable Petroleum Hydrocarbons
NM - Not measured
N/A - Not applicable
? - 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
H2 - Initial analysis within holding time. Reanalysis for the required dilution of confirmation was past holding time
I - The reported vlaue is between the laboratory MDL and RL
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

APPENDIX A

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:** | **Date:** 6/9/09

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	5.79	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	11:15	11:47	1.3	200

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)
11:20	.1	.1	200	6.25	2.26	27.8	919	.81	56.3	119.8	slightly brown	none
11:25	.2	.3	200	6.24	3.35	28.16	909	.63	46.3	115.8	"	"
11:30	.3	.6	200	6.59	3.45	28.21	896	.83	30.0	107.5	—	—
11:35	.3	.9	200	6.80	3.63	28.24	923	.78	20.6	92.0	—	—
11:40	.15	1.05	200	6.96	3.79	27.58	978	.74	15.8	94.1	—	—
11:45	.25	1.3	200	7.10	3.59	27.5	992	.79	12.0	95.5	—	—

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/Terraine	[signature]	11:47	12:27

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	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^{++}: 6 H_2S: 0 CO_2: 70 DO: .2 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:**	**Date:** 6/9/9

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	5.85	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' from bottom	1245	1327	2.65	250

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)
12:55	.5	.5	250	6.28	4.21	25.22	553	2.46	12.4	43.2	—	—
13:00	.4	.9	250	6.31	4.10	24.90	548	1.56	4.80	45.4	—	—
13:05	.3	1.2	250	6.32	4.35	25.06	547	1.52	3.52	48.7	—	—
13:10	.4	1.6	250	6.32	5.29	26.13	563	1.41	4.14	21.5	—	—
13:15	.4	2.0	250	6.33	5.91	26.15	565	1.50	4.03	11.1	—	—
13:20	.25	2.25	250	6.33	6.05	26.08	564	1.51	4.62	8.2	—	—
13:25	.4	2.65	250	6.31	6.05	26.26	564	1.49	5.17	7.9	—	—

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]	1327	1348

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	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^{++}: 0 H_2S: 0 CO_2: 35 DO: 0.4 A_T: 170

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:**	**Date:** 6/09/09

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	7.78	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' off bottom	1110	1155	1.8	250

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)
1120		0.2	250	8.19	3.75	26.99	561	1.66	18	359	—	—
1125		0.4	"	8.19	3.61	27.06	755	1.44	14	374	—	—
1130		0.6	"	8.17	3.52	26.94	894	1.29	11	376.9	—	—
1135		0.8	"	8.17	3.47	27.09	958	1.24	9.3	405.2	—	—
1140		1.0	"	8.17	3.46	27.10	998	1.23	6.1	415.4	—	—
1145		1.3	"	8.17	3.42	26.83	1057	1.24	3.9	423.4	—	—
1150		1.6	"	8.16	3.41	27.06	1081	1.22	2.5	430.4	—	—
1155		1.8	"	8.16	3.40	27.31	1102	1.22	2.1	435.0	—	—

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:
Joshua Clay Solutions IES	[signature]	1155	

Field Decontamination:	Field-Filtered:	Filter Size:	Filtration Equipment Type:	Duplicate:
Y (N)	Y (N)	NA µm	NA	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^{++}: 5 H_2S: 0 CO_2: 500 DO: 2 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-046-06D	**Sample ID:** CEF-046-06D	**Date:** 6/9/09

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	10.21	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' off bottom	1120	1152	~~180~~ on	180

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)
~~1115~~	on											
1128	0.1	0.1	180	11.17	2.16	27.95	6046	10.31	13.87	499.3	—	yellow
1133	0.2	0.3	180	11.32	2.09	27.76	7628	10.42	11.23	498.3	—	yellow
1138	0.2	0.5	140	11.26	2.09	28.12	8877	10.17	7.92	498.3	—	yellow
1143	0.2	0.7	140	11.20	2.09	27.66	9513	10.35	6.59	498.5	—	yellow
1148	0.2	0.9	140	11.20	2.04	27.61	9863	10.32	5.43	498.7	—	yellow

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:
Dawn Marshall / Solutions-IES	Dawn Marshall	1152	1155

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: DO meter not working properly – changed probe after sampling b/c Burke had DO reading of 13 on intermediate well

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:** 6/9/08

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	6.75	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' off bottom	1227	13:10	1.6	

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)
12:53	0.7	0.7	100	7.18	3.90	25.79	116	0.79	13.5	364.0	clear	none
12:59	0.2	0.9	100	7.18	3.91	25.63	117	0.50	13.4	352.9	clear	none
13:05	0.1	1.0	100	7.18	3.91	25.45	116	0.47	13.4	353	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:
Burke Cathey / Terraire	[signature]	13:10	

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^{++}: 2 H_2S: 0 CO_2: 50 DO: 0.5 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-046-21I	**Sample ID:** CEF-046-21 I	**Date:** 6/9/09

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	7.74'	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' off bottom	9:50	10:40	1.5	

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)
10:00	0.3	0.3	150	8.01	4.14	24.74	224	1.14	6.88	184.9	clear	none
10:05	0.2	0.5	100	8.03	4.14	24.02	223	0.59	4.36	181.5	clear	none
10:16	0.4	0.9	150	8.02	4.14	24.26	224	0.44	6.64	175.7	clear	none
10:21	0.3	1.2	150	8.02	4.16	24.48	223	0.39	3.24	168.8	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:
Jad Bean / Terraine	[signature]	10:40	11:25

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^{++}: 4.5 H_2S: 0 CO_2: 70 DO: 0.3 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

Site Name: Building 46 - Cecil Field		**Site Location:** Jacksonville, Florida
Well Number: CEF-046-24D	**Sample ID:** CEF-046-24 D	**Date:** 6/9/09

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	8.15	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' off bottom	11:35	11:55	0.6	

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)
11:45	0.3	0.3	100	8.20	2.84	25.57	1356	0.57	3.58	504.9	clear	none
11:48	0.1	0.4	100	8.20	2.82	25.66	1353	0.68	3.56	508.2	clear	none
11:51	0.1	0.5	100	8.20	2.82	25.93	1353	0.54	3.05	508.1	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:
Jud Bean / Terraine	[signature]	11:55	12:40

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 H_2S: 0 CO_2: 325 DO: 0.5 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-046-26I	**Sample ID:**	**Date:** 6/09/09

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	8.87	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	9:37	1001	0.6	100

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)
9:42	500mL	500mL	100	8.90	2.40	22.93	465	1.40	16.1	57.2	clear	a little sulfur
9:48	~~500mL~~	0.2 g	100	8.89	2.28	22.91	389	.94	17.9	53.2	"	"
9:53	.2 gal	.4 g	100	8.88	2.34	23.02	349	1.08	16.2	40.5	"	—
9:58	.2 gal	.6 g	100	8.89	2.47	22.95	331	1.22	9.66	37.2	"	—

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]	10:01	1040

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	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 H_2S: 1.06 CO_2: 150 DO: 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)

APPENDIX B

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY FORM

Southeast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

07/07/09

Technical Report for

Solutions-IES, Inc

Cecil Field -Bldg 46; Jacksonville, FL

4080.08A2

Accutest Job Number: F65902

Sampling Date: 06/09/09

Report to:

Solutions-IES, Inc

jdehart@solutions-ies.com

ATTN: Jessica Dehart

Total number of pages in report: **39**

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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Accutest LabLink@91503 15:01 07-Jul-2009

Sample Summary

Solutions-IES, Inc

Job No: F65902

Cecil Field -Bldg 46; Jacksonville, FL
Project No: 4080.08A2

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F65902-1	06/09/09	10:01	TF	06/10/09	AQ	Ground Water	CEF-046-26I
F65902-2	06/09/09	10:40	TF	06/10/09	AQ	Ground Water	CEF-046-2II
F65902-3	06/09/09	11:52	TF	06/10/09	AQ	Ground Water	CEF-046-06D
F65902-4	06/09/09	11:55	TF	06/10/09	AQ	Ground Water	CEF-046-05I
F65902-5	06/09/09	11:55	TF	06/10/09	AQ	Ground Water	CEF-046-24D
F65902-6	06/09/09	11:47	TF	06/10/09	AQ	Ground Water	CEF-046-01S
F65902-7	06/09/09	13:27	TF	06/10/09	AQ	Ground Water	CEF-046-02S
F65902-8	06/09/09	13:10	TF	06/10/09	AQ	Ground Water	CEF-046-07I
F65902-9	06/09/09	00:00	TF	06/10/09	AQ	Trip Blank Water	CEF-046-TB1

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Solutions-IES, Inc **Job No:** F65902

Site: Cecil Field -Bldg 46; Jacksonville, FL **Report Date** 6/23/2009 10:59:00

8 Samples, 1 Trip Blank were collected on 06/09/2009 and received at Accutest on 06/10/2009 properly preserved, at 3 Deg. C and intact. These Samples received an Accutest job number of F65902. 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:** VM1453

All samples were analyzed within the recommended method holding time.

Sample(s) F65918-1MS, F65918-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix: AQ **Batch ID:** VN1459

All samples were analyzed within the recommended method holding time.

Sample(s) F65715-3MS, F65715-3MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix: AQ **Batch ID:** VN1460

All samples were analyzed within the recommended method holding time.

Sample(s) F65923-1MS, F65923-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

MS/MSD Recovery(s) for Methyl Tert Butyl Ether are outside control limits. Probable cause due to matrix interference.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix: AQ **Batch ID:** OP29274

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) F65919-1MS, F65919-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Duplicate Recovery(s) for 2-Methylnaphthalene, Acenaphthylene, Naphthalene are outside control limits. Probable cause due to matrix interference.

RPD(s) for MSD for 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene, Acenaphthylene, Naphthalene are outside control limits for sample OP29274-MSD. Probable cause due to sample homogeneity.

Sample(s) F65902-4 have surrogates outside control limits. Probable cause due to matrix interference.

F65902-4: Confirmed by re-extraction and reanalysis beyond holdtime.

F65902-6: Dilution required due to matrix interference.

Matrix: AQ **Batch ID:** OP29334

The following samples were extracted outside of holding time for method SW846 8270C BY SIM: F65902-4

Sample(s) F65902-4 have surrogates outside control limits. Probable cause due to matrix interference.

F65902-4: Confirmation run.

Extractables by GC By Method FLORIDA-PRO

Matrix: AQ **Batch ID:** OP29257

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) F65899-6MS, F65899-6MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Sample(s) F65902-6 have surrogates outside control limits. Probable cause due to matrix interference.

F65902-6 for o-Terphenyl: Outside control limits due to dilution.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix: AQ **Batch ID:** GP13084

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) F65932-1DUP, F65932-1MS were used as the QC samples for Sulfate.

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: June 23, 2009

Svetlana Izosimova, QA Officer (signature on file)

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	CEF-046-26I		
Lab Sample ID:	F65902-1	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	N0035614.D	1	06/11/09	MM	n/a	n/a	VN1459
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	99%		87-116%
17060-07-0	1,2-Dichloroethane-D4	100%		76-127%
2037-26-5	Toluene-D8	99%		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-046-26I		
Lab Sample ID:	F65902-1	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	R18807.D	1	06/16/09	RB	06/12/09	OP29274	SR902
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	43%		42-108%
321-60-8	2-Fluorobiphenyl	41%		40-106%
1718-51-0	Terphenyl-d14	80%		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:	F65902-1	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	IJ57878.D	1	06/16/09	SL	06/11/09	OP29257	GIJ2004
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)	0.16 U	0.24	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		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:	F65902-1	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	134	4.0	2.0	mg/l	2	06/12/09 15:48	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-046-2II		
Lab Sample ID:	F65902-2	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	N0035619.D	1	06/11/09	MM	n/a	n/a	VN1459
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	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	101%		76-127%
2037-26-5	Toluene-D8	98%		86-112%
460-00-4	4-Bromofluorobenzene	101%		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-046-2II		
Lab Sample ID:	F65902-2	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	R18808.D	1	06/16/09	RB	06/12/09	OP29274	SR902
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	51%		42-108%
321-60-8	2-Fluorobiphenyl	48%		40-106%
1718-51-0	Terphenyl-d14	79%		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-046-2II		
Lab Sample ID:	F65902-2	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	IJ57879.D	1	06/16/09	SL	06/11/09	OP29257	GIJ2004
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)	0.16 U	0.24	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		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-046-2II		
Lab Sample ID:	F65902-2	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	74.4	2.0	1.0	mg/l	1	06/11/09 16:12	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:	F65902-3	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	19000	2000	1000	mg/l	1000	06/12/09 16:07	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-046-05I		
Lab Sample ID:	F65902-4	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	N0035615.D	1	06/11/09	MM	n/a	n/a	VN1459
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	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	101%		76-127%
2037-26-5	Toluene-D8	98%		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-046-05I		
Lab Sample ID:	F65902-4	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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 [a]	R18809.D	1	06/16/09	RB	06/12/09	OP29274	SR902
Run #2 [b]	W046382.D	1	06/21/09	RB	06/18/09	OP29334	SW2350

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2	1040 ml	1.0 ml

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	40%	59%	42-108%
321-60-8	2-Fluorobiphenyl	38%	54%	40-106%
1718-51-0	Terphenyl-d14	67%	80%	39-121%

(a) Confirmed by re-extraction and reanalysis beyond holdtime.
(b) Confirmation run.

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:	F65902-4	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	IJ57880.D	1	06/16/09	SL	06/11/09	OP29257	GIJ2004
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)	0.16 U	0.24	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		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:	F65902-4	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	1030	40	20	mg/l	20	06/12/09 16:25	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:	F65902-5	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	N0035616.D	1	06/11/09	MM	n/a	n/a	VN1459
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	99%		87-116%
17060-07-0	1,2-Dichloroethane-D4	102%		76-127%
2037-26-5	Toluene-D8	98%		86-112%
460-00-4	4-Bromofluorobenzene	101%		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:	F65902-5	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	R18810.D	1	06/16/09	RB	06/12/09	OP29274	SR902
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	53%		42-108%
321-60-8	2-Fluorobiphenyl	53%		40-106%
1718-51-0	Terphenyl-d14	77%		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:	F65902-5	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	IJ57881.D	1	06/16/09	SL	06/11/09	OP29257	GIJ2004
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-046-24D		
Lab Sample ID:	F65902-5	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	755	40	20	mg/l	20	06/12/09 16:44	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:	F65902-6	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	N0035617.D	1	06/11/09	MM	n/a	n/a	VN1459
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	1.6	1.0	0.35	ug/l	
100-41-4	Ethylbenzene	5.9	1.0	0.43	ug/l	
1330-20-7	Xylene (total)	12.5	3.0	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	29.8	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	102%		76-127%
2037-26-5	Toluene-D8	98%		86-112%
460-00-4	4-Bromofluorobenzene	95%		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:	F65902-6	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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 [a]	R18825.D	4	06/17/09	RB	06/12/09	OP29274	SR902
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	1.9 U	3.8	1.9	ug/l	
208-96-8	Acenaphthylene	1.9 U	3.8	1.9	ug/l	
120-12-7	Anthracene	1.9 U	3.8	1.9	ug/l	
56-55-3	Benzo(a)anthracene	0.19 U	0.76	0.19	ug/l	
50-32-8	Benzo(a)pyrene	0.19 U	0.76	0.19	ug/l	
205-99-2	Benzo(b)fluoranthene	0.19 U	0.76	0.19	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.19 U	0.76	0.19	ug/l	
207-08-9	Benzo(k)fluoranthene	0.19 U	0.76	0.19	ug/l	
218-01-9	Chrysene	0.38 U	0.76	0.38	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.19 U	0.76	0.19	ug/l	
206-44-0	Fluoranthene	0.95 U	3.8	0.95	ug/l	
86-73-7	Fluorene	1.9 U	3.8	1.9	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.19 U	0.76	0.19	ug/l	
90-12-0	1-Methylnaphthalene	0.95 U	3.8	0.95	ug/l	
91-57-6	2-Methylnaphthalene	1.8	3.8	0.95	ug/l	I
91-20-3	Naphthalene	6.4	3.8	0.95	ug/l	
85-01-8	Phenanthrene	0.95 U	3.8	0.95	ug/l	
129-00-0	Pyrene	0.95 U	3.8	0.95	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		42-108%
321-60-8	2-Fluorobiphenyl	61%		40-106%
1718-51-0	Terphenyl-d14	60%		39-121%

(a) Dilution required due to matrix interference.

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:	F65902-6	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	IJ57904.D	20	06/16/09	SL	06/11/09	OP29257	GIJ2004
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)	19.4	4.8	3.3	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% [a]		38-122%

(a) Outside control limits due to dilution.

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:	F65902-6	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	570	20	10	mg/l	10	06/12/09 17:02	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:	F65902-7	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	N0035618.D	1	06/11/09	MM	n/a	n/a	VN1459
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	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	100%		76-127%
2037-26-5	Toluene-D8	100%		86-112%
460-00-4	4-Bromofluorobenzene	101%		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:	F65902-7	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	R18812.D	1	06/16/09	RB	06/12/09	OP29274	SR902
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	61%		42-108%
321-60-8	2-Fluorobiphenyl	60%		40-106%
1718-51-0	Terphenyl-d14	79%		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:	F65902-7	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	IJ57883.D	1	06/16/09	SL	06/11/09	OP29257	GIJ2004
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)	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-046-02S		
Lab Sample ID:	F65902-7	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	82.5	2.0	1.0	mg/l	1	06/11/09 18:21	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:	F65902-8	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	M0035608.D	1	06/15/09	MM	n/a	n/a	VM1453
Run #2	N0035642.D	5	06/12/09	MM	n/a	n/a	VN1460

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	5.0	1.0	0.40	ug/l	
108-88-3	Toluene	0.35 U	1.0	0.35	ug/l	
100-41-4	Ethylbenzene	0.45	1.0	0.43	ug/l	I
1330-20-7	Xylene (total)	1.2 U	3.0	1.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	185 [a]	5.0	1.3	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	98%	87-116%
17060-07-0	1,2-Dichloroethane-D4	98%	101%	76-127%
2037-26-5	Toluene-D8	96%	99%	86-112%
460-00-4	4-Bromofluorobenzene	102%	99%	84-120%

(a) Result is from Run# 2

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:	F65902-8	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	R18813.D	1	06/16/09	RB	06/12/09	OP29274	SR902
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	53%		42-108%
321-60-8	2-Fluorobiphenyl	50%		40-106%
1718-51-0	Terphenyl-d14	70%		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:	F65902-8	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
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	IJ57884.D	1	06/16/09	SL	06/11/09	OP29257	GIJ2004
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)	0.16 U	0.24	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		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:	F65902-8	**Date Sampled:**	06/09/09
Matrix:	AQ - Ground Water	**Date Received:**	06/10/09
		Percent Solids:	n/a
Project:	Cecil Field -Bldg 46; Jacksonville, FL		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Sulfate	38.0	2.0	1.0	mg/l	1	06/11/09 18:40	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:	F65902-9	**Date Sampled:**	06/09/09
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/10/09
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	N0035625.D	1	06/12/09	MM	n/a	n/a	VN1460
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	101%		87-116%
17060-07-0	1,2-Dichloroethane-D4	102%		76-127%
2037-26-5	Toluene-D8	98%		86-112%
460-00-4	4-Bromofluorobenzene	99%		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

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Chain of Custody

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www.accutest.com

30452

Accutest JOB # F65902 PAGE 1 OF 1

Accutest Quote # SKU #

Client / Reporting Information

Company Name: Solutions-IES
Address: 110 Nowell Rd
City: Raleigh State: NC Zip:
Project Contact: Brian Rebar E-mail: brebar@solutions-ies.com
Phone#: (919) 454-7747
Sampler(s) Name(s) (Printed): JC, BC, JB, DM, TF

Project Information

Project Name: Cecil Field - Bldg 46
Street:
City: Jacksonville State: FL
Project #: 4080.08A2.CECI
Fax #:
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	Date	Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	BTEX - MTBE 8260B	PAHs 8270C	TRPH FL PRO	Sulfate 300.0								LAB USE ONLY
1	CEF-046-26I	6/9/09	1001	TF	GW	8		X	X			X				X	X	X	X								
2	CEF-046-21I		1040	JB	GW	8		X	X			X				X	X	X	X								
3	CEF-046-06D		1152	DM	GW	1		X											X								
4	CEF-046-05I		1155	JC	GW	8		X	X			X				X	X	X	X								
5	CEF-046-24D		1155	JB	GW	8		X	X			X				X	X	X	X								
6	CEF-046-01S		1147	TF	GW	8		X	X			X				X	X	X	X								
7	CEF-046-02S		1327	TF	GW	8		X	X			X				X	X	X	X								
8	CEF-046-07I		1310	JB	GW	8		X	X			X				X	X	X	X								
9	CEF-046-TR1					2			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

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	6/9/09 1625	2 [signature] 06/09/09 1625	3 [signature] 06/09/09 1900		4 [signature] Accutest 6-10-09 0820
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: 2.4 2.0 3.0 2.8

4.1

4

F65902: Chain of Custody

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ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F65902 CLIENT: Solution - IES PROJECT: Cecil field - Bldg. 46

DATE/TIME RECEIVED: 6.10.09 08:00 # OF COOLERS RECEIVED: 4 COOLER TEMPS: 2.6 2.0 3.0 2.8

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 RECEIVED IN COOLER

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

SAMPLE INFORMATION

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

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

MISC. INFORMATION

NUMBER OF ENCORES ? Ø

NUMBER OF 5035 FIELD KITS ? Ø

NUMBER OF LAB FILTERED METALS ? Ø

SUMMARY OF COMMENTS: Sample 3 bottle time says 1155 COC says 1152 LR

TECHNICIAN SIGNATURE/DATE E.T. 6.10.09 TECHNICIAN SIGNATURE/DATE CJR 6/10/09

ASBD 12/17/07

4.1

4

F65902: Chain of Custody

Page 2 of 2

APPENDIX C

SECOND QUARTER AIR SPARGE SYSTEM O&M LOGS

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

Technician: MILLARD H. SHARP
Date: JUNE 3 2009
Time In: 11:15AM RETURN OFFICE
Time Out: 9:15am 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 TS-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	COMPRESSOR FILTER DARK GRAY

INTERIOR CLEAN + DRY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	3.0	SCFM	90 PSIG	PSI
Valve 2	(Opened)	Closed	1.75	SCFM	90 PSIG	PSI
Valve 3	(Opened)	Closed	2.0	SCFM	90 PSIG	PSI — FLOATS RAPIDLY
Valve 4	(Opened)	Closed	2.0	SCFM	90 PSIG	PSI — BOUNCES DURING SYSTEM CYCLE
Valve 5	(Opened)	Closed	1.75	SCFM	90 PSIG	PSI —
Valve 6	(Opened)	Closed	1.5	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: RECEIVED JTAA SECURITY BRIEFING. SYSTEM OPERATING ON ARRIVAL. EMPTIED CONDENSATE PAIL. INTERIOR CLEAN + DRY. EXTERIOR HOSES NO LEAKS. DE-ACTIVATED SYSTEM AFTER INSPECTION PER DIRECTION

TO: MR BRIAN REBAR
FIELD SERVICE MANAGER
SOLUTIONS - IES INC
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: MAY 27, 2009
Time In: 12:30PM RETURN OFFICE
Time Out: 10:30AM 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: 164°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. INTERIOR DRY.	Yes	No	AIR FILTER DARK GREY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	3.5	SCFM	80 PSIG	PSI
Valve 2	Opened	Closed	2.75	SCFM	80 PSIG	PSI
Valve 3	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 4	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 5	Opened	Closed	1.25	SCFM	80 PSIG	PSI — AIR BUBBLES HAVE DISAPPEARED INSIDE SIGHT GLASS.
Valve 6	Opened	Closed	1.0	SCFM	78 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 MAY GREEN

Comments: SYSTEM NOT OPERATING ON ARRIVAL. ACTIVATED SYSTEM PER PROCEDURES. INTERIOR CLEAN AND DRY. EXTERIOR HOSES NO LEAKS EMPTIED CONDENSATE PAIL.

TO: MR BRIAN REBAR
FIELD SERVICE MANAGER
SOLUTIONS - IES, INC
919 872-1060
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: 11:30am ARRIVED OFFICE
Date: MAY 22 2009 | Time Out: 9:00am 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:	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:	0 PSIG	PSI
Oil in Sight Glass? OIL TO TOP OF	(Yes)	No	AIR FILTER DARK GRAY

GAGE INTERIOR CLEAN AND DRY.

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	4.5	SCFM	80 PSIG	PSI
Valve 2	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 3	Opened	Closed	1.5	SCFM	80 PSIG	PSI
Valve 4	Opened	Closed	1.5	SCFM	80 PSIG	PSI
Valve 5	Opened	Closed	1.75	SCFM	80 PSIG	PSI — LARGE QTY OF RAPID AIR BUBBLING IN SIGHT GLASS
Valve 6	Opened	Closed	1.0	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 + DRY. CONDENSATE PAIL EMPTIED.

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

May-22-09 11:56A P.01

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

Technician: MILLARD H. SHARP
Date: MAY 11 2009
Time In:
Time Out: 8:30am 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	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:	168°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	COMPRESSOR AIR FILTER DARK GRAY	

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	2.25	SCFM	80 PSIG	PSI
Valve 4	Opened	Closed	1.75	SCFM	80 PSIG	PSI
Valve 5	Opened	Closed	2.0	SCFM	80 PSIG	PSI — LARGE QTY OF RAPID AIR BUBBLES AND FLUID INSIDE SIGHT GLASS.
Valve 6	Opened	Closed	0.5	SCFM	80 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG	PSI	FLOAT RAPIDLY MOVES BETWEEN 0 AND 0.5 DURING SYSTEM CYCLE.
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

SIGHT GLASS INTERIOR DARK ORANGE COLOR.

Comments: SYSTEM OPERATING ON ARRIVAL. EXTERIOR HOSES NO LEAKS. CONDENSATE PAIL FILLED AND EMPTIED.

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

May-12-09 12:47P P.01

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

Technician: MILLARD H. SHARP — Time In: 12:00PM RETURN OFFICE
Date: MAY 6 2009 — Time Out: 8:30am 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 H-TS-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:		172°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	AIR FILTER DARK GRAY. CAN REPLACE	

INTERIOR CLEAN AND DRY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	3.75	SCFM	79 PSIG	PSI
Valve 2	(Opened)	Closed	2.0	SCFM	79 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	1.75	SCFM	80 PSIG	PSI — CONSIDERABLE
Valve 6	(Opened)	Closed	1.0	SCFM	80 PSIG	PSI AIR BUBBLING IN SIGHT GLASS VERY RAPID.

Air Tank

Tank Pressure Gauge	91 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	

FLOAT INSIDE SIGHT GLASS RELUCTANT TO MOVE DURING SYSTEM CYCLE UNLESS TAP GLASS SEVERAL TIMES FIRMLY.

Comments: SYSTEM OPERATING ON ARRIVAL, EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY, CONDENSATE BUCKET FULL AND EMPTIED.

TO: MR BRIAN REBAR
FIELD SERVICE MANAGER
SOLUTIONS, IES INC.
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: APRIL 30 : 2009
Time In: 1:00PM
Time Out: 9:30AM
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 TSH	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: 89 PSIG		PSI
Temperature Gauge	record number: 172°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	COMPRESSOR FILTER DARK GRAY. CAN REPLACE IF NEW SENT DOWN

INTERIOR CLEAN FORT

Manifolds

	Circle One		Flow		Pressure	
Valve 1	Opened	Closed	4.0	SCFM	80 PSIG	PSI
Valve 2	Opened	Closed	2.25	SCFM	80 PSIG	PSI
Valve 3	Opened	Closed	2.0	SCFM	79 PSIG	PSI – SAND GRAINS IN SIGHT GLASS
Valve 4	Opened	Closed	2.0	SCFM	80 PSIG	PSI
Valve 5	Opened	Closed	2.0	SCFM	79 PSIG	PSI – LARGE QTY OF RAPID AIR BUBBLES IN SIGHT GLASS.
Valve 6	Opened	Closed	1.50	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. CONDENSATE BUCKET FULL + EMPTIED.

TO: MR BRIAN REDAR
FIELD SERVICE MANAGER
SOLUTIONS, IES INC
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: 1:00 PM — RETURN OFFICE
Date: APRIL 21, 2009 — Time Out: 0915 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: 88°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: 168°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	SAY REPLACE COMPRESSOR AIR FILTER IF NEW IS SENT DOWN

INTERIOR CLEAN AND DRY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	4.0	SCFM	80 PSIG	PSI
Valve 2	(Opened)	Closed	2.5	SCFM	80 PSIG	PSI
Valve 3	(Opened)	Closed	2.5	SCFM	79 PSIG	PSI
Valve 4	(Opened)	Closed	1.75	SCFM	80 PSIG	PSI
Valve 5	(Opened)	Closed	1.5	SCFM	80 PSIG	PSI
Valve 6	(Opened)	Closed	1.0	SCFM	80 PSIG	PSI

SAND GRAINS BEGINNING TO APPEAR INSIDE SIGHT GLASS

FLUID AND CONSIDERABLE AIR BUBBLING INSIDE SIGHT GLASS.

CONSIDERABLE AIR BUBBLES INSIDE SIGHT GLASS DURING SYSTEM CYCLE.

Air Tank

Tank Pressure Gauge	91 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. INTERIOR CLEAN AND DRY. EXTERIOR HOSES NO LEAKS. CONDENSATE PAIL 1/2 FULL. CHANGED OUT OIL FILTER PER DIRECTION.

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

Apr-21-09 01:14p P.01

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

Technician: MILLARD H. SHARP
Date: APRIL 14 2008
Time In: 3:00pm RETURNED OFFICE
Time Out: 11:00am 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: 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: 91 PSIG	PSI
Line Pressure Gauge	record number: 90 PSIG	PSI
Temperature Gauge	record number: 164°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	CAN REPLACE DIRTY AIR FILTER IF NEW IS SENT DOWN

INTERIOR CLEAN AND DRY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	4.0	SCFM	80 PSIG	PSI
Valve 2	(Opened)	Closed	2.5	SCFM	79 PSIG	PSI
Valve 3	(Opened)	Closed	2.5	SCFM	80 PSIG	PSI
Valve 4	(Opened)	Closed	2.0	SCFM	80 PSIG	PSI
Valve 5	(Opened)	Closed	2.0	SCFM	79 PSIG	PSI — CONSIDERABLE AIR BUBBLES AND FLUID IN SIGHT GLASS
Valve 6	(Opened)	Closed	1.75	SCFM	80 PSIG	PSI

Air Tank

Tank Pressure Gauge	90 PSIG		PSI — ORANGE COLORATION IN SIGHT GLASS
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 MAY GROAN

Comments: SYSTEM NOT OPERATING ON ARRIVAL. RESTARTED SYSTEM PER PROCEDURES. INTERIOR CLEAN AND DRY. EXTERIOR HOSES NO LEAKS WAITED 15 MINUTES FOR SYSTEM TO WARMUP AND STABILIZE BEFORE GAGE READINGS.

TO: MR BRIAN KERR
FIELD SERVICES MANAGER
SOLUTIONS IES INC.
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: 12:45pm — RETURN TO OFFICE
Date: APRIL 7, 2009 — Time Out: 9:00am — 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:	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:	91 PSIG	PSI
Temperature Gauge	record number:	163°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	AIR FILTER DARK GRAY. CAN REPLACE IF ONE IS SENT DOWN.

INTERIOR CLEAN AND DRY.

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	4.0	SCFM	80 PSIG	PSI — MAINTAIN FRYSLOOPING IN SIGHT GLASS
Valve 2	(Opened)	Closed	3.25	SCFM	80 PSIG	PSI
Valve 3	(Opened)	Closed	2.5	SCFM	80 PSIG	PSI
Valve 4	(Opened)	Closed	2.0	SCFM	80 PSIG	PSI
Valve 5	(Opened)	Closed	1.75	SCFM	79 PSIG	PSI
Valve 6	(Opened)	Closed	1.5	SCFM	80 PSIG	PSI — LOOKS LIKE FLUID DOUBLE LOOPING IN SIGHT GLASS WITH AIR BUBBLES

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 ARRIVAL. EXTERIOR HOSES NO LEAKS. INTERIOR CLEAN AND DRY. CONDENSATE BUCKET 3/4 FULL. CONDENSATE FREQUENTLY SPLASHES FROM BUCKET. NEED BETTER METHOD TO FIX HOSE INTO BUCKET.

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

Apr-07-09 12:20P P.01

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

Technician: MILLARD H. SHARP
Date: MARCH 31, 2009
Time In: 2:00PM RETURNED OFFICE
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: 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 HTS4	record number:	85°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:	166°F	°F
Separator Differential Gauge	record number:	3 PSIG	PSI
Oil Filter Differential Gauge	record number:	1 PSIG	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS.	(Yes) No	CAN REPLACE COMPRESSOR AIR FILTER IF NEW IS SENT DOWN.	

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	4.0	SCFM	79 PSIG	PSI
Valve 2	(Opened)	Closed	3.1	SCFM	80 PSIG	PSI
Valve 3	(Opened)	Closed	2.5	SCFM	80 PSIG	PSI — SMALL AMOUNT OF GRIT IN SIGHT GLASS
Valve 4	(Opened)	Closed	2.0	SCFM	79 PSIG	PSI
Valve 5	(Opened)	Closed	2.0	SCFM	80 PSIG	PSI
Valve 6	(Opened)	Closed	1.0	SCFM	80 PSIG	PSI — FLOAT RAPIDLY ROUNDES IN SIGHT GLASS DURING SYSTEM CYCLE.

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 AREA NO LEAKS. INTERIOR CLEAN AND DRY. CONDENSATE BUCKET 3/4 FILLED. * DURING INSPECTION OF COMPRESSOR INTERIOR A SMALL PUDDLE ≈ 6-7oz OF OILY WATER WAS FOUND BENEATH COMPRESSOR MOTOR. CLEANED/REMOVED FLUID. FLUID APPEARS TO HAVE ORIGINATED FROM BROWN RUBBER HOSE CONNECTION IN COMPRESSOR BOTTOM RIGHT SIDE. TIGHTENED THE 2 HOSE CLAMP SCREWS. CONTACTED FIELD SERVICE MANAGER.

TO: MR BRIAN RSBAK
FIELD SERVICE MANAGER
SOLUTIONS-IES, INC.
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: 12:40 | RETURNED OFFICE
Date: MARCH 25, 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: 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	record number:	°F
Building High Temperature Setting	record number:	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number:	91 PSIG	PSI
Line Pressure Gauge	record number:	89 PSIG	PSI
Temperature Gauge	record number:	166°F	°F
Separator Differential Gauge	record number:	3 PSIG	PSI
Oil Filter Differential Gauge	record number:	1 PSIG	PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	CAN REPLACE COMPRESSOR AIR FILTER IF ONE IS SENT DOWN.

INTERIOR CLEAN AND DRY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	3.9	SCFM	80 PSIG	PSI
Valve 2	(Opened)	Closed	3.5	SCFM	79 PSIG	PSI
Valve 3	(Opened)	Closed	2.25	SCFM	80 PSIG	PSI
Valve 4	(Opened)	Closed	2.5	SCFM	80 PSIG	PSI
Valve 5	(Opened)	Closed	1.80	SCFM	80 PSIG	PSI
Valve 6	(Opened)	Closed	1.2	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 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 DAMAGE OR LEAKS. INTERIOR CLEAN AND DRY. CONDENSATE PAIL 3/4 FILLED. HG FLOAT BOUNCES RAPIDLY AND ERRATICALLY DURING SYSTEM CYCLE THEN IMMEDIATELY RESEATS. FLOW RATE BEST OBSERVATION.

TO: MR. BRIAN REAR
FIELD SERVICE MANAGER
SOLUTIONS - IES, INC.
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: 12:30PM RETURN OFFICE DEPART OFFICE
Date: MARCH 17, 2009 Time Out: 9:50am

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:	89 PSIG	PSI
Temperature Gauge	record number:	165°F	°F
Separator Differential Gauge	record number:	3 PSIG	PSI
Oil Filter Differential Gauge	record number:	1 PSID	PSI
Oil in Sight Glass? OIL TOP OF SIGHT GLASS, INTERIOR	(Yes)	No	COULD REPLACE COMPRESSOR AIR FILTER IF PROVIDED

CLEAN AND DRY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	3.5	SCFM	80 PSIG	PSI
Valve 2	(Opened)	Closed	3.0	SCFM	79 PSIG	PSI
Valve 3	(Opened)	Closed	2.0	SCFM	81 PSIG	PSI → FLOAT IN SIGHT GLASS STICKS AND NEED TAPPING ON EXTERIOR TO FREEUP
Valve 4	(Opened)	Closed	2.5	SCFM	80 PSIG	PSI
Valve 5	(Opened)	Closed	1.75	SCFM	80 PSIG	PSI
Valve 6	(Opened)	Closed	1.25	SCFM	80 PSIG	PSI → SAME AS

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 NOT OPERATING ON ARRIVAL. CONDENSATE BUCKET NEAR FULL TO OVERFLOW. RESTARTED SYSTEM PER PROCEDURES, WAITED FOR 15 MINUTES PRIOR TO INSTRUMENT READING TO PERMIT SYSTEM WARMUP AND STABILIZATION. INTERIOR CLEAN AND DRY, EXTERIOR HOSES NO LEAKS. WATCHED GAGES 15 MINUTES PRIOR DEPARTURE TO VERIFY SYSTEM PRESSURE BALANCE. EXTERIOR HOSES UNDAMAGED AND NO LEAKS.

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

Mar-17-09 11:55A P.01

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

Technician: MILLARD H. SHARP
Date: MARCH 12, 2009
Time In: 12:30PM
Time Out: 1:00PM
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	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: 166°F		°F
Separator Differential Gauge	record number: 3.5 PSIG		PSI
Oil Filter Differential Gauge	record number: 1 PSID		PSI
Oil in Sight Glass? OIL TO TOP OF SIGHT GLASS	(Yes)	No	CAN CHANGE OUT COMPRESSOR OIL FILTER IF REPLACEMENT IS SENT DOWN.

INTERIOR DAY AND CLEAN

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	3.3	SCFM	80 PSIG	PSI
Valve 2	(Opened)	Closed	3.0	SCFM	80 PSIG	PSI
Valve 3	(Opened)	Closed	2.5	SCFM	80 PSIG	PSI
Valve 4	(Opened)	Closed	4.2	SCFM	80 PSIG	PSI
Valve 5	(Opened)	Closed	0	SCFM	81 PSIG	PSI
Valve 6	(Opened)	Closed	0	SCFM	82 PSIG	PSI

FLOAT IN SIGHT GLASS 3 MOVES ERRATICALLY AT PEAK OF SYSTEM CYCLE.

FLOAT IN SIGHT GLASS 5 DOES NOT MOVE DURING SYSTEM CYCLE.

FLOAT IN SIGHT GLASS 6 DOES NOT MOVE DURING SYSTEM CYCLE.

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 GAGES
Compressed Air Filter 3 Indicator	(clean)	change	dirty

Comments: VISITED SPARGE TRAILER PER HOME OFFICE REQUEST. SYSTEM NOT OPERATING ON ARRIVAL. EXTERIOR CIRCUIT BREAKER ON "ON" POSITION. RESTARTED SYSTEM PER PROCEDURES. WAITED 15 MINUTES FOR SYSTEM TO STABILIZE AND WARM-UP BEFORE GAGE CHECK. INTERIOR CLEAN AND NORMAL. EXTERIOR HOSES NO LEAKS. FLOATS IN SIGHT GLASSES 5 & 6 DO NOT MOVE DURING SYSTEM CYCLE. TAPPING ON SIDE OF SIGHT GLASSES DOES NOT FREE-UP FLOATS. REMAINED ON SITE 15 MINUTES TO OBSERVE AND VERIFY PRESSURE BALANCE

TO: MR BRIAN REBAR
FIELD SERVICE MANAGER
SOLUTIONS - IES, INC.
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: MARCH 10, 2009
Time In: 11:00 AM 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	
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	
Building High Temperature Setting HTS-4	record number: 132 °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: 167 °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 — COMPRESSOR FILTER DARK GRAY, CAN CHANGE OUT IF NOW IS SHUT DOWN.

INTERIOR CLEAN AND DRY

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	3.5	SCFM	80 PSIG	PSI
Valve 2	(Opened)	Closed	2.9	SCFM	80 PSIG	PSI
Valve 3	(Opened)	Closed	2.0	SCFM	80 PSIG	PSI
Valve 4	(Opened)	Closed	3.0	SCFM	80 PSIG	PSI
Valve 5	(Opened)	Closed	2.0	SCFM	80 PSIG	PSI
Valve 6	(Opened)	Closed	1.75	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 UNDAMAGED OR LEAKS. EMPTIED 3/4TH FULL CONDENSATE BUCKET. FLOAT IN SIGHT GLASS #6 BOUNCES AT RAPID RATE WHEN SYSTEM CYCLES.

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