N60200.AR.005121
NAS CECIL FIELD, FL
5090.3a

THIRD QUARTER 2008 LONG TERM MONITORING OPERATION AND MAINTENANCE STATUS REPORT FOR BUILDING 46 NAS CECIL FIELD FL

12/22/2008

SOLUTIONS-IES INC

THIRD QUARTER 2008
LONG-TERM MONITORING
OPERATION & MAINTENANCE
STATUS REPORT

BUILDING 46
FORMER NAS CECIL FIELD
JACKSONVILLE, FL

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

Prepared for:

NAVFAC SOUTHEAST, BRAC PMO
4130 Faber Place Drive, Suite 202
North Charleston, South Carolina 29405

Prepared by:

SOLUTIONS-IES, INC.
1101 Nowell Road
Raleigh, NC 27607
www.solutions-ies.com

SOLUTIONS-IES PROJECT NO. 4080.08A2.CECI

DECEMBER 22, 2008

Solutions-IES
Industrial & Environmental Services

SIGNATURE PAGE

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.

JESSICA LYNN DEHART
LICENSE
No. 2538
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

12/23/08 | 2538

Jessica L. Dehart, P.G. | Date | Registration No.
Project Geologist
Solutions-IES, Inc.

12/23/08

Brian M. Rebar | Date
Senior Project Manager
Solutions-IES, Inc.

12/23/08

Carrie A. Ruhlman | Date
Project Manager
Solutions-IES, Inc.

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 SITE LOCATION AND DESCRIPTION 1
1.2 SITE HISTORY 1
2.0 GROUNDWATER MONITORING SUMMARY 2
2.1 WATER LEVEL MEASUREMENTS 2
2.2 GROUNDWATER SAMPLING 3
2.2.1 Methodology 3
2.2.2 Laboratory Analyses 4
2.3 INVESTIGATION DERIVED WASTE (IDW) 4
3.0 AS SYSTEM PERFORMANCE SUMMARY 4
3.1 SYSTEM INSTALLATION 4
3.2 SYSTEM OPERATION 5
3.2 MAINTENANCE SUMMARY 5
4.0 SAMPLING AND ANALYTICAL RESULTS 6
4.1 DATA VALIDATION 6
4.2 GROUNDWATER RESULTS 6
5.0 CONCLUSIONS AND RECOMMENDATIONS 7

Figures

Figure 1 – Site Location Map
Figure 2 – Well Location Map
Figure 3 – Groundwater Contour Map – Intermediate Aquifer
Figure 4 – Concentration Map
Figure 5 – BTEX Concentrations in CEF-46-1S
Figure 6 – PAH Constituents in CEF-46-1S
Figure 7 – Sulfate Concentration in Selected Wells

Tables

Table 1 – Groundwater Elevation and Free Product Data
Table 2 – Groundwater Field Analytical Results
Table 3 – Groundwater Laboratory Analytical Results

APPENDICES

Appendix A Groundwater Sampling Logs
Appendix B Laboratory Analytical Report and Chain-of-Custody
Appendix C Third Quarter Air Sparge System O&M Logs and Field Notes

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 O&M of the air sparge (AS) system. This Third Quarter Monitoring Report details the activities performed at the site from July through September 2008.

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 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. A new AS system was installed on the east side of the site on September 17, 2008.

At this time, there are 14 active monitoring wells on the site (**Figure 2**). They are screened at depths ranging between approximately 13 and 90 feet below ground surface. Each monitoring well is sampled on a quarterly basis in March, June, September and December for petroleum constituents and sulfate. The active AS system on the east side of the site is connected to the following sparge wells: BD-1, BD-2, BD-3, BD-4, BD-6 and BD-7 (**Figure 2**).

2.0 GROUNDWATER MONITORING SUMMARY

During the third quarter monitoring event, water levels were recorded and samples were collected from the wells listed below for laboratory analysis of BTEX, MTBE, polycyclic aromatic hydrocarbons (PAHs), TRPH and sulfate.

Monitoring Well	Screened Interval
CEF-46-1S	Shallow
CEF-46-2S	Shallow
CEF-46-5I	Intermediate
CEF-46-6D	Deep
CEF-46-7I	Intermediate
CEF-46-9I	Intermediate
CEF-46-12I	Intermediate
CEF-46-13I	Intermediate
CEF-46-14D	Deep
CEF-46-15I	Intermediate
CEF-46-21I	Intermediate
CEF-46-24D	Deep
CEF-46-25I	Intermediate
CEF-46-26I	Intermediate

2.1 WATER LEVEL MEASUREMENTS

Depth-to-groundwater measurements were recorded on September 16, 2008 at the Building 46 site. The top-of-casing elevations, depth-to-product, depth-to-water, and calculated water level elevations are provided in **Table 1**.

A groundwater contour map, indicating the groundwater elevations in the intermediate wells, as measured during the September 2008 event is included as **Figure 3**. According to water level measurements obtained on September 16, 2008, groundwater flows south-southwest in the intermediate zone at the site. There are insufficient data points to contour shallow and deep wells.

No free product was detected in any sampled monitoring wells during the September 2008 sampling event. Free product has not been encountered at this site, based on historical information, dating back to December 2000.

2.2 GROUNDWATER SAMPLING

2.2.1 Methodology

Groundwater sampling was conducted at the Building 46 site on September 16, 2008. Fourteen monitoring wells (CEF-46-1S, -2S, -5I, -6D, -7I, -9I, -12I, -13I, -14D, -15I, -21I, -24D, -25I, and -26I) were purged and sampled using low-flow methodology.

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, turbidity, dissolved oxygen [DO] and oxidation reduction potential [ORP]) stabilized.

Samples were collected for field analysis of carbon dioxide, alkalinity, ferrous iron, hydrogen sulfide and DO using Hach® field test kits. Carbon dioxide readings were not obtained for wells CEF-46-01S, -02S, -05I, -06D, -24D or -26I due to test interference. According to the manufacturer, the most likely cause of interference for this field test is high level of contaminants interfering with the titrant. DO was less than 1 mg/L in all wells field-tested with the Hach® kits. However, low-level readings were obtained with the field meter.

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

2.2.2 Laboratory Analyses

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

- BTEX and MTBE by EPA Method 8260B
- PAHs by EPA Method 8270C
- TRPH by FL PRO
- Sulfate by EPA Method 300.0

A Level II data report and electronic data deliverables (EDDs) were provided by the laboratory and can be found in **Appendix B**.

2.3 INVESTIGATION DERIVED WASTE (IDW)

Purge water, wash water and rinse water were collected in 5-gallon containers and transferred to a 55-gallon drum. The drum is staged at the Day Tank 1 site. Arrangements will be made during the December 2008 sampling event to move existing IDW and store additional IDW in the on-site storage building for disposal by the NAS Jacksonville Public Works Department (PWD-JAX).

3.0 AS SYSTEM PERFORMANCE SUMMARY

3.1 SYSTEM INSTALLATION

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-46-BD-1, -2, -3, -4, -6 and -7), surrounding the two hot-spots (monitoring wells CEF-46-1S and CEF-46-7I), as instructed by the RAC contractor (CH2M Hill). During installation, the sparge wells were plumbed so that the air hoses from the AS system could be attached. A pressure test was performed before connecting the piping at the wellheads. Based on discussions with the RAC contractor, Solutions-IES attempted to set the system at the original design parameters, with a flow of 15 standard cubic feet per minute (scfm) and pressure of 50 pounds per square inch (psi). Because none of the wells were registering the intended flow, Solutions-IES performed several troubleshooting measures including blowing air into well CEF-46-BD-1 and purging the liquid out. It was noted at this time that much of the obstructions appeared to be rust from the iron injection wells. At the conclusion of this event, the pressure to wells CEF-46-BD-1, BD-2, BD-4 and BD-6 was set at 65 psi $\pm$ 3 psi. The valves to wells

CEF-46-BD-3 and BD-7 were turned off to avoid a build-up of pressure since the wells were not registering any airflow. Notes from the AS system installation event can be found in **Appendix C**.

On September 24, 2008, Solutions-IES re-mobilized to the site to attempt to clean out the wells, to increase flow and decrease pressure to the intended levels (original design parameters). At the conclusion of the event, well depths were noted as follows:

Well	Depth
CEF-46-BD-1	65 ft
CEF-46-BD-2	4.0 ft
CEF-46-BD-3	86.7 ft
CEF-46-BD-4	84.5 ft
CEF-46-BD-6	66.3 ft
CEF-46-BD-7	65 ft

Valves to wells BD-3 and BD-7 were kept off to avoid pressure build-up. Notes from the well clean-out event can be found in **Appendix C**. At this time, the oil filter in the AS system was also changed.

3.2 SYSTEM OPERATION

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, Inc. Weekly O&M forms can be found in **Appendix C**.

No major operational problems were encountered with the system during the third quarter.

3.2 MAINTENANCE SUMMARY

The oil filter on the AS system was changed on September 24, 2008 as part of routine maintenance. No additional maintenance was conducted during the reporting period.

4.0 SAMPLING AND ANALYTICAL RESULTS

4.1 DATA VALIDATION

Accutest data analysts validated all data according to laboratory standard operating procedures (SOPs). According to laboratory results (**Appendix B**), sulfate was detected in the equipment blank. According to the laboratory case narrative, the probable cause was attributed to field equipment carryover. Additionally, a number of other QC notes were indicated in the laboratory case narrative for SVOCs, TRPH and sulfate. Most QC irregularities were recognized as matrix interference, sample dilution and sample nonhomogeneity (sulfate). 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. The data validation evaluated data completeness, holding time compliance, laboratory blank contamination and detection limits. Cross-contamination from the field equipment is not expected because new tubing is used for each well.

4.2 GROUNDWATER RESULTS

Results from the third quarter 2008 sampling event, along with historical sampling results can be found in **Table 3**. Seven wells contained constituents above the GCTLs during this reporting period: CEF-46-1S, CEF-46-2S, CEF-46-5I, CEF-46-6D, CEF-46-7I, CEF-46-21I and CEF-46-26I. The constituents included MTBE, benzene, ethylbenzene, xylenes, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, and sulfate. In CEF-46-2S, CEF-46-5I, CEF-46-6D, CEF-46-21I and CEF-46-26I, TRPH sulfate is the only constituent that exceeded the GCTL. Locations and constituent concentrations in excess of the regulatory limits are shown on **Figure 4**.

This quarter, benzene, ethylbenzene, xylenes, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene and TRPH were all detected above their respective GCTLs in monitoring well CEF-46-1S. These constituents have consistently exceeded the GCTLs in this well since 2003. However, MTBE was below its GCTL this quarter for the first time since January 2001, and sulfate was below its GCTL for the first time since September 2006. Benzene and ethylbenzene remain below their respective Natural Attenuation Default Source Concentrations (NADSC), however, xylenes exceeded the NADSC of 200 μg/L, and TRPH

exceeded its NADSC of 50,000 μg/L this quarter. Trends in benzene, toluene, ethylbenzene and xylenes concentrations in CEF-46-1S are shown on **Figure 5**.

Three PAHs, naphthalene, 1- and 2-methylnaphthalene were reported above their GCTLs of 14 μg/L and 28 μg/L, respectively in well CEF-46-1S during this sampling event (**Figure 6**). Naphthalene also exceeded the NADSC (140 μg/L) this quarter. Naphthalene has consistently exceeded the NADSC for 22 out of the past 23 sampling events over the past five years.

Well CEF-46-7I exhibited benzene and MTBE concentrations above the GCTLs (1 μg/L and 20 μg/L respectively) this quarter. Overall, there has been a decrease in the benzene concentrations in well CEF-46-7I over the past five years, though recently, concentrations have remained steady. Generally, MTBE concentrations in well CEF-46-71 have been steadily decreasing since 2003. This is the third consecutive quarter, that MTBE concentrations have been below the NADSC (200 μg/L) concentration in this well.

Sulfate concentrations exceeded the GCTL (250 mg/L) in wells CEF-46-2S, CEF-46-5I, CEF-46-6D, CEF-46-21I and CEF-46-26I this quarter. Trends in sulfate concentrations over time in historically impacted monitoring wells are shown in **Figure 7**. In general, sulfate concentrations are decreasing in wells CEF-46-2S, -5I, -24D and 26I. However, an overall increasing trend in concentrations can be noted for wells CEF-46-1S and -6D.

A summary of historical sampling results can be found in **Table 3**. The September 2008 laboratory report is included in **Appendix B**.

5.0 CONCLUSIONS

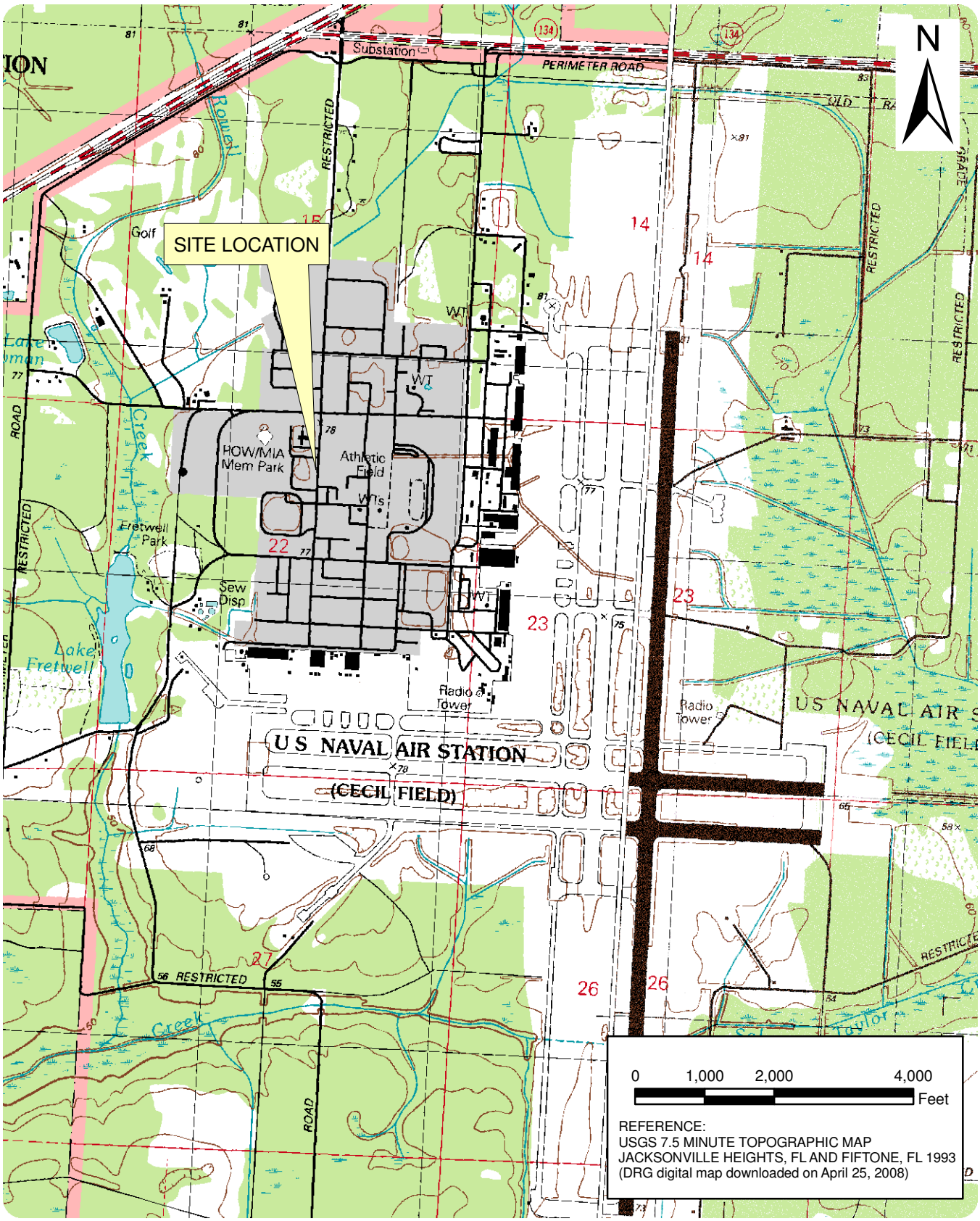
Water level data suggest that groundwater in the intermediate zone at this site flows to the south-southwest. No free product was observed in any of the wells sampled during the September 2008 sampling event. Because free product has not been observed at the site from December 2000 through June 2008, Solutions-IES recommends discontinuing free product monitoring.

Field test kit data for this quarter indicate that DO was less than 1 mg/L in all wells. In general, DO has been below 1 mg/L in wells analyzed with the Hach® kits since December 2000, though the multi-meters detect low-level (<1 mg/L) readings. Solutions-IES is discontinuing use of Hach® kits for field sampling and will begin using Chemetric® Kits during the December 2008 sampling event. The low-level Chemetric® Kit will be used for DO measurement at this site.

Constituents detected in excess of their regulatory limits this quarter include benzene, ethylbenzene, xylenes, MTBE, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, TRPH and sulfate. Five monitoring wells, CEF-46-2S, CEF-46-5I, CEF-46-6D, CEF-46-21I and CEF-46-26I exhibited concentrations of sulfate above their respective GCTLs this quarter. Based on the analytical results, sulfate appears to be predominant in wells south and west of well CEF-46-2S. Most other GCTL exceedances and all NADSC exceedances occurred in monitoring well CEF-46-1S, though well CEF-46-7I also exhibited GCTL exceedances of benzene and MTBE this quarter.

The September 2008 sampling event was conducted in general accordance with previous sampling events. Changes made to the Work Plan (February 2008) this quarter, included Revision 01, dated September 24, 2008. The AS system will continue to be monitored weekly and the next sampling event will take place in December 2008.

FIGURES



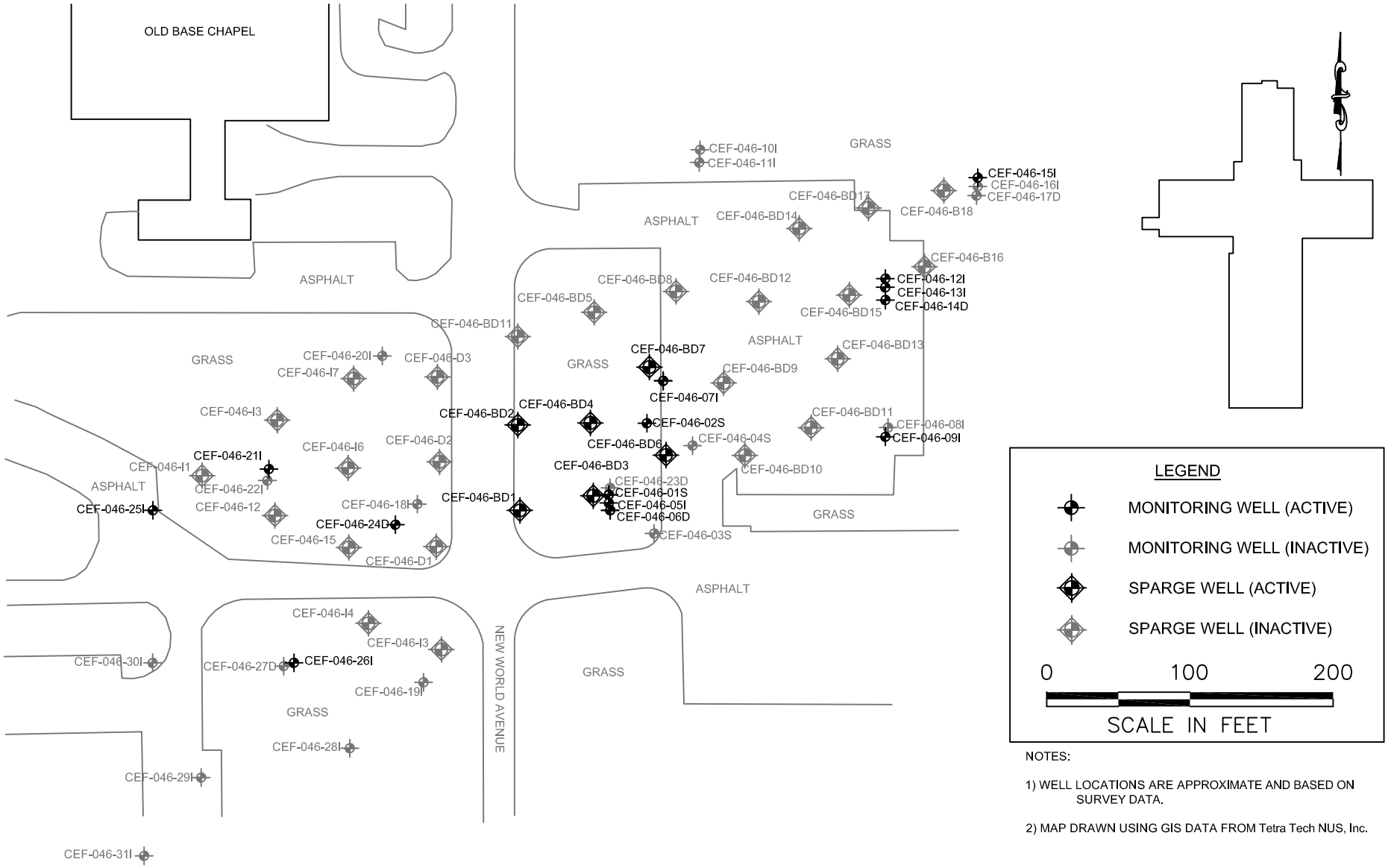
PROJECT NUMBER	DRAFTER	CHECKED BY	PROJECT MANAGER	DATE	FILE
4080.08A2.CECI	JC	JD	CR	11/07/08	CeciITOPO.mxd

Solutions-IES
Industrial & Environmental Services
1101 NOWELL ROAD
RALEIGH, NORTH CAROLINA 27607
TEL.: (919) 873-1060 FAX.: (919) 873-1074

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

FIGURE:
1

FILE	DATE	PROJECT MANAGER	CHECKED BY	DRAFTER	PROJECT NUMBER
Figure2.PDF	12/08/08	CR	JD	JC	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.

Solutions-IES
Industrial & Environmental Services
1101 NOWELL ROAD
RALEIGH, NORTH CAROLINA 27607
TEL.: (919) 873-1060 FAX.: (919) 873-1074

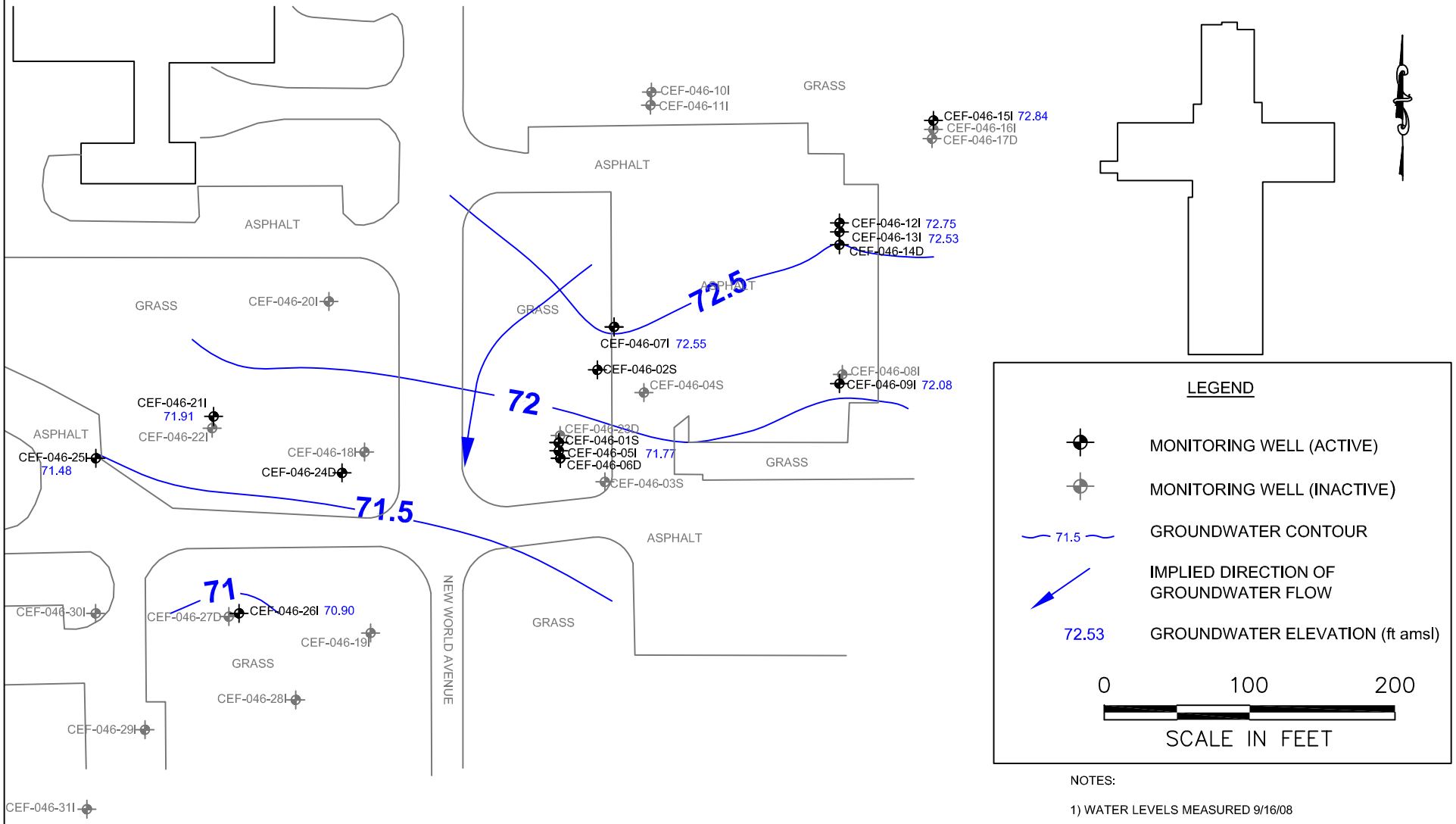
WELL LOCATION MAP
BUILDING 46 - NAS CECIL FIELD
JACKSONVILLE, FL
SEPTEMBER 2008

FIGURE:

2

T:\Project Files\Cecil Field 1\CAD\B46Basemap.dwg

FILE	DATE	PROJECT MANAGER	CHECKED BY	DRAFTER	PROJECT NUMBER
Figure3.PDF	12/08/08	CR	JD	JC	4080.08A2.CECI



NOTES:

1) WATER LEVELS MEASURED 9/16/08

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

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

Solutions-IES
Industrial & Environmental Services
1101 NOWELL ROAD
RALEIGH, NORTH CAROLINA 27607
TEL.: (919) 873-1060 FAX.: (919) 873-1074

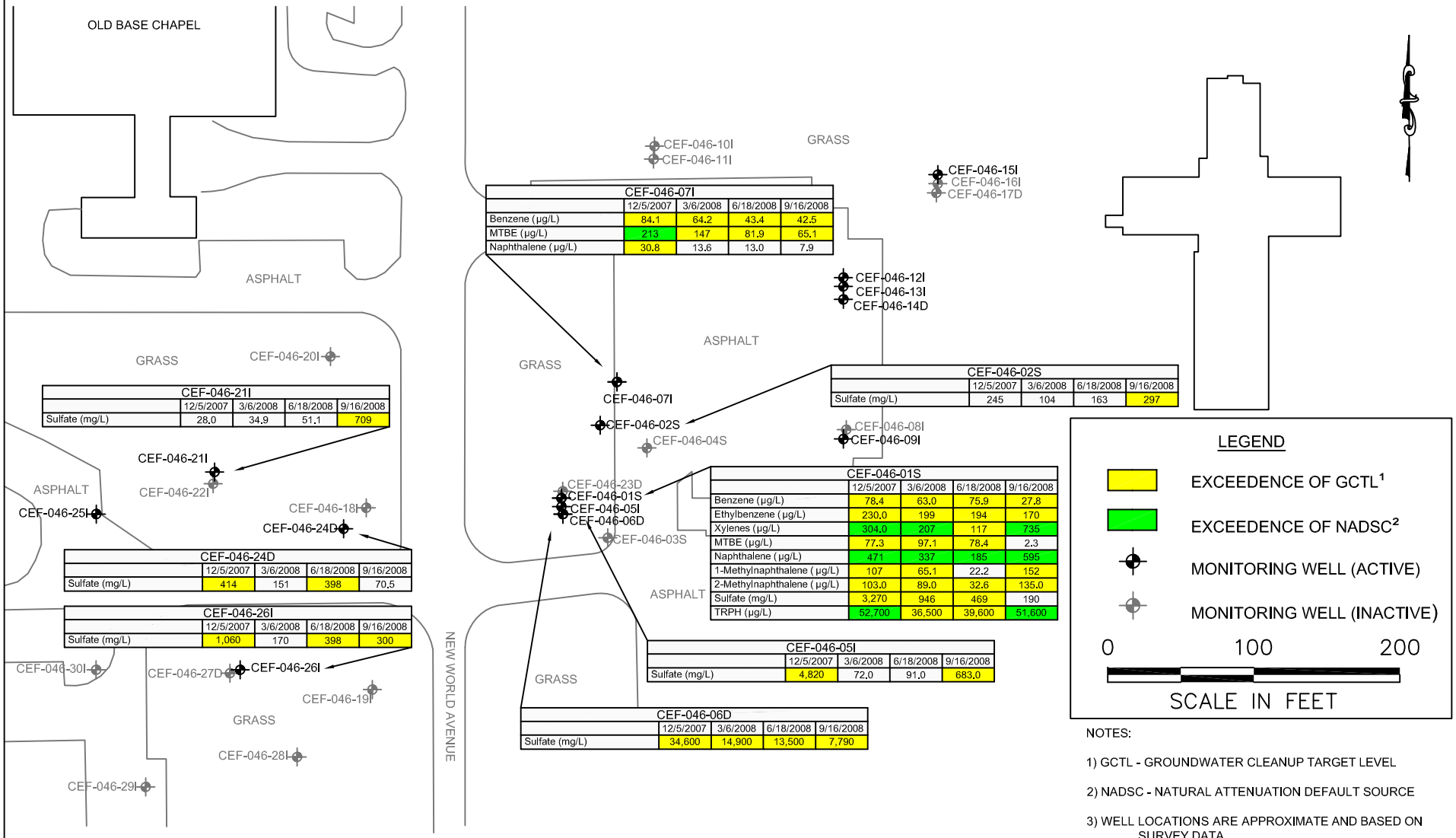
GROUNDWATER CONTOUR MAP - INTERMEDIATE AQUIFER
BUILDING 46 - NAS CECIL FIELD
JACKSONVILLE, FL
SEPTEMBER 2008

FIGURE:

3

T:\Project Files\Cecil Field 1\CAD\B46Basemap.dwg

FILE	DATE	PROJECT MANAGER	CHECKED BY	DRAFTER	PROJECT NUMBER
Figure4.PDF	12/08/08	CR	JD	JC	4080.08A2.CECI



CEF-046-21I	12/5/2007	3/6/2008	6/18/2008	9/16/2008
Sulfate (mg/L)	28.0	34.9	51.1	709

CEF-046-24D	12/5/2007	3/6/2008	6/18/2008	9/16/2008
Sulfate (mg/L)	414	151	398	70.5

CEF-046-26I	12/5/2007	3/6/2008	6/18/2008	9/16/2008
Sulfate (mg/L)	1,060	170	398	300

CEF-046-07I	12/5/2007	3/6/2008	6/18/2008	9/16/2008
Benzene (µg/L)	84.1	64.2	43.4	42.5
MTBE (µg/L)	213	147	81.9	65.1
Naphthalene (µg/L)	30.8	13.6	13.0	7.9

CEF-046-02S	12/5/2007	3/6/2008	6/18/2008	9/16/2008
Sulfate (mg/L)	245	104	163	297

CEF-046-01S	12/5/2007	3/6/2008	6/18/2008	9/16/2008
Benzene (µg/L)	78.4	63.0	75.9	27.8
Ethylbenzene (µg/L)	230.0	199	194	170
Xylenes (µg/L)	304.0	207	117	735
MTBE (µg/L)	77.3	97.1	78.4	2.3
Naphthalene (µg/L)	471	337	185	595
1-Methylnaphthalene (µg/L)	107	65.1	22.2	152
2-Methylnaphthalene (µg/L)	103.0	89.0	32.6	135.0
Sulfate (mg/L)	3,270	946	469	190
TRPH (µg/L)	52,700	36,500	39,600	51,600

CEF-046-05I	12/5/2007	3/6/2008	6/18/2008	9/16/2008
Sulfate (mg/L)	4,820	72.0	91.0	683.0

CEF-046-06D	12/5/2007	3/6/2008	6/18/2008	9/16/2008
Sulfate (mg/L)	34,600	14,900	13,500	7,790

NOTES:

1) GCTL - GROUNDWATER CLEANUP TARGET LEVEL

2) NADSC - NATURAL ATTENUATION DEFAULT SOURCE

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

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

5) SEE REPORT TABLE 3 FOR QUALIFIER DEFINITIONS

Solutions-IES
Industrial & Environmental Services
1101 NOWELL ROAD
RALEIGH, NORTH CAROLINA 27607
TEL.: (919) 873-1060 FAX.: (919) 873-1074

CONCENTRATION MAP
BUILDING 46 - NAS CECIL FIELD
JACKSONVILLE, FL
SEPTEMBER 2008

FIGURE:

4

T:\Project Files\Cecil Field 1\CAD\B46Basemap.dwg

Figure 5
BTEX Concentrations in CEF-46-1S
March 2003 - September 2008

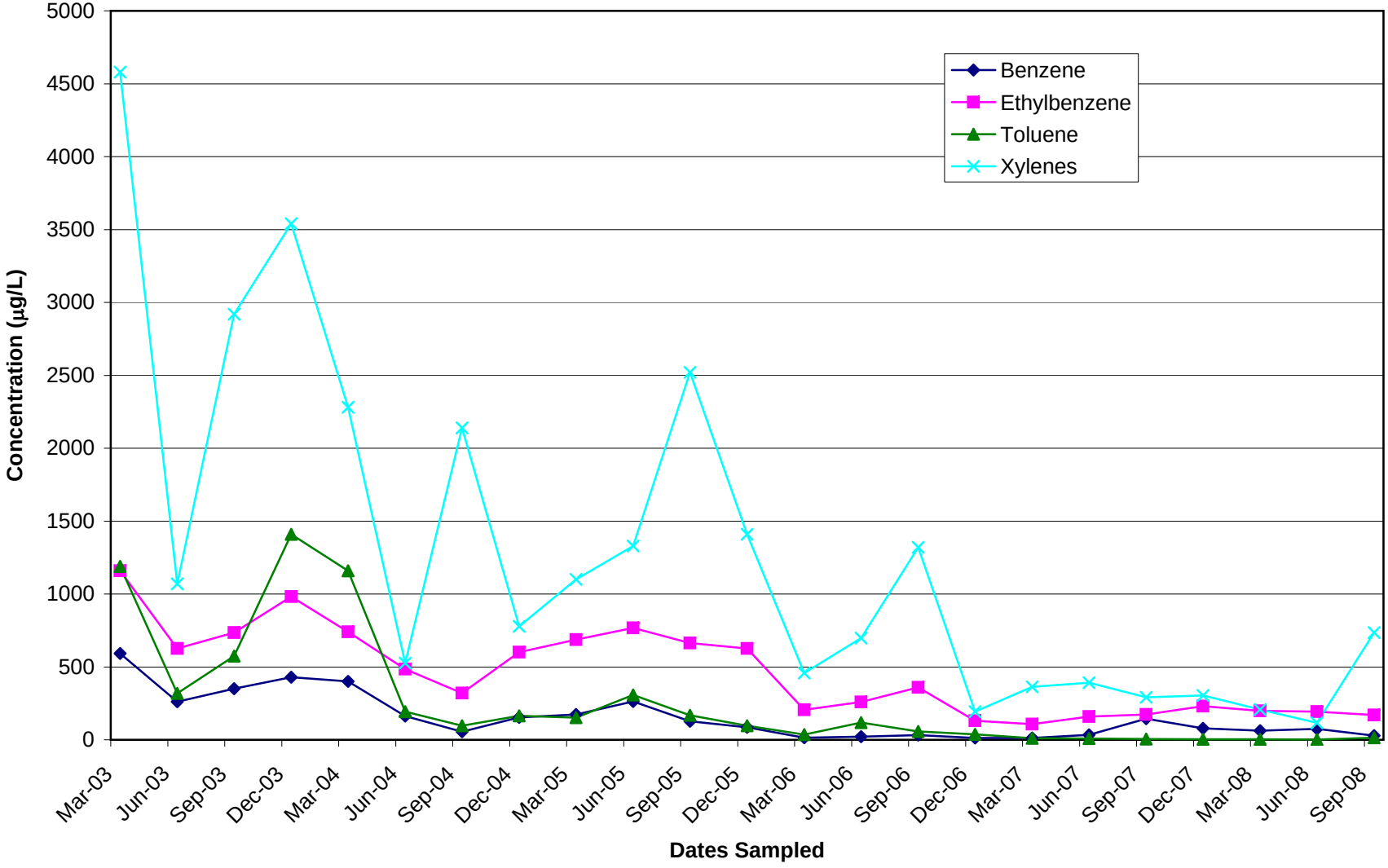


Figure 6
PAH Constituents in CEF-46-1S
March 2003 - September 2008

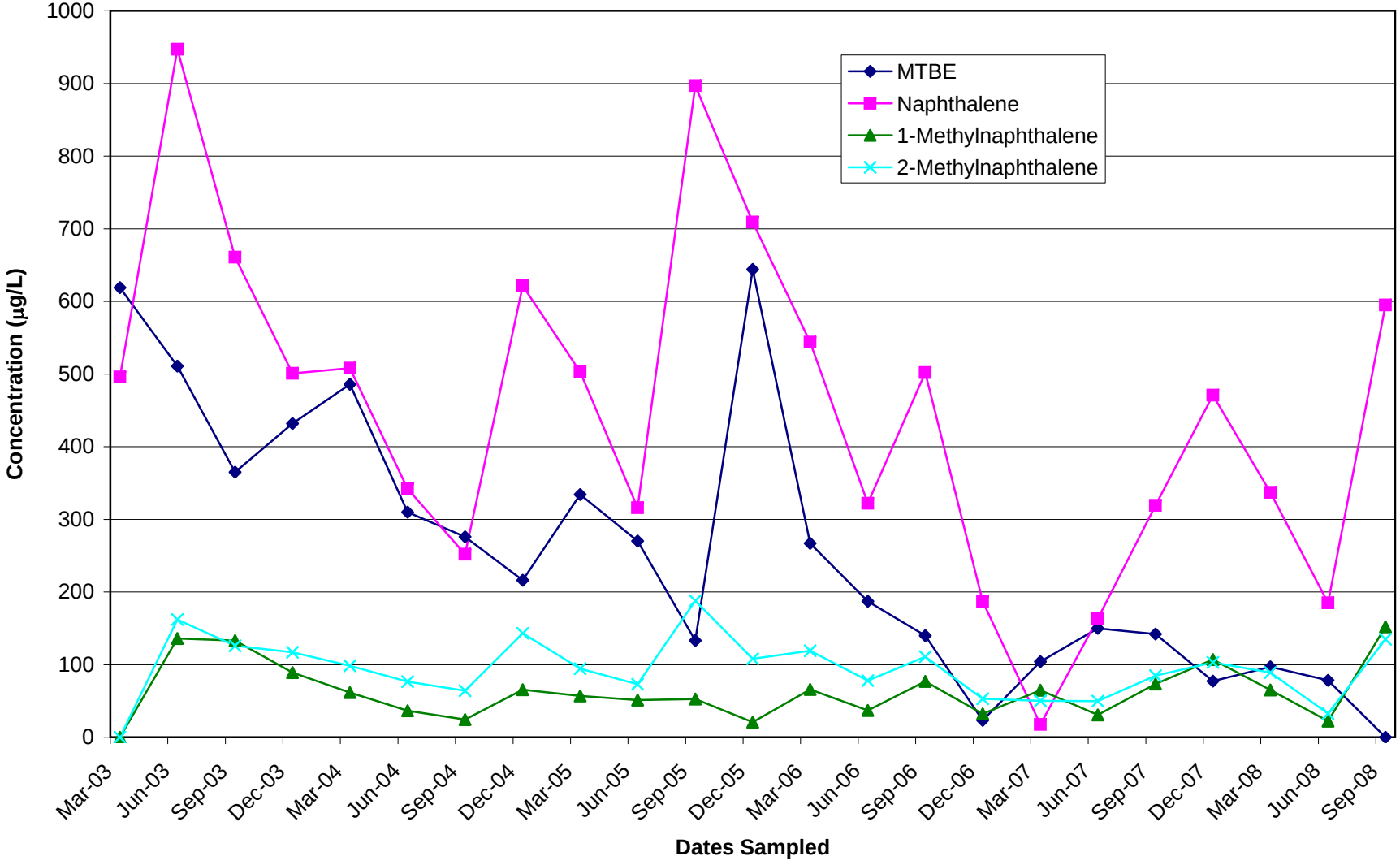
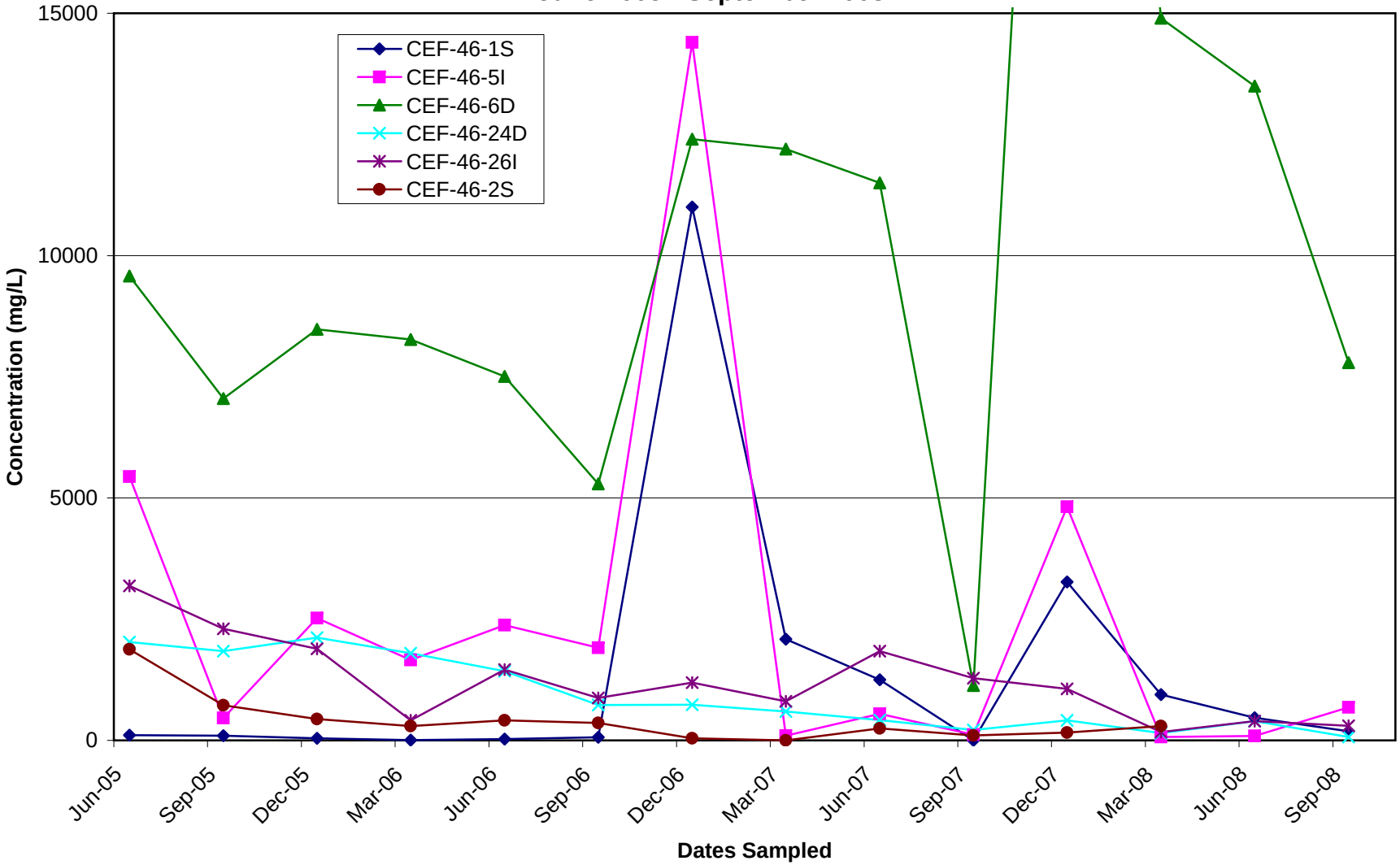


Figure 7
Sulfate Concentration in Selected Wells
June 2005 - September 2008



TABLES

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Well Total Depth (Feet BGS)	Date	Top of Casing Elevation (Feet)	Depth to Product (Feet)	Depth to Water (Feet)	Water Level Elevation (Feet)
CEF-46-1S	14.24	12/21/00	79.08	No Product	4.94	74.14
		03/14/03		No Product	2.55	76.53
		06/09/03		No Product	2.40	76.68
		09/03/03		No Product	3.42	75.66
		12/11/03		No Product	5.20	73.88
		03/18/04		No Product	5.92	73.16
		06/08/04		No Product	7.80	71.28
		09/21/04		No Product	3.42	75.66
		12/01/04		No Product	7.06	72.02
		03/13/05		No Product	9.00	70.08
		06/09/05		No Product	9.04	70.04
		09/06/05		No Product	6.95	72.13
		12/06/05		No Product	8.79	70.29
		03/29/06		No Product	9.31	69.77
		06/09/06		No Product	10.95	68.13
		09/24/06		No Product	12.60	66.48
		12/08/06		No Product	12.52	66.56
		03/01/07		No Product	12.10	66.98
		06/15/07		No Product	12.02	67.06
		09/12/07		No Product	11.32	67.76
		12/05/07		No Product	10.16	68.92
		03/05/08		No Product	9.80	69.28
		06/17/08		No Product	10.47	68.61
		09/16/08		No Product	5.42	73.66
CEF-46-2S	13.88	12/21/00	79.08	No Product	5.02	74.06
		03/14/03		No Product	2.55	76.53
		06/05/03		No Product	3.75	75.33
		09/03/03		No Product	2.70	76.38
		12/11/03		No Product	5.04	74.04
		03/18/04		No Product	6.02	73.06
		06/08/04		No Product	7.80	71.28
		09/21/04		No Product	3.75	75.33
		12/01/04		No Product	7.02	72.06
		03/13/05		No Product	8.86	70.22
		06/09/05		No Product	8.95	70.13
		09/06/05		No Product	6.70	72.38
		09/21/05		No Product	6.60	72.48
		12/06/05		No Product	8.23	70.85
		03/30/06		No Product	9.22	69.86
		06/09/06		No Product	10.83	68.25
		09/24/06		No Product	11.54	67.54
		12/08/06		No Product	12.32	66.76
		03/01/07		No Product	11.98	67.10
		06/15/07		No Product	12.00	67.08
		09/12/07		No Product	11.28	67.80
		12/05/07		No Product	10.07	69.01
		03/05/08		No Product	9.68	69.40
		06/17/08		No Product	10.37	68.71
		09/16/08		No Product	5.60	73.48
CEF-46-3S	15.00	12/06/05	79.14	No Product	9.19	69.95
CEF-46-4S	15.00	12/06/05	79.29	No Product	8.85	70.44

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Well Total Depth (Feet BGS)	Date	Top of Casing Elevation (Feet)	Depth to Product (Feet)	Depth to Water (Feet)	Water Level Elevation (Feet)
CEF-46-5I	49.65	12/21/00	79.18	No Product	5.81	73.37
		03/14/03		No Product	3.40	75.78
		06/05/03		No Product	4.90	74.28
		09/03/03		No Product	6.25	72.93
		12/11/03		No Product	6.64	72.54
		03/18/04		No Product	7.89	71.29
		06/08/04		No Product	9.40	69.78
		09/21/04		No Product	5.71	73.47
		12/01/04		No Product	9.23	69.95
		03/13/05		No Product	10.11	69.07
		06/09/05		No Product	10.45	68.73
		09/06/05		No Product	8.63	70.55
		12/06/05		No Product	10.01	69.17
		03/29/06		No Product	10.68	68.50
		06/09/06		No Product	11.95	67.23
		09/24/06		No Product	12.62	66.56
		12/08/06		No Product	14.82	64.36
		03/01/07		No Product	12.85	66.33
		06/15/07		No Product	12.93	66.25
		09/12/07		No Product	12.27	66.91
		12/05/07		No Product	11.10	68.08
		03/05/08		No Product	10.98	68.20
		06/17/08		No Product	11.49	67.69
		09/16/08		No Product	7.41	71.77
CEF-46-6D	79.82	12/21/00	79.17	No Product	7.40	71.77
		03/14/03		No Product	6.50	72.67
		06/09/03		No Product	8.00	71.17
		09/03/03		No Product	5.82	73.35
		12/10/03		No Product	7.30	71.87
		03/16/04		No Product	10.60	68.57
		06/08/04		No Product	11.69	67.48
		09/21/04		No Product	7.46	71.71
		12/01/04		No Product	9.72	69.45
		03/13/05		No Product	10.58	68.59
		06/09/05		No Product	10.20	68.97
		09/06/05		No Product	9.66	69.51
		12/06/05		No Product	10.95	68.22
		03/29/06		No Product	10.78	68.39
		06/09/06		No Product	12.24	66.93
		09/24/06		No Product	9.21	69.96
		12/08/06		No Product	16.90	62.27
		03/01/07		No Product	13.21	65.96
		06/15/07		No Product	13.40	65.77
		09/12/07		No Product	12.99	66.18
		12/05/07		No Product	11.49	67.68
		03/05/08		No Product	11.23	67.94
		06/17/08		No Product	11.95	67.22
		09/16/08		No Product	9.71	69.46

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Well Total Depth (Feet BGS)	Date	Top of Casing Elevation (Feet)	Depth to Product (Feet)	Depth to Water (Feet)	Water Level Elevation (Feet)
CEF-46-7I	29.68	12/21/00	79.02	No Product	5.45	73.57
		03/14/03		No Product	3.30	75.72
		06/09/03		No Product	3.20	75.82
		09/03/03		No Product	2.80	76.22
		12/11/03		No Product	5.84	73.18
		03/18/04		No Product	7.40	71.62
		06/08/04		No Product	8.80	70.22
		09/21/04		No Product	4.95	74.07
		12/01/04		No Product	8.60	70.42
		03/13/05		No Product	9.71	69.31
		06/09/05		No Product	9.40	69.62
		09/06/05		No Product	7.19	71.83
		12/06/05		No Product	9.00	70.02
		03/30/06		No Product	9.91	69.11
		06/09/06		No Product	11.30	67.72
		09/24/06		No Product	11.82	67.20
		12/08/06		No Product	10.35	68.67
		03/01/07		No Product	12.82	66.20
		06/15/07		No Product	12.95	66.07
		09/12/07		No Product	11.74	67.28
		12/05/07		No Product	10.22	68.80
		03/05/08		No Product	9.97	69.05
		06/17/08		No Product	10.68	68.34
		09/16/08		No Product	6.47	72.55
CEF-46-8I	30.50	12/06/05	78.91	No Product	9.10	69.81
CEF-46-9I	48.81	12/21/00	79.05	No Product	5.67	73.38
		03/14/03		No Product	2.55	76.50
		06/04/03		No Product	4.10	74.95
		09/03/03		No Product	3.32	75.73
		12/11/03		No Product	5.79	73.26
		03/16/04		No Product	7.20	71.85
		06/08/04		No Product	8.92	70.13
		09/21/04		No Product	5.29	73.76
		12/01/04		No Product	8.44	70.61
		03/13/05		No Product	9.58	69.47
		06/09/05		No Product	9.78	69.27
		09/06/05		No Product	7.86	71.19
		12/06/05		No Product	9.40	69.65
		03/30/06		No Product	9.95	69.10
		06/09/06		No Product	11.32	67.73
		09/24/06		No Product	11.89	67.16
		12/08/06		No Product	12.90	66.15
		03/01/07		No Product	12.26	66.79
		06/15/07		No Product	12.26	66.79
		09/12/07		No Product	11.61	67.44
		12/05/07		No Product	10.51	68.54
		03/05/08		No Product	10.20	68.85
		06/17/08		No Product	10.88	68.17
		09/16/08		No Product	6.97	72.08
CEF-46-10I	30.50	12/06/05	80.18	No Product	9.08	71.10
CEF-46-11I	50.50	12/06/05	80.23	No Product	9.73	70.50

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Well Total Depth (Feet BGS)	Date	Top of Casing Elevation (Feet)	Depth to Product (Feet)	Depth to Water (Feet)	Water Level Elevation (Feet)
CEF-46-12I	29.61	12/21/00	78.73	No Product	5.23	73.50
		03/14/03		No Product	2.10	76.63
		06/05/03		No Product	3.30	75.43
		09/03/03		No Product	2.90	75.83
		12/11/03		No Product	5.45	73.28
		03/18/04		No Product	6.45	72.28
		06/08/04		No Product	8.10	70.63
		09/21/04		No Product	4.30	74.43
		12/01/04		No Product	7.25	71.48
		03/13/05		No Product	8.70	70.03
		06/09/05		No Product	8.80	69.93
		09/06/05		No Product	6.80	71.93
		12/06/05		No Product	8.35	70.38
		03/29/06		No Product	8.93	69.80
		06/09/06		No Product	10.54	68.19
		09/25/06		No Product	11.13	67.60
		12/08/06		No Product	12.00	66.73
		03/01/07		No Product	11.51	67.22
		06/15/07		No Product	11.48	67.25
		09/12/07		No Product	10.80	67.93
		12/05/07		No Product	9.61	69.12
		03/05/08		No Product	9.22	69.51
		06/17/08		No Product	9.57	69.16
		09/16/08		No Product	5.98	72.75
CEF-46-13I	39.56	12/21/00	78.87	No Product	5.43	73.44
		03/14/03		No Product	2.31	76.56
		06/05/03		No Product	3.50	75.37
		09/03/03		No Product	3.10	75.77
		12/11/03		No Product	5.90	72.97
		03/18/04		No Product	6.85	72.02
		06/08/04		No Product	8.61	70.26
		09/21/04		No Product	4.65	74.22
		12/01/04		No Product	7.60	71.27
		03/13/05		No Product	8.91	69.96
		06/09/05		No Product	9.10	69.77
		09/06/05		No Product	7.15	71.72
		12/06/05		No Product	8.64	70.23
		03/29/06		No Product	9.17	69.70
		06/09/06		No Product	10.95	67.92
		09/25/06		No Product	11.36	67.51
		12/08/06		No Product	12.32	66.55
		03/01/07		No Product	11.73	67.14
		06/15/07		No Product	11.72	67.15
		09/12/07		No Product	11.08	67.79
		12/05/07		No Product	9.90	68.97
		03/05/08		No Product	9.52	69.35
		06/17/08		No Product	10.24	68.63
		09/16/08		No Product	6.34	72.53

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Well Total Depth (Feet BGS)	Date	Top of Casing Elevation (Feet)	Depth to Product (Feet)	Depth to Water (Feet)	Water Level Elevation (Feet)
CEF-46-14D	78.79	12/21/00	78.88	No Product	6.86	72.02
		03/14/03		No Product	4.20	74.68
		06/04/03		No Product	6.15	72.73
		09/03/03		No Product	5.15	73.73
		12/10/03		No Product	7.20	71.68
		03/16/04		No Product	8.72	70.16
		06/08/04		No Product	9.75	69.13
		09/21/04		No Product	5.34	73.54
		12/01/04		No Product	7.66	71.22
		03/13/05		No Product	8.54	70.34
		06/09/05		No Product	9.74	69.14
		09/06/05		No Product	8.09	70.79
		12/06/05		No Product	8.42	70.46
		03/26/06		No Product	9.50	69.38
		06/09/06		No Product	10.70	68.18
		09/24/06		No Product	11.14	67.74
		12/08/06		No Product	13.74	65.14
		03/01/07		No Product	11.56	67.32
		06/15/07		No Product	11.52	67.36
		09/12/07		No Product	11.08	67.80
		12/05/07		No Product	9.76	69.12
		03/05/08		No Product	9.39	69.49
		06/17/08		No Product	10.21	68.67
		09/16/08		No Product	7.04	71.84
CEF-46-15I	29.77	12/21/00	79.75	No Product	6.33	73.42
		03/13/03		No Product	3.47	76.28
		06/04/03		No Product	4.54	75.21
		09/03/03		No Product	4.22	75.53
		12/10/03		No Product	6.53	73.22
		03/16/04		No Product	7.40	72.35
		06/08/04		No Product	9.22	70.53
		09/21/04		No Product	5.20	74.55
		12/01/04		No Product	8.07	71.68
		03/13/05		No Product	9.31	70.44
		06/09/05		No Product	9.54	70.21
		09/06/05		No Product	7.69	72.06
		12/06/05		No Product	9.10	70.65
		03/30/06		No Product	9.95	69.80
		06/09/06		No Product	11.46	68.29
		09/24/06		No Product	11.95	67.80
		12/08/06		No Product	12.85	66.90
		03/01/07		No Product	12.30	67.45
		06/15/07		No Product	12.17	67.58
		09/12/07		No Product	11.59	68.16
		12/05/07		No Product	10.46	69.29
		03/05/07		No Product	9.91	69.84
		06/17/08		No Product	10.74	69.01
		09/16/08		No Product	6.91	72.84
CEF-46-16I	50.00	12/06/05	79.42	No Product	8.96	70.46
CEF-46-17D	80.50	12/06/05	79.15	No Product	8.78	70.37

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Well Total Depth (Feet BGS)	Date	Top of Casing Elevation (Feet)	Depth to Product (Feet)	Depth to Water (Feet)	Water Level Elevation (Feet)
CEF-46-18I	30.50	12/07/05	78.54	No Product	9.44	69.10
CEF-46-19I	50.50	12/07/05	78.88	No Product	10.55	68.33
CEF-46-20I	30.50	12/07/05	79.34	No Product	9.60	69.74
CEF-46-21I	29.70	12/21/00	79.33	No Product	6.02	73.31
		03/13/03		No Product	2.79	76.54
		06/05/03		No Product	4.18	75.15
		09/03/03		No Product	3.70	75.63
		12/11/03		No Product	7.50	71.83
		03/18/04		No Product	8.35	70.98
		06/08/04		No Product	10.10	69.23
		09/21/04		No Product	5.80	73.53
		12/01/04		No Product	9.15	70.18
		03/13/05		No Product	10.60	68.73
		06/10/05		No Product	10.90	68.43
		09/06/05		No Product	NR	NR
		12/07/05		No Product	10.11	69.22
		03/29/06		No Product	10.60	68.73
		06/09/06		No Product	12.18	67.15
		09/24/06		No Product	12.97	66.36
		12/08/06		No Product	13.81	65.52
		03/01/07		No Product	13.36	65.97
		06/15/07		No Product	13.43	65.90
		09/12/07		No Product	12.67	66.66
		12/05/07		No Product	11.43	67.90
		03/05/08		No Product	11.34	67.99
		06/17/08		No Product	11.87	67.46
		09/16/08		No Product	7.42	71.91
CEF-46-22I	50.50	12/07/05	79.22	No Product	9.91	69.31
CEF-46-23D	92.50	12/07/05	NA	No Product	11.18	NA
CEF-46-24D	90.45	12/21/00	78.74	No Product	7.30	71.44
		03/14/03		No Product	13.78	64.96
		06/05/03		No Product	6.40	72.34
		09/03/03		No Product	4.97	73.77
		12/10/03		No Product	7.40	71.34
		03/16/04		No Product	8.95	69.79
		06/08/04		No Product	10.68	68.06
		09/21/04		No Product	6.31	72.43
		12/01/04		No Product	9.11	69.63
		03/13/05		No Product	9.92	68.82
		06/09/05		No Product	10.28	68.46
		09/06/05		No Product	8.93	69.81
		12/07/05		No Product	9.92	68.82
		03/29/06		No Product	10.15	68.59
		06/09/06		No Product	11.69	67.05
		09/24/06		No Product	12.12	66.62
		12/08/06		No Product	13.69	65.05
		03/01/07		No Product	12.43	66.31
		06/15/07		No Product	12.66	66.08
		09/12/07		No Product	11.87	66.87
		12/05/07		No Product	10.75	67.99
		03/05/08		No Product	10.46	68.28
		06/17/08		No Product	11.25	67.49
		09/16/08		No Product	7.99	70.75

TABLE 1
GROUNDWATER ELEVATION AND FREE PRODUCT DATA

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Well Total Depth (Feet BGS)	Date	Top of Casing Elevation (Feet)	Depth to Product (Feet)	Depth to Water (Feet)	Water Level Elevation (Feet)
CEF-46-25I	50.45	12/21/00	79.17	No Product	6.25	72.92
		03/13/03		No Product	2.49	76.68
		06/04/03		No Product	3.98	75.19
		09/03/03		No Product	3.50	75.67
		12/10/03		No Product	5.98	73.19
		03/16/04		No Product	8.30	70.87
		06/08/04		No Product	10.03	69.14
		09/21/04		No Product	5.61	73.56
		12/01/04		No Product	9.11	70.06
		03/13/05		No Product	10.46	68.71
		06/09/05		No Product	10.56	68.61
		09/06/05		No Product	8.93	70.24
		12/07/05		No Product	10.10	69.07
		03/29/06		No Product	10.50	68.67
		06/09/06		No Product	12.19	66.98
		09/24/06		No Product	12.98	66.19
		12/08/06		No Product	13.89	65.28
		03/01/07		No Product	13.42	65.75
		06/15/07		No Product	13.60	65.57
		09/12/07		No Product	12.85	66.32
		12/05/07		No Product	11.58	67.59
		03/05/08		No Product	11.51	67.66
		06/17/08		No Product	12.14	67.03
		09/16/08		No Product	7.69	71.48
CEF-46-26I	47.76	12/21/00	79.43	No Product	7.09	72.34
		03/14/03		No Product	3.82	75.61
		06/05/03		No Product	4.30	75.13
		09/03/03		No Product	3.73	75.70
		12/11/03		No Product	6.65	72.78
		03/18/04		No Product	8.05	71.38
		06/08/04		No Product	10.40	69.03
		09/21/04		No Product	6.56	72.87
		12/01/04		No Product	10.20	69.23
		03/13/05		No Product	11.50	67.93
		06/09/05		No Product	11.50	67.93
		09/06/05		No Product	9.90	69.53
		12/07/05		No Product	11.01	68.42
		03/29/06		No Product	11.00	68.43
		06/09/06		No Product	12.90	66.53
		09/24/06		No Product	13.60	65.83
		12/08/06		No Product	14.54	64.89
		03/01/07		No Product	14.08	65.35
		06/15/07		No Product	14.23	65.20
		09/12/07		No Product	13.43	66.00
		12/05/07		No Product	12.22	67.21
		03/05/08		No Product	12.25	67.18
		06/17/08		No Product	12.76	66.67
		09/16/08		No Product	8.53	70.90
CEF-46-27D	90.00	12/07/05	78.94	No Product	10.65	68.29
CEF-46-28I	50.00	12/07/05	79.38	No Product	11.21	68.17
CEF-46-29I	50.00	12/07/05	79.88	No Product	11.75	68.13
CEF-46-30I	50.00	12/07/05	79.66	No Product	11.10	68.56
CEF-46-31I	50.00	12/07/05	90.02	No Product	12.20	77.82

BGS = Below Ground Surface
NR = Not recorded due to water level meter malfunction
Elevation is referenced to National Geodetic Vertical Datum 1929 (NGVD 1929)
Depth-to-product and depth-to-water measured from top of casing

TABLE 2
GROUNDWATER FIELD ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)*	Oxidation Reduction Potential (mV)	Temperature (°C)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)	Dissolved Oxygen (mg/L) **
CEF-46-1S	12/21/00	6.20	0.512	1.05	NM	22.70	NM	200	1.4	1.0	NM
	03/14/03	7.54	2.520	0.89	-204.00	20.77	ND	100	2.2	5.0	NM
	06/09/03	6.39	1.730	ND	-238.00	25.28	Interference	140	3.2	5.0	NM
	09/03/03	6.27	0.201	2.03	-364.00	27.53	Interference	205	1.0	5.0	NM
	12/11/03	5.98	0.234	ND	-332.00	23.15	400	250	1.4	5.0	ND
	03/18/04	6.48	0.220	NM	-278.00	22.33	Interference	175	2.0	5.0	ND
	06/08/04	6.00	1.920	0.04	-296.00	26.24	Interference	130	1.0	5.0	ND
	09/21/04	7.42	0.122	0.00	-234.00	27.97	Interference	100	5.4	5.0	ND
	12/01/04	6.39	2.404	0.15	-356.90	26.07	362	205	ND	5.0	ND
	03/13/05	6.23	1.467	0.18	-347.60	24.63	170	275	2.8	5.0	ND
	06/09/05	6.24	1.223	0.71	-347.10	26.88	140	195	1.8	5.0	ND
	09/06/05	6.52	0.927	0.20	-367.70	27.64	140	120	1.6	5.0	ND
	12/06/05	6.92	0.507	0.22	-269.80	23.49	123	85	1.6	5.0	ND
	03/29/06	5.73	0.355	0.24	-129.80	24.21	280	ND	2.6	5.0	ND
	06/09/06	4.30	0.405	0.50	-130.00	25.49	83	375	1.5	1.0	ND
	9/24/2006***	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/08/06	3.29	10.302	0.59	5.10	22.01	426	ND	4.4	5.0	ND
	03/01/07	4.04	5.013	0.78	48.8	21.88	205	ND	4.8	2.0	ND
	06/15/07	4.33	4.081	0.22	-11.9	30.62	Interference	ND	5.5	2.0	ND
	09/12/07	4.56	2.279	0.83	-10.3	29.77	Interference	ND	6.5	1.0	ND
	12/05/07	5.07	2.671	3.04	-140.7	25.99	Interference	ND	3.0	5.0	ND
	03/06/08	4.81	2.146	0.23	-98.2	24.44	Interference	10	3.6	5.0	ND
	06/17/08	4.87	1.135	1.08	-36.5	27.87	Interference	Interference	6.0	5.0+	ND
	09/16/08	5.90	0.4	0.19	-120.7	27.28	Interference	60	11.0	3.0	ND
CEF-46-2S	12/21/00	6.20	0.962	1.06	NM	23.20	352	720	1.0	ND	NM
	03/14/03	7.08	1.620	1.60	-112.00	20.88	310	165	2.2	0.1	NM
	06/05/03	6.44	1.860	ND	NM	24.66	228	195	2.2	0.3	NM
	09/03/03	6.25	1.480	0.03	-132.00	27.94	245	160	2.0	0.3	NM
	12/11/03	6.47	1.070	0.40	-258.00	23.85	218	190	1.0	1.0	0.6
	03/18/04	6.80	0.123	NM	-111.00	20.09	231	190	1.4	0.7	ND
	06/08/04	5.73	0.855	0.16	-145.00	25.17	154	95	4.8	ND	3.0
	09/21/04	7.06	0.142	0.03	-153.00	26.76	157	130	3.8	2.0	ND
	12/01/04	6.45	2.454	0.06	-215.20	25.63	88	100	0.6	5.0	ND
	03/13/05	5.92	2.547	0.07	-181.60	22.86	207	60	2.2	1.0	ND
	06/09/05	6.14	2.530	0.59	-199.90	24.39	127	55	5.0	0.5	ND
	09/06/05	6.68	3.436	0.04	-295.10	27.26	184	90	3.8	1.0	ND
	09/21/05	6.61	2.954	0.49	-125.00	26.67	NM	NM	NM	NM	NM
	12/06/05	6.41	1.839	0.33	-25.00	24.31	175	65	3.0	0.1	ND
	03/30/06	5.84	3.300	0.24	-10.00	24.29	167	60	5.2	ND	ND
	06/09/06	4.75	0.994	0.66	-47.90	25.94	67	60	4.4	0.1	ND
	09/25/06	5.81	1.175	0.39	-85.10	26.25	237	75	4.0	0.7	ND
	12/08/06	6.02	1.232	0.73	-9.50	23.77	162	50	2.4	2.0	ND
	03/01/07	5.17	0.841	0.41	-7.70	22.96	229	40	4.2	0.7	ND
	06/15/07	5.90	0.244	0.23	28.10	25.33	332	5	2.0	0.5	ND
	09/12/07	6.21	0.551	0.41	-56.40	27.80	148	105	3.4	ND	ND
	12/05/07	6.18	1.147	0.38	4.70	25.23	189	ND	ND	0.1	ND
	03/06/08	5.92	0.358	0.34	28.00	22.40	260	60	1.2	0.1	ND
	06/17/08	5.87	0.478	0.69	-37.70	25.13	297	125	0.8	0.2	ND
	09/16/08	6.46	0.567	0.12	-77.30	27.06	Interference	400	0.0	0.3	ND

TABLE 2
GROUNDWATER FIELD ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)*	Oxidation Reduction Potential (mV)	Temperature (°C)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)	Dissolved Oxygen (mg/L) **
CEF-46-3S	12/06/05	7.38	2.078	0.16	-106.90	25.11	108	325	ND	5.0	ND
CEF-46-4S	12/06/05	6.11	0.728	0.36	-57.10	25.04	167	20	3.8	5.0	ND
CEF-46-5I	12/21/00	5.60	0.140	1.10	NM	23.20	183	100	1.8	1.0	NM
	03/14/03	3.54	5.810	2.05	393.00	25.23	ND	ND	4.2	ND	NM
	06/05/03	2.00	4.840	0.23	407.00	26.92	Interference	ND	9.9	ND	NM
	09/03/03	2.74	4.450	0.04	320.00	27.29	Interference	ND	10.0	ND	NM
	12/11/03	2.84	4.480	4.01	331.00	22.90	568	ND	6.0	ND	ND
	03/18/04	2.48	4.074	NM	NM	25.00	172	ND	4.2	ND	ND
	06/08/04	2.28	5.216	0.10	503.60	27.25	93	ND	15.0	ND	15.0
	09/21/04	6.04	0.103	0.05	-61.80	26.85	171	5	4.8	0.1	ND
	12/01/04	4.48	0.638	0.23	267.70	26.86	Interference	ND	7.2	0.1	ND
	03/13/05	4.21	2.300	0.00	283.00	27.41	579	ND	9.2	ND	ND
	06/09/05	2.71	5.151	0.06	319.90	29.89	390	ND	10.0	ND	ND
	09/06/05	2.91	0.946	0.18	513.50	26.98	145	ND	3.8	ND	ND
	12/06/05	2.62	4.721	2.15	554.10	24.95	94	ND	ND	ND	ND
	03/29/06	2.36	3.174	0.21	418.90	25.71	478	ND	4.8	ND	ND
	06/09/06	2.69	4.061	0.67	406.40	29.66	535	ND	6.0	0.1	ND
	09/24/06	2.91	3.865	0.24	361.70	28.12	Interference	5	9.8	ND	ND
	12/08/06	2.66	12.471	1.50	353.30	21.20	Interference	ND	5.0	1.0	ND
	03/01/07	3.21	0.463	1.10	536.50	23.61	102	5	0.6	ND	ND
	06/15/07	1.31	0.660	0.83	566.00	27.51	460	ND	3.0	0.1	ND
	09/12/07	2.92	2.156	1.24	339.50	27.99	Interference	ND	6.0	0.3	ND
	12/05/07	3.03	3.368	2.35	328.10	26.00	Interference	ND	5.0	ND	1.5
	03/06/08	2.86	0.327	0.84	57.60	24.82	99	ND	1.2	ND	ND
	06/17/08	3.85	0.298	0.32	68.80	27.32	116	5	3.6	0.1	ND
	09/16/08	3.54	0.499	0.38	218.70	25.91	Interference	0	9.2	0.1	ND
CEF-46-6D	12/21/00	9.71	0.180	6.51	NM	23.50	8	120	0.4	0.3	NM
	03/14/03	3.23	8.600	2.64	404.00	25.71	ND	ND	4.2	ND	NM
	06/09/03	2.69	9.740	0.09	77.00	27.97	Interference	ND	7.0	ND	NM
	09/03/03	2.70	8.759	0.37	335.00	27.71	Interference	ND	10.0	ND	NM
	12/10/03	2.62	0.790	ND	376.00	23.95	Interference	ND	5.4	ND	0.8
	03/16/04	2.53	0.746	6.00	NM	24.60	263	ND	ND	3.0	ND
	06/08/04	2.42	8.973	0.09	431.60	26.46	Interference	ND	9.8	ND	15.0
	09/21/04	2.37	10.411	0.23	434.30	26.45	109	ND	9.8	0.1	ND
	12/01/04	2.59	18.791	0.15	437.10	27.16	118	ND	7.6	0.1	ND
	03/13/05	2.44	9.000	0.14	414.00	26.45	176	ND	10.0	ND	ND
	06/09/05	2.49	8.012	0.15	431.90	26.79	Interference	ND	10.0	ND	ND
	09/06/05	2.48	7.592	0.99	608.90	28.41	154	ND	4.2	0.1	ND
	12/06/05	2.52	10.154	5.44	515.70	25.87	99	ND	10.0	ND	ND
	03/29/06	2.21	9.429	1.82	598.90	26.23	241	200	4.6	ND	1.8
	06/09/06	2.49	8.276	0.71	564.50	28.89	128	ND	2.5	0.1	ND
	09/24/06	2.56	8.092	0.33	508.10	28.70	Interference	60	10.0	ND	ND
	12/08/06	2.42	9.589	4.80	344.60	19.58	Interference	ND	4.4	ND	3.2
	03/01/07	2.50	10.085	0.51	633.90	24.74	Interference	100	0.6	ND	ND
	06/15/07	1.88	8.965	0.45	532.80	27.37	Interference	ND	1.0	0.1	ND
	09/12/07	2.43	10.362	0.71	408.80	28.74	239	ND	9.5	ND	ND
	12/05/07	2.48	16.340	2.07	408.50	25.88	Interference	ND	5.5	ND	1.75
	03/06/08	2.38	10.573	0.59	439.70	21.74	Interference	ND	4.2	ND	ND
	06/17/08	2.51	11.134	0.98	409.20	22.24	Interference	ND	10.0+	ND	ND
	09/16/08	3.08	4.656	0.37	419.70	23.55	Interference	50	28.0	0.3	ND

TABLE 2
GROUNDWATER FIELD ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)*	Oxidation Reduction Potential (mV)	Temperature (°C)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)	Dissolved Oxygen (mg/L) **
CEF-46-7I	12/21/00	4.90	0.510	1.11	NM	25.40	317	60	0.6	0.3	NM
	03/14/03	3.23	0.250	5.24	360.00	23.41	121	ND	1.8	ND	NM
	06/09/03	3.80	0.191	1.05	278.00	26.12	233	ND	2.2	ND	NM
	09/03/03	4.51	0.226	0.12	81.00	27.32	143	ND	4.0	2.0	NM
	12/11/03	5.19	0.180	0.67	-170.00	23.07	70	25	3.7	2.0	ND
	03/18/04	4.89	0.230	NM	120.00	24.42	75	15	4.0	ND	ND
	06/08/04	3.67	0.089	0.24	256.00	25.91	99	ND	4.4	ND	ND
	09/21/04	3.55	0.085	0.00	163.00	26.80	68	5	10.0	ND	ND
	12/01/04	5.62	0.175	0.06	-50.60	26.45	217	10	5.8	1.0	ND
	03/13/05	4.90	0.130	0.12	-79.20	25.78	122	35	4.0	2.0	ND
	06/09/05	4.04	0.439	0.67	-39.50	26.99	148	ND	3.8	2.0	ND
	09/06/05	3.65	0.461	0.15	253.60	26.26	140	ND	4.6	0.1	ND
	12/06/05	3.90	0.188	0.40	258.30	23.64	113	ND	3.0	0.1	ND
	03/30/06	4.40	0.244	0.38	120.70	23.92	128	20	5.0	0.1	ND
	06/09/06	2.04	0.126	0.68	37.20	25.43	176	70	5.8	0.7	ND
	09/25/06	4.84	0.108	0.25	3.40	25.61	105	15	4.8	2.0	ND
	12/08/06	3.39	0.485	2.30	468.20	23.41	181	ND	0.1	ND	4.2
	03/01/07	4.63	0.134	0.35	-3.20	24.18	108	65	3.2	0.7	ND
	06/15/07	4.83	0.098	0.20	-69.60	26.19	176	ND	2.4	1.0	ND
	09/12/07	4.92	0.083	0.57	-41.90	28.28	98	5	3.5	2.0	ND
	12/05/07	4.95	0.112	0.50	-11.70	25.66	148	ND	2.0	2.0	ND
	03/06/08	4.50	0.075	0.45	-70.10	23.89	113	4	3.4	1.0	ND
	06/17/08	4.02	0.063	0.60	-64.20	24.81	145	15	2.6	1.0	ND
	09/16/08	4.61	0.031	0.13	-70.20	26.41	150	20	2.6	2.0	ND
CEF-46-8I	12/06/05	4.89	0.076	0.59	80.80	25.87	Interference	15	3.0	ND	ND
CEF-46-9I	12/20/00	5.29	0.079	1.47	NM	24.60	84.6	20	0.8	0.3	NM
	03/14/03	5.47	0.914	1.35	64.00	25.40	ND	ND	2.2	1.0	NM
	06/04/03	4.75	1.090	0.60	-8.00	25.73	Interference	ND	6.0	1.0	NM
	09/03/03	3.74	1.040	0.84	18.00	26.85	Interference	ND	3.8	1.0	NM
	12/10/03	3.64	1.010	6.21	-100.00	26.29	Interference	ND	5.2	0.5	ND
	03/16/04	3.67	0.165	NM	199.00	25.08	Interference	ND	2.8	2.0	ND
	06/08/04	3.58	1.770	0.14	68.00	25.99	Interference	ND	8.0	5.0	3.0
	09/21/04	3.50	1.401	0.17	-18.20	25.99	Interference	ND	8.4	3.0	ND
	12/01/04	3.68	NM	0.11	-74.80	26.09	370	ND	4.5	3.0	ND
	03/13/05	5.92	0.540	0.00	72.00	25.01	296	ND	5.4	1.0	ND
	06/09/05	3.76	0.830	0.14	-29.30	26.31	201	ND	3.6	2.0	ND
	09/06/05	3.74	0.641	0.18	-39.70	28.43	352	ND	3.5	5.0	ND
	12/06/05	3.76	1.055	0.24	225.80	25.47	Interference	ND	3.0	5.0	ND
	03/30/06	3.96	20.384	0.37	-34.40	24.92	Interference	ND	5.0	2.0	ND
	06/09/06	2.86	0.756	0.33	177.80	29.25	Interference	ND	7.0	2.0	ND
	09/24/06	3.70	0.661	0.17	218.80	29.13	413	5	7.2	0.1	ND
	12/08/06	3.81	0.493	0.38	-43.60	24.24	Interference	ND	ND	2.0	ND
	03/01/07	3.80	0.390	0.33	44.90	24.03	257	ND	3.6	2.0	ND
	06/15/07	3.07	0.528	0.20	62.20	26.36	Interference	ND	3.1	1.0	ND
	09/12/07	3.93	0.236	1.48	58.60	27.37	212	ND	3.4	1.0	ND
	12/05/07	4.42	0.279	0.45	14.60	25.43	323	ND	2.8	1.0	ND
	03/06/08	3.45	0.296	0.23	-41.80	25.75	487	ND	2.0	ND	ND
	06/17/08	4.02	0.146	0.96	-39.10	25.87	400	15	3.2	5.0	ND
	09/16/08	4.06	0.064	0.50	63.10	27.80	380	5	4.0	5.0	ND

TABLE 2
GROUNDWATER FIELD ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)*	Oxidation Reduction Potential (mV)	Temperature (°C)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)	Dissolved Oxygen (mg/L) **
CEF-46-10I	12/06/05	5.68	0.119	0.50	33.20	23.89	99	15	2.0	1.0	ND
CEF-46-11I	12/06/05	6.44	0.406	0.63	-46.20	23.45	134	85	2.0	5.0	ND
CEF-46-12I	12/20/00	5.57	0.160	1.91	NM	26.50	193.6	80	0.8	2.0	NM
	03/14/03	3.38	0.178	3.92	333.00	26.07	96	ND	2.2	ND	NM
	06/05/03	4.22	0.155	1.65	117.00	26.33	168	ND	1.0	ND	NM
	09/03/03	4.71	0.308	0.00	164.00	27.88	136	5	0.0	ND	NM
	12/11/03	4.97	0.310	0.61	129.00	23.96	84	1	2.2	0.1	0.8
	03/18/04	5.33	0.129	0.60	NM	24.90	86	5	3.5	0.1	0.6
	06/08/04	4.69	0.142	0.47	162.00	26.48	122	5	3.0	ND	13.0
	09/21/04	4.65	0.245	0.01	124.00	24.84	115	5	3.0	ND	ND
	12/01/04	5.30	0.661	0.12	133.40	26.37	45	5	1.4	ND	ND
	03/13/05	5.12	0.384	0.12	120.10	24.02	220	25	1.0	ND	ND
	06/09/05	5.13	0.412	0.97	121.10	25.29	217	25	1.8	ND	ND
	09/06/05	5.06	0.417	0.22	4.20	26.82	306	20	2.8	0.1	ND
	12/06/05	4.79	0.185	0.50	170.40	22.70	273	ND	4.8	ND	ND
	03/29/06	4.54	0.234	0.42	66.50	24.92	253	25	2.8	0.3	ND
	06/09/06	3.73	0.203	0.59	216.8	26.76	246	15	5.2	0.1	ND
	09/25/06	3.93	0.222	0.60	-49.8	25.73	443	15	3.2	0.1	ND
	12/08/06	4.39	0.236	1.04	266.5	23.65	296	ND	4.5	0.1	ND
	03/01/07	4.33	0.227	0.30	106.5	23.43	247	ND	3.2	0.1	ND
	06/15/07	3.53	0.188	0.43	126.6	24.87	379	ND	2.4	0.1	ND
	09/12/07	4.55	0.183	0.55	182.0	28.00	227	5	2.8	ND	ND
	12/05/07	4.74	0.298	0.46	28.4	25.33	367	ND	3.0	0.1	ND
	03/06/08	3.96	0.243	0.23	6.1	22.97	425	ND	1.8	0.1	ND
	06/17/08	4.71	0.176	0.07	65.9	26.58	398	10	3.4	0.1	ND
	09/16/08	4.45	0.108	0.21	-57.3	26.55	392	20	2.8	0.1	ND
CEF-46-13I	12/20/00	5.40	0.120	1.23	NM	25.00	188	20	1.4	5.0	NM
	03/14/03	6.29	0.110	0.99	-31.00	25.90	280	ND	2.5	5.0	NM
	06/05/03	3.71	0.643	0.00	1.00	26.44	Interference	ND	3.6	5.0	NM
	09/03/03	3.81	0.999	0.36	57.00	28.50	Interference	ND	2.4	2.0	NM
	12/11/03	3.93	0.990	1.11	160.00	24.10	Interference	ND	3.2	5.0	ND
	03/18/04	3.76	1.282	0.50	NM	25.60	Interference	ND	3.0	0.3	ND
	06/08/04	3.08	1.170	0.34	286.00	26.73	Interference	ND	3.6	ND	1.0
	09/21/04	4.96	0.588	0.17	-32.00	26.20	Interference	ND	7.8	5.0	ND
	12/01/04	3.93	0.931	0.06	37.70	26.53	Interference	ND	0.7	5.0	ND
	03/13/05	2.92	0.947	0.75	494.30	24.67	Interference	ND	2.8	1.0	ND
	06/09/05	2.98	1.584	0.71	361.30	25.97	Interference	ND	4.0	0.7	ND
	09/06/05	3.84	1.698	0.84	-90.00	26.30	Interference	ND	4.1	1.0	ND
	12/06/05	3.55	0.568	0.47	257.70	22.63	167	ND	3.0	2.0	ND
	03/29/06	2.48	0.538	0.63	571.60	24.98	246	ND	3.4	0.1	ND
	06/09/06	3.04	0.205	0.26	125.10	27.12	58	ND	10.0	2.0	ND
	09/25/06	3.86	0.154	0.47	-42.30	26.38	395	ND	5.4	0.1	ND
	12/08/06	4.07	0.146	1.03	121.60	23.00	242	ND	3.5	2.0	ND
	03/01/07	3.90	0.174	2.18	187.50	23.81	158	ND	0.8	0.1	1.0
	06/15/07	3.94	0.149	0.33	290.70	25.18	213	ND	1.2	0.1	ND
	09/12/07	4.32	0.124	0.33	-25.10	28.40	209	5	3.5	0.7	ND
	12/05/07	4.52	0.203	0.46	15.00	25.75	349	ND	3.4	0.1	ND
	03/06/08	3.42	0.194	2.78	62.70	24.01	230	ND	2.4	ND	1.8
	06/17/08	4.35	0.124	0.74	-62.80	27.98	352	15	2.5	5.0	ND
	09/16/08	4.46	0.077	0.17	-125.20	26.34	267	20	1.6	1.0	ND

TABLE 2
GROUNDWATER FIELD ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)*	Oxidation Reduction Potential (mV)	Temperature (°C)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)	Dissolved Oxygen (mg/L) **
CEF-46-14D	12/20/00	5.87	0.109	1.52	NM	24.90	84	540	2.4	0.3	NM
	03/14/03	6.26	0.098	0.85	-33.00	25.32	180	15	2.5	5.0	NM
	06/04/03	5.77	0.106	0.17	-39.00	26.14	186	20	2.3	2.0	NM
	09/03/03	4.82	0.215	0.86	-54.00	27.66	155	20	2.2	5.0	NM
	12/10/03	5.36	0.282	0.07	-62.00	25.92	136	10	2.4	1.0	ND
	03/16/04	5.43	0.105	0.80	NM	25.60	154	20	24.0	5.0	ND
	06/08/04	5.17	0.109	0.10	-58.90	26.00	NM	NM	NM	NM	NM
	09/21/04	5.26	0.125	0.16	-159.20	25.37	120	15	4.8	3.0	ND
	12/01/04	5.51	0.239	0.42	-174.00	25.41	176	25	2.4	0.1	ND
	03/13/05	7.68	0.110	0.20	-29.00	22.89	109	25	3.8	2.0	ND
	06/09/05	5.38	0.156	0.25	-64.40	25.86	94	15	1.5	0.1	ND
	09/06/05	5.33	0.108	0.25	-169.70	26.70	109	15	3.5	1.0	ND
	12/06/05	5.22	0.127	ND	-28.60	22.36	185	ND	2.6	2.0	ND
	03/29/06	3.67	0.106	0.51	192.00	24.43	160	15	4.8	0.3	ND
	06/09/06	4.02	0.093	0.52	25.10	29.19	93	10	2.6	0.1	ND
	09/24/06	3.34	0.095	0.49	148.90	28.48	252	40	3.0	0.3	ND
	12/08/06	5.45	0.103	0.38	-109.40	23.46	Interference	45	1.0	0.7	ND
	03/01/07	5.39	0.109	0.32	-16.00	23.42	217	ND	1.8	0.3	ND
	06/15/07	5.28	0.089	0.28	-46.60	26.29	159	1	1.2	0.1	ND
	09/12/07	5.46	0.090	1.21	-21.60	26.65	109	25	3.4	0.1	1.0
	12/05/07	5.77	0.135	0.58	15.20	22.79	117	ND	2.0	0.1	ND
	03/06/08	5.08	0.122	0.30	-54.30	24.57	169	20	1.8	0.1	ND
	06/17/08	5.16	0.082	0.75	-59.60	28.71	115	30	2.0	0.7	ND
	09/16/08	3.91	0.042	0.64	21.50	26.82	132	14	4.6	1.0	ND
CEF-46-15I	12/20/00	5.01	0.108	1.27	NM	22.20	86.6	40	3.2	1.0	NM
	03/13/03	4.64	0.191	0.90	328.00	22.79	343	ND	3.2	ND	NM
	06/04/03	1.76	0.172	0.59	92.00	22.89	368	10	3.3	ND	NM
	09/03/03	3.99	0.369	0.45	195.00	24.16	367	ND	2.8	ND	NM
	12/10/03	4.00	0.290	6.16	99.00	23.64	124	1	3.5	0.1	5.0
	03/16/04	4.30	0.501	NM	241.00	22.91	324	ND	3.0	ND	ND
	06/08/04	4.26	0.168	0.22	193.30	22.89	317	15	3.8	ND	3.0
	09/21/04	4.25	0.179	0.27	-55.00	23.27	319	ND	3.5	ND	ND
	12/01/04	4.42	0.347	0.19	-91.40	23.69	143	15	3.4	0.1	ND
	03/13/05	4.47	0.180	2.07	256.00	22.05	291	ND	ND	ND	1.0
	06/09/05	4.16	0.244	0.19	-51.00	22.93	312	10	4.8	ND	ND
	09/06/05	4.32	0.138	0.66	-101.60	23.90	219	ND	2.5	3.0	ND
	12/06/05	4.66	0.180	0.76	86.00	20.99	155	15	2.0	0.7	ND
	03/30/06	4.54	2.820	0.55	23.20	22.20	234	15	4.8	0.1	ND
	06/09/06	3.10	0.146	0.45	138.80	24.19	241	20	5.4	0.5	ND
	09/24/06	3.07	0.142	0.29	192.90	24.45	253	5	6.4	ND	ND
	12/08/06	4.54	0.150	0.54	-2.00	20.88	296	ND	2.2	0.1	ND
	03/01/07	4.47	0.151	0.38	82.90	21.21	296	ND	2.6	0.3	ND
	06/15/07	3.03	0.118	0.40	88.10	22.42	431	ND	3.0	0.7	ND
	09/12/07	4.64	0.111	1.94	25.30	23.42	236	2	4.2	1.0	1.0
	12/05/07	4.62	0.187	1.12	30.10	19.51	232	ND	3.0	0.3	ND
	03/06/08	3.99	0.155	0.39	-37.80	20.65	280	ND	2.0	1.0	ND
	06/17/08	4.70	0.107	0.09	45.70	23.77	291	10	3.2	2.0	ND
	09/16/08	4.05	0.700	0.58	92.30	24.64	302	10	2.8	2.0	ND
CEF-46-16I	12/06/05	4.87	0.148	0.90	44.90	20.67	241	20	2.5	5.0	ND
CEF-46-17D	12/06/05	4.44	1.904	0.61	53.50	20.08	Interference	ND	3.5	3.0	ND
CEF-46-18I	12/07/05	3.80	0.856	0.99	318.80	23.56	0.186	ND	9.0	0.1	ND

TABLE 2
GROUNDWATER FIELD ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)*	Oxidation Reduction Potential (mV)	Temperature (°C)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)	Dissolved Oxygen (mg/L) **
CEF-46-19I	12/07/05	2.58	5.885	0.77	476.90	22.01	Interference	ND	3.6	5.0	ND
CEF-46-20I	12/07/05	3.84	1.054	0.95	324.00	23.14	241	ND	9.0	0.1	ND
CEF-46-21I	12/20/00	4.86	0.047	1.35	NM	23.20	9.4	60	0.8	ND	NM
	03/13/03	3.75	0.713	2.35	397.00	23.94	0.0	ND	3.0	ND	NM
	06/05/03	3.12	0.798	0.00	251.00	24.22	Interference	ND	3.9	0.7	NM
	09/03/03	3.34	0.406	2.82	449.00	26.30	115	ND	1.6	ND	NM
	12/11/03	3.58	0.476	3.43	407.00	23.07	89	ND	1.6	ND	2.0
	03/18/04	3.81	0.162	2.10	NM	23.00	91	ND	2.4	ND	1.0
	06/08/04	3.39	0.147	0.86	406.00	23.91	78	ND	1.4	ND	13.0
	09/21/04	2.61	0.147	0.44	317.00	24.62	69	ND	0.8	ND	ND
	12/01/04	3.89	0.334	2.30	439.10	24.76	54	ND	0.3	ND	ND
	03/13/05	3.66	0.175	0.10	311.20	23.58	112	ND	0.8	ND	0.10
	06/09/05	3.61	0.114	1.21	319.00	23.57	45	5	1.4	ND	0.00
	09/06/05	4.22	0.103	0.26	79.30	25.31	75	5	1.0	ND	ND
	12/07/05	4.36	0.218	2.03	219.80	23.24	35	ND	4.5	3.0	3.60
	03/29/06	3.54	0.072	0.43	83.90	23.97	31	10	1.0	0.3	ND
	06/09/06	3.70	0.056	0.15	209.70	25.52	NM	NM	NM	NM	NM
	09/24/06	3.83	0.095	0.47	-45.30	25.78	156	20	2.4	0.1	ND
	12/08/06	3.99	0.121	0.57	284.10	20.08	140	5	1.8	0.1	ND
	03/01/07	3.15	0.136	0.49	126.40	22.41	142	ND	0.8	0.5	ND
	06/15/07	3.23	0.159	0.51	650.00	26.36	Interference	ND	3.6	0.1	ND
	09/12/07	4.42	0.139	0.58	167.60	25.28	199	5	3.2	ND	ND
	12/05/07	4.35	0.238	2.42	221.10	23.16	171	ND	2.8	0.1	2.00
	03/06/08	3.98	0.176	0.66	389.50	20.92	98	ND	1.8	0.1	ND
	06/17/08	4.29	0.194	0.10	58.10	23.85	253	15	4.2	1.0	ND
	9/16/08`	4.03	0.103	0.53	140.10	26.42	249	5	3.6	0.0	ND
CEF-46-22I	12/07/05	3.70	4.124	1.03	153.30	22.84	95	ND	10.00	5.00	ND
CEF-46-23D	12/07/05	2.44	21.506	1.23	438.80	24.49	86	ND	8.50	0.10	ND
CEF-46-24D	12/20/00	6.15	0.129	0.13	NM	21.90	16.4	60	2.3	0.1	NM
	03/14/03	3.70	2.530	2.23	402.00	27.46	ND	ND	4.0	ND	NM
	06/05/03	0.36	3.160	0.36	250.00	28.22	Interference	ND	5.9	ND	NM
	09/03/03	3.20	2.110	0.21	282.00	27.68	Interference	ND	5.4	ND	NM
	12/10/03	3.24	0.200	0.30	308.00	26.18	Interference	ND	3.8	ND	ND
	03/16/04	3.45	1.285	0.60	NM	27.60	Interference	ND	4.2	0.1	ND
	06/08/04	3.09	1.564	0.20	386.40	27.04	Interference	ND	7.2	0.1	ND
	09/21/04	3.74	1.218	0.44	17.20	26.06	Interference	ND	9.6	0.3	ND
	12/01/04	3.74	2.133	0.33	211.60	24.52	Interference	ND	8.5	0.3	ND
	03/13/05	6.16	1.200	0.12	58.00	25.70	Interference	5	7.4	1.0	ND
	06/09/05	4.26	4.395	0.06	106.40	26.31	Interference	5	10.0	0.5	ND
	09/06/05	4.12	2.946	0.17	161.20	26.94	Interference	ND	9.0	1.0	ND
	12/07/05	4.38	8.358	0.96	207.30	23.42	72	ND	5.2	0.3	0.96
	03/29/06	4.34	3.362	0.46	97.90	24.67	Interference	5	5.2	ND	ND
	06/09/06	3.66	2.810	0.41	212.10	26.11	Interference	ND	10.0	0.1	ND
	09/24/06	4.09	2.319	0.50	20.40	26.75	Interference	ND	5.0	0.1	ND
	12/08/06	3.48	1.664	0.43	265.90	21.23	Interference	ND	3.1	0.1	ND
	03/01/07	3.24	1.353	0.42	180.70	23.24	Interference	ND	4.2	0.1	ND
	06/15/07	4.05	1.017	0.61	182.70	25.46	Interference	ND	4.0	0.1	ND
	09/12/07	4.69	0.762	0.94	123.10	26.54	Interference	5	3.6	ND	ND
	12/05/07	4.81	1.093	2.45	21.70	23.96	Interference	40	2.5	ND	2.30
	03/06/08	3.44	0.771	0.54	286.70	23.36	Interference	ND	2.2	0.5	ND
	06/17/08	3.82	0.730	0.11	77.70	25.01	Interference	10	3.0	0.7	ND
	09/16/08	4.76	0.484	0.22	42.10	25.20	Interference	10	19.0	0.3	ND

TABLE 2
GROUNDWATER FIELD ANALYTICAL RESULTS

BUILDING 46
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well	Date	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)*	Oxidation Reduction Potential (mV)	Temperature (°C)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)	Dissolved Oxygen (mg/L) **
CEF-46-25I	12/20/00	5.81	0.167	2.88	NM	24.60	20.6	120	0.6	5.0	NM
	03/13/03	6.16	1.420	1.03	-58.00	25.35	ND	ND	4.5	5.0	NM
	06/04/03	5.98	1.440	0.00	-87.00	25.76	ND	ND	6.0	5.0	NM
	09/03/03	3.77	0.910	0.53	-107.00	26.43	Interference	ND	3.8	5.0	NM
	12/10/03	3.95	0.860	5.82	-198.00	24.15	Interference	ND	3.5	5.0	ND
	03/16/04	3.74	0.179	NM	-2.00	23.99	Interference	ND	5.4	5.0	ND
	06/08/04	3.53	2.054	0.13	-92.90	25.15	Interference	ND	6.2	5.0	ND
	09/21/04	3.66	1.736	0.41	-97.40	24.31	Interference	ND	NM	2.0	ND
	12/01/04	3.72	3.586	0.08	-153.10	24.20	Interference	ND	7.8	5.0	ND
	03/13/05	6.67	0.800	0.19	8.00	22.96	Interference	ND	12.0	5.0	ND
	06/09/05	3.74	1.429	0.13	-111.30	24.71	Interference	ND	9.8	5.0	ND
	09/06/05	3.44	0.871	0.14	-96.00	25.26	Interference	ND	9.5	5.0	ND
	12/07/05	3.96	2.015	1.03	140.40	21.84	58	ND	7.0	5.0	ND
	03/29/06	4.05	0.340	0.43	121.40	23.78	Interference	5	5.0	5.0	ND
	06/09/06	3.52	0.235	0.33	-28.40	24.84	NM	NM	NM	NM	NM
	09/24/06	3.86	0.201	0.47	-85.30	25.71	316	ND	3.4	5.0	ND
	12/08/06	3.85	0.299	0.84	75.90	20.23	Interference	ND	3.4	5.0	ND
	03/01/07	3.29	0.214	0.42	-44.40	22.33	Interference	ND	3.2	2.0	ND
	06/15/07	4.21	0.199	0.72	-76.30	24.37	Interference	ND	3.2	5.0	ND
	09/12/07	4.39	0.138	0.96	-27.60	25.80	134	2	2.6	5.0	ND
	12/05/07	4.39	0.192	1.93	-142.00	20.51	Interference	ND	2.0	2.0	1.6
	03/06/08	4.24	0.098	0.41	-81.80	21.75	141	ND	2.6	5.0	ND
	06/17/08	4.71	1.045	0.07	33.50	24.79	211	15	2.4	5.0	ND
	09/16/08	4.46	0.034	0.44	4.30	25.94	2.39	10	5.6	5.0	ND
CEF-46-26I	12/20/00	8.53	0.099	0.03	NM	23.10	24.2	NM	1.4	NM	NM
	03/14/03	6.34	0.063	4.66	3.00	26.88	ND	ND	4.6	5.0	NM
	06/05/03	3.31	2.880	0.00	-2.00	24.60	Interference	ND	9.0	5.0	NM
	09/03/03	3.40	1.990	0.12	111.00	25.14	Interference	ND	7.8	5.0	NM
	12/11/03	3.52	0.224	0.00	151.00	22.18	Interference	ND	3.0	5.0	ND
	03/18/04	3.51	0.268	NM	203.00	22.45	Interference	ND	5.0	5.0	ND
	06/08/04	2.43	3.460	0.32	284.00	24.34	Interference	ND	4.0	1.0	4.0
	09/21/04	3.69	0.280	0.00	91.00	23.88	Interference	ND	10.0	5.0	ND
	12/01/04	2.62	6.045	0.11	371.60	23.43	Interference	ND	3.33	5.0	ND
	03/13/05	2.90	5.353	0.12	250.30	24.33	Interference	ND	10.0	2.0	ND
	06/09/05	2.54	6.025	0.82	297.10	24.22	Interference	ND	10.0	5.0	ND
	09/06/05	3.40	5.927	0.06	74.90	24.57	Interference	ND	6.2	3.0	ND
	12/07/05	3.50	6.642	0.43	225.50	22.19	Interference	ND	8.0	5.0	ND
	03/29/06	2.84	3.147	0.46	498.40	23.82	Interference	ND	8.0	ND	ND
	06/09/06	2.72	2.493	0.23	281.80	24.46	Interference	ND	9.2	5.0	ND
	09/24/06	3.78	1.952	0.42	-63.80	26.59	Interference	ND	8.2	2.0	ND
	12/08/06	3.24	1.682	0.69	100.60	20.74	Interference	ND	4.5	5.0	ND
	03/01/07	2.32	1.746	0.58	280.60	22.32	Interference	ND	4.8	0.1	ND
	06/15/07	3.77	2.088	0.56	22.40	24.77	Interference	ND	6.6	2.0	ND
	09/12/07	3.41	1.769	0.47	37.40	26.15	Interference	ND	2.8	2.0	ND
	12/05/07	3.40	2.466	3.34	2.00	24.43	Interference	ND	4.4	5.0	ND
	03/06/08	3.40	1.314	0.38	21.30	21.99	Interference	ND	3.6	5.0	ND
	06/17/08	3.56	0.811	0.72	-2.50	24.35	Interference	5	6.6	5.0	ND
	09/16/08	3.79	0.327	0.16	-54.80	24.92	Interference	5	9.0	2.0	ND
CEF-46-27D	12/07/05	7.67	1.491	1.08	-79.40	22.38	169	280	5.0	ND	ND
CEF-46-28I	12/07/05	4.00	5.614	0.53	84.50	21.24	Interference	ND	4.8	5.0	ND
CEF-46-29I	12/07/05	3.52	7.275	0.53	152.90	21.24	Interference	ND	7.0	5.0	ND
CEF-46-30I	12/07/05	3.64	4.614	0.29	-3.20	21.97	Interference	ND	10.0	5.0	ND
CEF-46-31I	12/07/05	3.68	6.551	0.44	71.60	21.08	Interference	ND	10.0	5.0	ND

* YSI Meter
**Dissolved Oxygen Hach Test Kit
***Well went dry after pumping 0.7 gallons, final readings not obtained.
ND = Non Detect
NM = Not Measured

TABLE 3
GROUNDWATER LABORATORYANALYTICAL 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
Groundwater Criteria (GCTL) [1]		1	30	40	20	20	14	28	28	250 *	5000
Natural Attenuation Default Source		100	300	400	200	200	140	280	280	n/a	50000
CEF-46-1S	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	51,600
CEF-46-2S	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	<0.4	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	297	244
CEF-46-3S	12/06/05	17.2	1.81 I	0.480 I	1.56 I	19.3	<0.103	<0.137	<0.209	503	40 I
CEF-46-4S	12/06/05	0.570 I	<0.201	<0.142	0.540 I	1.47 I	<0.103	<0.137	<0.209	255	<18

TABLE 3
GROUNDWATER LABORATORYANALYTICAL 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
Groundwater Criteria (GCTL) [1]		1	30	40	20	20	14	28	28	250 *	5000
Natural Attenuation Default Source		100	300	400	200	200	140	280	280	n/a	50000
CEF-46-5I	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	683.0	333
CEF-46-6D	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

TABLE 3
GROUNDWATER LABORATORYANALYTICAL 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
Groundwater Criteria (GCTL) [1]		1	30	40	20	20	14	28	28	250 *	5000
Natural Attenuation Default Source		100	300	400	200	200	140	280	280	n/a	50000
CEF-46-7I	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
CEF-46-8I	12/06/05	<0.143	<0.201	<0.142	<0.220	13.8	<0.103	<0.137	<0.209	13.3	<18
CEF-46-9I	12/20/00	<1.0	<1.0	<1.0	<1.0	NM	<1.1	NM	NM	NM	<570
	01/25/01	<1.0	<1.0	<1.0	<1.0	1.3	<1.0	NM	NM	NM	<500
	03/14/03	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	NM	<200
	06/04/03	<1.00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NM	<211
	09/03/03	<1.00	<1.0	<1.0	<1.0	<1.0	0.22	<1.0	<1.0	NM	<225
	12/10/03	<1.00	<1.0	<1.0	<1.0	<1.0	0.22	<1.0	<1.0	NM	<200
	03/16/04	<1.00	<1.0	<1.0	<3.0	<1.0	<0.11	<0.11	<0.11	NM	<111
	06/08/04	<1.00	<1.00	<1.00	<1.00	<1.00	<2.20	<2.20	<2.20	NM	<210
	09/21/04	<1.00Y	<1.00Y	<1.00Y	<1.00Y	3.92Y	<2.20 J3Y	<2.20 J3Y	<2.20 J3Y	NM	220Y
	12/01/04	<0.143	0.5500 I	<0.1417	0.440 I	28.85	0.32 I	<0.202	<0.212	NM	80 I V
	03/13/05	<0.143	<0.201	<0.142	<0.220	16.0	<0.101	<0.133	<0.210	NM	<18
	06/09/05	< 0.143	0.420 I	< 0.142	0.550 I	13.5	<0.101	< 0.133	< 0.210	253	< 18
	09/06/05	< 0.143	<0.201	<0.142	0.220 I	79.7	<0.100	<0.133	<0.203	288 ?	< 18
	12/06/05	<0.143	<0.201	<0.142	<0.220	48.1	<0.100	<0.133	<0.203	486	<18
	03/30/06	0.260 I	<0.126	<0.176	<0.298	24.2	<0.100	<0.133	<0.203	556	191
	06/09/06	<0.305	<0.338	<0.257	<0.433	12.7	<0.100	<0.133	<0.203	380	452
	09/24/06	<0.305	<0.338	<0.257	<0.433	14.6	<0.100	<0.133	<0.203	114	54 I
	12/08/06	<0.305	<0.338	<0.257	<0.433	9.52	<0.100	<0.133	<0.203	228	<18
	03/01/07	<0.305	<0.338	<0.257	<0.433	7.19	<0.100	2.71 I	2.35 I	137	<18
	06/15/07	<0.305	<0.338	<0.257	<0.433	9.60	<0.100	<0.133	<0.203	187	119 I
	09/12/07	<0.305	<0.338	0.270 I	<0.433	<0.336	<0.100	<0.133	<0.203	97.0	53 I V
	12/05/07	<0.305	<0.338	<0.257	<0.433	0.800 I	<0.100	<0.133	<0.203	35.7	<18
	03/06/08	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	80.7	<18
	06/18/08	<0.270	<0.240	<0.280	<0.860	<0.420	<1.00	<1.00	<1.00	38.8	339 V,CF2,CF6
	09/16/08	<0.4	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	37.1	343
CEF-46-10I	12/06/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.102	<0.136	<0.207	9.04	<18
CEF-46-11I	12/06/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.105	<0.140	<0.214	17.4	<18

TABLE 3
GROUNDWATER LABORATORYANALYTICAL 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
Groundwater Criteria (GCTL) [1]		1	30	40	20	20	14	28	28	250 *	5000
Natural Attenuation Default Source		100	300	400	200	200	140	280	280	n/a	50000
CEF-46-12I	12/20/00	<1.0	<1.0	<1.0	<1.0	NM	<1.1	NM	NM	NM	<530
	01/24/01	<1.0	<1.0	<1.0	<1.0	14	<1.0	NM	NM	NM	<520
	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
	12/11/03	<1.00	<1.0	<1.0	<3.0	2.2	<0.10	<0.10	<0.10	NM	<200
	03/18/04	<1.00	<1.0	<1.0	<3.0	79.9	<0.10	<0.10	<0.10	NM	<222
	06/08/04	<1.00	<1.00	<1.00	<1.00	502	<2.20	<2.20	<2.20	NM	<200
	09/21/04	<1.00Y	<1.00Y	<1.00Y	<1.00Y	18.9Y	<2.00 J3Y	<2.00 J3Y	<2.00 J3Y	NM	<200Y
	12/01/04	<0.143	<0.2010	<0.1417	<0.220	8.480	<0.22	<0.200	<0.210	NM	240 I V
	03/13/05	<0.143	<0.201	<0.142	<0.220	0.450 I	<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	47.5	< 18
	09/06/05	<0.143	<0.201	<0.142	<0.220	< 0.236	<0.100	<0.133	<0.203	57.1	< 18
	12/06/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.100	<0.133	<0.203	43.9	<18
	03/29/06	<0.140	<0.126	<0.176	<0.298	0.310 I	<0.100	<0.133	<0.203	47.8	<18
	06/09/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	49.9	70 I
	09/25/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	63	<18
	12/08/06	<0.305	<0.338	<0.257	<0.433	<0.335	<0.100	<0.133	<0.203	68.3	<18
	03/01/07	<0.305	<0.338	<0.257	<0.433	<0.336	3.47 I	2.73 I	<0.203	49.2	<18
	06/15/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	45.8	83 I
	09/12/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	45.0	38 I V
	12/05/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	44.8	<18
	03/06/08	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	49.3	<18
	06/17/08	<0.270	<0.240	<0.280	<0.860	<0.420	<1.00	<1.00	<1.00	55.0	204 V,I
	09/16/08	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	58.9	331
CEF-46-13I	12/20/00	<1.0	<1.0	<1.0	0.45	NM	0.89	NM	NM	NM	<540
	01/24/01	<1.0	<1.0	1.5	0.62	280	0.6	NM	NM	NM	320
	03/14/03	<1.0	<1.0	<1.0	<1.0	318	<2.0	<2.0	<2.0	NM	276
	06/05/03	1.10	<1.0	<1.0	<1.0	254	0.19	<0.10	<0.10	NM	<100
	09/03/03	<1.00	<1.0	<1.0	<1.0	240	0.12	<0.10	<0.10	NM	<225
	12/11/03	<1.00	<1.0	<1.0	<0.30	114	0.5	<0.10	<0.10	NM	208
	03/18/04	<1.00	<1.0	<1.0	<3.0	60.7	<0.10	<0.10	<0.10	NM	<250
	06/08/04	<1.00	<1.00	<1.00	<1.00	83.8	<2.02	<2.02	<2.02	NM	<220
	09/21/04	<1.00Y	<1.00Y	<1.00Y	<1.00Y	149Y	<2.22 J3Y	<2.22 J3Y	<2.22 J3Y	NM	<200Y
	12/01/04	<0.143	0.9000 I	<0.1417	1.29 I	337.5	<0.22	<0.202	<0.212	NM	150 I V
	03/13/05	<0.143	<0.201	<0.142	<0.220	133	<0.101	<0.133	<0.210	NM	<18
	06/09/05	<0.143	<0.201	<0.142	<0.220	62.7	<0.101	< 0.133	< 0.210	481	< 18
	09/06/05	<0.143	<0.201	<0.142	<0.220	1.75 I	<0.100	< 0.133	<0.203	519	< 18
	12/06/05	<0.143	<0.201	<0.142	<0.220	0.880 I	<0.100	<0.133	<0.203	189	<18
	03/29/06	<0.140	<0.126	<0.176	<0.298	0.400 I	<0.100	<0.133	<0.203	104	<18
	06/09/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	54.3	96 I
	09/25/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	33.5	<18
	12/08/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	42.6	<18
	03/01/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	29.2	<18
	06/15/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	26.8	66 I
	09/12/07	<0.305	<0.338	0.300 I	<0.433	<0.336	<0.100	<0.133	<0.203	<20.0	38 I V
	12/05/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.100	<0.203	25.1	<18
	03/06/08	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.100	<0.203	51.7	<18
	06/17/08	<0.270	<0.240	<0.280	<0.860	<0.420	<0.952	<0.952	<0.952	28.7	341 V,CF2,CF6
	09/16/08	<0.40	<0.43	<0.35	<1.2	<0.26	<0.24	<0.24	<0.24	27.1	274

TABLE 3
GROUNDWATER LABORATORYANALYTICAL 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
Groundwater Criteria (GCTL) [1]		1	30	40	20	20	14	28	28	250 *	5000
Natural Attenuation Default Source		100	300	400	200	200	140	280	280	n/a	50000
CEF-46-14D	12/20/00	<1.0	<1.0	0.42	0.37	NM	<1.1	NM	NM	NM	<550
	01/24/01	<1.0	<1.0	<1.0	0.23	<1.0	<1.0	NM	NM	NM	<530
	03/14/03	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	NM	248
	06/04/03	<1.00	<1.0	<1.0	<1.0	1	<0.10	<0.10	<0.10	NM	<211
	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	4.2	<0.10	<0.10	<0.10	NM	<100
	06/08/04	<1.00	<1.00	<1.00	<1.00	2.4	<2.20	<2.20	<2.20	NM	<220
	09/21/04	<1.00Y	<1.00Y	<1.00Y	<1.00Y	2.97Y	<2.20 J3Y	<2.20 J3Y	<2.20 J3Y	NM	<200Y
	12/01/04	<0.143	<0.2010	<0.1417	<0.220	2.500	<0.22	<0.204	<0.214	NM	80 I V
	03/13/05	<0.143	<0.201	<0.142	<0.220	3.190	<0.101	<0.133	<0.210	NM	<20
	06/09/05	<0.143	<0.201	<0.142	<0.220	1.38 I	<0.101	< 0.133	< 0.210	5.16	< 20
	09/06/05	<0.143	<0.201	<0.142	<0.220	5.30	<0.100	< 0.133	<0.203	29.3 ?	<18
	12/06/05	<0.143	<0.201	<0.142	<0.220	8.21	<0.111	<0.148	<0.226	15.3	<18
	03/29/06	<0.140	<0.126	<0.176	<0.298	1.07	<0.100	<0.133	<0.203	2.12	<18
	06/09/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	<2.00	94 I
	09/24/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	2.91 J4	<18
	12/08/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	<2.00	52 I
	03/01/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	2.72 I	2.39 I	<2.00	<18
	06/15/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	<2.00	83 I
	09/12/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	<200 J4	39 I V
	12/05/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	<2.00	<18
	03/06/08	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	<2.00	<18
	06/17/08	0.27	<0.240	<0.280	<0.860	<0.420	<0.971	<0.971	<0.971	<0.500	<105
	09/16/08	<0.40	<0.43	<0.35	<1.2	2.70	<0.24	<0.24	<0.24	9.5	<270
CEF-46-15I	12/20/00	<1.0	<1.0	<1.0	<1.0	NM	<1.1	NM	NM	NM	<550
	01/24/01	0.17	<1.0	<1.0	<1.0	<1.0	<1.0	NM	NM	NM	<530
	03/13/03	<1.0	<1.0	<1.0	<1.0	<1.0	<2.4	<2.4	<2.4	NM	<200
	06/04/03	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<222
	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	<3.0	<1.0	<0.10	<0.10	<0.10	NM	<200
	03/16/04	<1.00	<1.0	<1.0	<3.0	<1.0	<0.11	<0.11	<0.11	NM	<100
	06/08/04	<1.00	<1.00	<1.00	<1.00	<1.00	<2.20	<2.20	<2.20	NM	<220
	09/21/04	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<2.11Y	<2.11 J3Y	<2.11 J3Y	NM	<220Y
	12/01/04	<0.143	<0.2010	<0.1417	<0.220	<0.2359	<0.23	<0.206	<0.216	NM	110 I V
	03/13/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.101	<0.133	<0.210	NM	<18.0
	06/09/05	<0.143	<0.201	<0.142	<0.220	< 0.236	<0.101	< 0.133	< 0.210	25.6	< 20
	09/06/05	<0.143	<0.201	<0.142	<0.220	< 0.236	<0.100	< 0.133	<0.203	34.8 ?	<18
	12/06/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.111	<0.148	<0.226	20.3	<18
	03/30/06	<0.140	<0.126	<0.176	<0.298	<0.236	<0.100	<0.133	<0.203	29.8	<18
	06/09/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	26.7	28 I
	09/24/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	23.9	<18
	12/08/06	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	33.8	<18
	03/01/07	<0.305	<0.338	<0.257	<0.433	<0.336	3.42 I	<0.133	<0.203	29.8	<18
	06/15/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	26.7	133 I
	09/12/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	23.5	70 I V
	12/05/07	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	25.6	<18
	03/06/08	<0.305	<0.338	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	34.3	<18
	06/17/08	<0.270	<0.240	<0.280	<0.860	<0.420	<1.00	<1.00	<1.00	32.7	118 V, I
	09/16/08	<0.40	<0.43	<0.354	<1.2	<0.26	<0.24	<0.24	<0.24	51.2	460
CEF-46-16I	12/06/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.102	<0.136	<0.207	20.5	<18

TABLE 3
GROUNDWATER LABORATORYANALYTICAL 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
Groundwater Criteria (GCTL) [1]		1	30	40	20	20	14	28	28	250 *	5000
Natural Attenuation Default Source		100	300	400	200	200	140	280	280	n/a	50000
CEF-46-17D	12/06/05	<0.143	<0.201	<0.142	<0.220	27.4	<0.105	<0.140	<0.214	982	158 I
CEF-46-18I	12/07/05	<0.143	<0.201	<0.142	0.440 I	1.17 I	<0.111	<0.148	<0.226	84.2	<20
CEF-46-19I	12/07/05	21.6	0.640 I	<0.142	4.86	27.7	<0.103	<0.137	<0.209	1230	<20
CEF-46-20I	12/07/05	<0.143	<0.201	<0.142	<0.220	0.940 I	<0.109	<0.145	<0.221	112	<18
CEF-46-21I	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
CEF-46-22I	12/07/05	<0.143	<0.201	<0.142	0.570 I	<0.236	<0.105	<0.140	<0.214	1060	<20
CEF-46-23D	12/07/05	0.900 I	2.04	1.48 I	40.7	0.320 I	<0.111	<0.148	<0.226	6310	102 I
CEF-46-24D	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

TABLE 3
GROUNDWATER LABORATORYANALYTICAL 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
Groundwater Criteria (GCTL) [1]		1	30	40	20	20	14	28	28	250 *	5000
Natural Attenuation Default Source		100	300	400	200	200	140	280	280	n/a	50000
CEF-46-25I	12/20/00	<1.0	<1.0	<1.0	<1.0	NM	<1.1	NM	NM	NM	<560
	01/25/01	0.25	<1.0	<1.0	0.42	<1.0	<1.0	NM	NM	NM	320
	03/13/03	<1.0	<1.0	<1.0	<1.0	<1.0	<2.3	<2.3	<2.3	NM	<200
	06/04/03	<1.00	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	NM	<200
	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	<3.0	<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	<111
	06/08/04	<1.00	<1.00	<1.00	<1.00	<1.00	<2.02	<2.02	<2.02	NM	<200
	09/21/04	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<1.00Y	<2.11Y	<2.11 J3Y	<2.11 J3Y	NM	<220Y
	12/01/04	<0.143	0.4800 I	<0.1417	<0.220	<0.2359	<0.22	<0.204	<0.214	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	622	< 20
	09/06/05	<0.143	<0.201	<0.142	0.590 I	< 0.236	0.260 I	< 0.133	<0.203	477	< 20
	12/07/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.102	<0.136	<0.207	271	<20
	03/29/06	<0.140	0.126	<0.176	<0.298	<0.236	<0.100	<0.133	<0.203	93.2	<18
	06/09/06	<0.305	<0.388	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	65.1	68 I
	09/24/06	<0.305	<0.388	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	33.0	38.0 I
	12/09/06	<0.305	<0.388	<0.257	<0.433	<0.336	0.890 I	<0.133	<0.203	94.9	55 I
	03/01/07	<0.305	<0.388	<0.257	<0.433	<0.336	<0.100	2.69 I	<0.203	67.4	<18
	06/15/07	<0.305	<0.388	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	61.7	135 I
	09/12/07	<0.305	<0.388	<0.257	<0.433	<0.336	<0.100	<0.133	<0.203	42.3	111 I V
	12/05/07	<0.305	<0.338	<0.257	<0.433	<0.336	1.68	0.230 I	0.260 I	23.9	39 I
	03/06/08	<0.305	<0.338	<0.257	<0.433	<0.336	0.280	<0.133	<0.203	43.4	<18
	06/18/08	<0.270	<0.240	<0.280	<0.860	<0.420	<0.952	<0.952	<0.952	23.2	<110
	09/16/08	<0.40	<0.43	<0.35	<1.2	<0.26	0.7 I	<0.24	<0.24	22.9	203
CEF-46-26I	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
CEF-46-27D	12/07/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.101	<0.134	<0.205	2.22	<18
CEF-46-28I	12/07/05	13.6	<0.201	<0.142	1.34 I	10.6	<0.109	<0.145	<0.221	1300	<18
CEF-46-29I	12/07/05	19.8	<0.201	<0.142	2.46	0.350 I	<0.103	<0.137	<0.209	2220	<18
CEF-46-30I	12/07/05	<0.143	<0.201	<0.142	<0.220	<0.236	<0.111	<0.148	<0.226	721	<18
CEF-46-31I	12/07/05	0.560 I	<0.201	<0.142	<0.220	<0.236	<0.111	<0.148	<0.226	2120	<20

Table 3 Data Qualifiers, Definitions and Notes

All values reported in ug/L unless otherwise noted
* GCTL Reported in mg/L
1 = Ch 62-777 F.A.C Groundwater Cleanup Target Levels (GCTL) reported in ug/L unless otherwise noted by "*"
Concentration exceeds the GCTL value
Concentration exceeds the NADSC value
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
U = The compound was analyzed for but not detected
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

APPENDIX A

GROUNDWATER SAMPLING LOGS

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-01S	SAMPLE ID: 04-41001/3:CEF-046-01S:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.13	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 5.42	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (15.00 feet – 5.42 feet) X 0.16 gallons/foot = 1.56 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons+(0.00 gallons/foot X 17.00 feet)+ 0.13 gallons = 0.14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 13.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13.00	PURGING INITIATED AT: 18:43	PURGING ENDED AT: 18:57	TOTAL VOLUME PURGED (gallons): 0.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
18:46		0.20	5.69	5.90	-115.10	27.25	383.00	0.67	6.97	yellow	strong HC
18:50	0.20	0.40	5.81	5.90	-115.40	27.22	382.00	0.32	8.96	yellow	strong HC
18:53	0.10	0.50	5.91	5.89	-116.00	27.28	378.00	0.27	14.95	clear	strong HC

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	0.19	TEMP.(°C):	27.28	DO:	<1	CO2:	Interference	DO High Range:	DO Low Range:
SEC(uS/cm):	373	pH:	5.90	Alkalinity:	60	Ferrous Iron:	11	CO2 High Range:	DO Low Range:
ORP(mV):	-120.7	TURB(NTU):	18.59	H2S:	3	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate:		Sulfide:			
				Nitrate:					

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Brian Rebar	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 18:57	SAMPLING ENDED AT: 19:23
PUMP OR TUBING DEPTH IN WELL (feet): 13.00	SAMPLE PUMP FLOW RATE (mL per minute): 202.79	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N	FIELD-FILTERED: ☐ Y ☑ N Filtration Equipment Type:	FILTER SIZE: NA	DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-01S	3	CG	40 ml	HCL	40 ml	5.90	VOCs	RFPP
CEF-046-01S	2	AG	1 L	None	1 L	5.90	PAHs	PP
CEF-046-01S	2	AG	1 L	H2SO4	1 L	5.90	TRPH	PP
CEF-046-01S	1	PE	500 ml	None	500 ml	5.90	Sulfate	PP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-02S	SAMPLE ID: 04-41001/3:CEF-046-02S:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 5.60	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (15.00 feet – 5.60 feet) X 0.16 gallons/foot = 1.53 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons+(0.00 gallons/foot X 17.00 feet)+ 0.13 gallons = 0.18 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 13.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13.00	PURGING INITIATED AT: 17:39	PURGING ENDED AT: 17:56	TOTAL VOLUME PURGED (gallons): 1.00

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
17:44		0.40	5.80	6.46	-70.70	27.20	567.00	0.34	3.30	yellow	none
17:47	0.10	0.50	5.83	6.46	-73.10	27.18	567.00	0.23	2.41	clear	none
17:51	0.40	0.90	5.85	6.46	-74.90	27.13	567.00	0.13	3.22	clear	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	0.12	TEMP.(°C):	27.06	DO:	<1	CO2:	Interference	DO High Range:	DO Low Range:
SEC(uS/cm):	567	pH:	6.46	Alkalinity:	400	Ferrous Iron:	0	CO2 High Range:	DO Low Range:
ORP(mV):	-77.3	TURB(NTU):	1.33	H2S:	0.3	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate: Nitrate:		Sulfide:			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Brian Rebar	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 17:56	SAMPLING ENDED AT: 18:23
PUMP OR TUBING DEPTH IN WELL (feet): 13.00	SAMPLE PUMP FLOW RATE (mL per minute): 222.67	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N | FIELD-FILTERED: ☐ Y ☑ N | FILTER SIZE: NA | DUPLICATE: ☐ Y ☑ N
Filtration Equipment Type:

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-02S	2	AG	1 L	None	1 L	6.46	PAHs	PP
CEF-046-02S	2	AG	1 L	H2SO4	1 L	6.46	TRPH	PP
CEF-046-02S	1	PE	500 ml	None	500 ml	6.46	Sulfate	PP
CEF-046-02S	3	CG	40 ml	HCL	40 ml	6.46	VOCs	RFPP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-05I	SAMPLE ID: 04-41001/3:CEF-046-05I:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 7.41	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (50.50 feet – 7.41 feet) X 0.16 gallons/foot = 7.03 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
=0.00 gallons+(0.00 gallons/foot X 52.00 feet)+ 0.13 gallons = 0.26 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 48.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 48.00	PURGING INITIATED AT: 18:43	PURGING ENDED AT: 19:05	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
18:58		0.75	8.95	3.54	241.00	25.85	498.00	0.44	6.84	clear	none
19:01	0.15	0.90	7.96	3.54	230.50	25.90	499.00	0.42	5.23	clear	none
19:04	0.30	1.20	7.96	3.54	222.70	25.91	499.00	0.40	4.23	clear	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	.38	TEMP.(°C):	25.91	DO:	<1	CO2:	Interference	DO High Range:	DO Low Range:
SEC(uS/cm):	499	pH:	3.54	Alkalinity:	0	Ferrous Iron:	9.2	CO2 High Range:	DO Low Range:
ORP(mV):	218.7	TURB(NTU):	2.73	H2S:	0.1	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate: Nitrate:		Sulfide:			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Josh Clay	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 19:05	SAMPLING ENDED AT: 19:37
PUMP OR TUBING DEPTH IN WELL (feet): 48.00	SAMPLE PUMP FLOW RATE (mL per minute): 223.68	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N	FIELD-FILTERED: ☐ Y ☑ N Filtration Equipment Type:	FILTER SIZE: NA	DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-05I	2	AG	1 L	H2SO4	1 L	3.54	TRPH	PP
CEF-046-05I	3	CG	40 ml	HCL	40 ml	3.54	VOCs	RFPP
CEF-046-05I	1	PE	500 ml	None	500 ml	3.54	Sulfate	PP
CEF-046-05I	2	AG	1 L	None	1 L	3.54	SVOCs	PP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-06D	SAMPLE ID: 04-41001/3:CEF-046-06D:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 9.71	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (80.50 feet – 9.71 feet) X 0.16 gallons/foot = 11.55 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
=0.00 gallons+(0.00 gallons/foot X 82.00 feet)+ 0.13 gallons = 0.13 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 78.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 78.00	PURGING INITIATED AT: 17:44	PURGING ENDED AT: 18:06	TOTAL VOLUME PURGED (gallons): 1.10

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
17:56		0.50	8.41	3.09	419.50	22.56	4,734.00	0.41	7.54	yellow	none
18:01	0.25	0.75	8.48	3.09	419.80	22.88	4,701.00	0.40	3.36	yellow	none
18:05	0.15	0.90	8.49	3.08	419.80	22.61	4,718.00	0.39	2.41	yellow	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	.37	TEMP.(°C):	23.55	DO:	<1	CO2:	Interference	DO High Range:	DO Low Range:
SEC(uS/cm):	4656	pH:	3.08	Alkalinity:	50	Ferrous Iron:	28	CO2 High Range:	DO Low Range:
ORP(mV):	419.7	TURB(NTU):	2.97	H2S:	0.3	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate: Nitrate:		Sulfide:			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Josh Clay	SAMPLER(S) SIGNATURES: JC	SAMPLING INITIATED AT: 18:06	SAMPLING ENDED AT: 18:42
PUMP OR TUBING DEPTH IN WELL (feet): 78.00	SAMPLE PUMP FLOW RATE (mL per minute): 189.27	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N
FIELD-FILTERED: ☐ Y ☑ N
Filtration Equipment Type:
FILTER SIZE: NA
DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-06D	1	PE	500 ml	None	500 ml	3.08	Sulfate	PP
CEF-046-06D	2	AG	1 L	None	1 L	3.08	SVOCs	PP
CEF-046-06D	2	AG	1 L	H2SO4	1 L	3.08	TRPH	PP
CEF-046-06D	3	CG	40 ml	HCL	40 ml	3.08	VOCs	RFPP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-07I	SAMPLE ID: 04-41001/3:CEF-046-07I:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 6.47	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (30.50 feet – 6.47 feet) X 0.16 gallons/foot = 3.92 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons+(0.00 gallons/foot X 32.50 feet)+ 0.13 gallons = 0.21 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 28.50	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 28.50	PURGING INITIATED AT: 16:35	PURGING ENDED AT: 16:54	TOTAL VOLUME PURGED (gallons): 1.50

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
16:39		0.25	7.35	4.39	-25.30	26.36	40.00	0.60	12.46	yellow	none
16:42	0.25	0.50	7.45	4.57	-30.40	26.47	34.00	0.28	14.25	clear	organic
16:46	0.10	0.60	7.42	4.57	-50.20	26.60	30.00	0.17	23.50	clear	organic

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	0.13	TEMP.(°C):	26.41	DO:	<1	CO2:	150	DO High Range:	DO Low Range:
SEC(uS/cm):	31	pH:	4.61	Alkalinity:	20	Ferrous Iron:	2.6	CO2 High Range:	DO Low Range:
ORP(mV):	-70.2	TURB(NTU):	35.6	H2S:	2	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate:		Sulfide:			
				Nitrate:					

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Brian Rebar	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 16:54	SAMPLING ENDED AT: 17:24
PUMP OR TUBING DEPTH IN WELL (feet): 28.50	SAMPLE PUMP FLOW RATE (mL per minute): 298.85	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N	FIELD-FILTERED: ☐ Y ☑ N Filtration Equipment Type:	FILTER SIZE: NA	DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-07I	3	CG	40 ml	HCL	40 ml	4.61	VOCs	RFPP
CEF-046-07I	2	AG	1 L	H2SO4	1 L	4.61	TRPH	PP
CEF-046-07I	1	PE	500 ml	None	500 ml	4.61	Sulfate	PP
CEF-046-07I	2	AG	1 L	None	1 L	4.61	PAHs	PP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-09I	SAMPLE ID: 04-41001/3:CEF-046-09I:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 6.97	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (50.50 feet – 6.97 feet) X 0.16 gallons/foot = 7.10 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
=0.00 gallons+(0.00 gallons/foot X 52.00 feet)+ 0.13 gallons = 0.26 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 48.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 48.00	PURGING INITIATED AT: 16:38	PURGING ENDED AT: 17:04	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
16:55		0.75	7.01	4.04	83.20	27.94	64.00	0.54	1.44	clear	none
16:59	0.25	1.00	7.01	4.06	75.00	27.84	64.00	0.51	1.31	clear	none
17:03	0.25	1.25	7.01	4.06	67.80	27.81	64.00	0.51	1.28	clear	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	.50	TEMP.(°C):	27.80	DO:	<1	CO2:	380	DO High Range:	DO Low Range:
SEC(uS/cm):	64	pH:	4.06	Alkalinity:	5	Ferrous Iron:	4	CO2 High Range:	DO Low Range:
ORP(mV):	63.1	TURB(NTU):	1.05	H2S:	5	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate: Nitrate:		Sulfide:			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Josh Clay	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 17:04	SAMPLING ENDED AT: 17:35
PUMP OR TUBING DEPTH IN WELL (feet): 48.00	SAMPLE PUMP FLOW RATE (mL per minute): 189.27	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N
FIELD-FILTERED: ☐ Y ☑ N
Filtration Equipment Type:
FILTER SIZE: NA
DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-09I	2	AG	1 L	None	1 L	4.06	PAHs	PP
CEF-046-09I	3	CG	40 ml	HCL	40 ml	4.06	VOCs	RFPP
CEF-046-09I	1	PE	500 ml	None	500 ml	4.06	Sulfate	PP
CEF-046-09I	2	AG	1 L	H2SO4	1 L	4.06	TRPH	PP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-12I	SAMPLE ID: 04-41001/3:CEF-046-12I:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 5.98	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (30.50 feet – 5.98 feet) X 0.16 gallons/foot = 4.00 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
=0.00 gallons+(0.00 gallons/foot X 32.00 feet)+ 0.13 gallons = 0.21 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 28.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 28.00	PURGING INITIATED AT: 10:19	PURGING ENDED AT: 10:37	TOTAL VOLUME PURGED (gallons): 0.80

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10:23		0.25	6.04	3.78	-30.50	26.61	179.00	0.51	7.61	clear	none
10:28	0.15	0.40	6.05	4.35	-47.00	26.59	139.00	0.35	6.52	clear	none
10:32	0.20	0.60	6.04	4.40	-61.20	26.52	120.00	0.28	3.61	clear	none
10:35	0.15	0.75	6.04	4.44	-75.80	26.45	111.00	0.20	2.43	clear	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	0.21	TEMP.(°C):	26.55	DO:	<1	CO2:	392	DO High Range:	DO Low Range:
SEC(uS/cm):	108	pH:	4.45	Alkalinity:	20	Ferrous Iron:	2.8	CO2 High Range:	DO Low Range:
ORP(mV):	-57.3	TURB(NTU):	1.99	H2S:	0.1	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate: Nitrate:		Sulfide:			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Brian Rebar	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 10:37	SAMPLING ENDED AT: 11:19
PUMP OR TUBING DEPTH IN WELL (feet): 28.00	SAMPLE PUMP FLOW RATE (mL per minute): 168.24	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N	FIELD-FILTERED: ☐ Y ☑ N Filtration Equipment Type:	FILTER SIZE: NA	DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-12I	3	CG	40 ml	HCL	40 ml	4.45	VOCs	RFPP
CEF-046-12I	2	AG	1 L	None	1 L	4.45	PAHs	PP
CEF-046-12I	2	AG	1 L	H2SO4	1 L	4.45	TRPH	PP
CEF-046-12I	1	PE	500 ml	None	500 ml	4.45	Sulfate	PP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-13I	SAMPLE ID: 04-41001/3:CEF-046-13I:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.13	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 6.34	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (50.50 feet – 6.34 feet) X 0.16 gallons/foot = 7.21 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons+(0.00 gallons/foot X 52.00 feet)+ 0.13 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 48.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 48.00	PURGING INITIATED AT: 11:29	PURGING ENDED AT: 11:44	TOTAL VOLUME PURGED (gallons): 1.00

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
11:32		0.30	6.39	4.47	-91.80	26.50	75.00	0.36	1.52	yellow	none
11:35	0.30	0.60	6.39	4.47	-102.80	26.51	75.00	0.22	1.17	yellow	none
11:38	0.15	0.75	6.39	4.47	-115.10	26.42	76.00	0.20	0.86	yellow	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	0.17	TEMP.(°C):	26.34	DO:	<1	CO2:	267	DO High Range:	DO Low Range:
SEC(uS/cm):	77	pH:	4.46	Alkalinity:	20	Ferrous Iron:	1.6	CO2 High Range:	DO Low Range:
ORP(mV):	-125.2	TURB(NTU):	0.68	H2S:	1	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate:		Sulfide:			
				Nitrate:					

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Brian Rebar	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 11:44	SAMPLING ENDED AT: 12:16
PUMP OR TUBING DEPTH IN WELL (feet): 48.00	SAMPLE PUMP FLOW RATE (mL per minute): 252.36	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N
FIELD-FILTERED: ☐ Y ☑ N FILTER SIZE: NA
Filtration Equipment Type:
DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-13I	1	PE	500 ml	None	500 ml	4.46	Sulfate	PP
CEF-046-13I	3	CG	40 ml	HCL	40 ml	4.46	VOCs	RFPP
CEF-046-13I	2	AG	1 L	None	1 L	4.46	PAHs	PP
CEF-046-13I	2	AG	1 L	H2SO4	1 L	4.46	TRPH	PP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-14D	SAMPLE ID: 04-41001/3:CEF-046-14D:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 7.04	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (80.00 feet – 7.04 feet) X 0.16 gallons/foot = 11.91 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
=0.00 gallons+(0.00 gallons/foot X 82.00 feet)+ 0.13 gallons = 0.34 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 78.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 78.00	PURGING INITIATED AT: 10:21	PURGING ENDED AT: 10:37	TOTAL VOLUME PURGED (gallons): 0.50

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10:29		0.25	7.35	3.61	53.20	27.10	44.00	1.88	9.99	clear	none
10:32	0.05	0.30	7.39	3.76	40.00	26.93	43.00	0.58	1.10	clear	none
10:35	0.20	0.50	7.40	3.83	32.00	26.85	42.00	0.52	1.41	clear	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	0.64	TEMP.(°C):	26.82	DO:	<1	CO2:	132	DO High Range:	DO Low Range:
SEC(uS/cm):	42	pH:	3.91	Alkalinity:	14	Ferrous Iron:	4.6	CO2 High Range:	DO Low Range:
ORP(mV):	21.5	TURB(NTU):	1.50	H2S:	1	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate:		Sulfide:			
				Nitrate:					

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Josh Clay	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 10:37	SAMPLING ENDED AT: 11:16
PUMP OR TUBING DEPTH IN WELL (feet): 78.00	SAMPLE PUMP FLOW RATE (mL per minute): 118.29	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N	FIELD-FILTERED: ☐ Y ☑ N Filtration Equipment Type:	FILTER SIZE: NA	DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-14D	3	CG	40 ml	HCL	40 ml	3.91	VOCs	RFPP
CEF-046-14D	1	PE	500 ml	None	500 ml	3.91	Sulfate	PP
CEF-046-14D	2	AG	1 L	None	1 L	3.91	SVOCs	PP
CEF-046-14D	2	AG	1 L	H2SO4	1 L	3.91	TRPH	PP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-15I	SAMPLE ID: 04-41001/3:CEF-046-15I:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 6.91	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (30.50 feet – 6.91 feet) X 0.16 gallons/foot = 3.85 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
=0.00 gallons+(0.00 gallons/foot X 4.00 feet)+ 0.13 gallons = 0.14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 11:27	PURGING ENDED AT: 11:58	TOTAL VOLUME PURGED (gallons): 1.00

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
11:36		0.20	7.05			25.20	141.00	2.60			
11:49	0.40	0.60	7.05	3.89	99.90	25.07	73.00	0.67	2.73	clear	none
11:52	0.10	0.70	7.05	3.97	94.40	24.88	72.00	0.62	1.45	clear	none
11:55	0.05	0.75	7.05	4.03	93.30	24.78	71.00	0.61	1.02	clear	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	.58	TEMP.(°C):	24.64	DO:	<1	CO2:	302	DO High Range:	DO Low Range:
SEC(uS/cm):	70	pH:	4.05	Alkalinity:	10	Ferrous Iron:	2.8	CO2 High Range:	DO Low Range:
ORP(mV):	92.3	TURB(NTU):	2.16	H2S:	2.0	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate:		Sulfide:			
				Nitrate:					

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Josh Clay	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 11:58	SAMPLING ENDED AT: 12:35
PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute): 122.11	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N
FIELD-FILTERED: ☐ Y ☑ N
Filtration Equipment Type:
FILTER SIZE: NA
DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-15I	2	AG	1 L	H2SO4	1 L	4.05	TRPH	PP
CEF-046-15I	3	CG	40 ml	HCL	40 ml	4.05	VOCs	RFPP
CEF-046-15I	1	PE	500 ml	None	500 ml	4.05	Sulfate	PP
CEF-046-15I	2	AG	1 L	None	1 L	4.05	SVOCs	PP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-21I	SAMPLE ID: 04-41001/3:CEF-046-21I:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 7.42	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (30.50 feet – 7.42 feet) X 0.16 gallons/foot = 3.77 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
=0.00 gallons+(0.00 gallons/foot X 32.00 feet)+ 0.13 gallons = 0.21 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 28.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 28.00	PURGING INITIATED AT: 15:25	PURGING ENDED AT: 15:49	TOTAL VOLUME PURGED (gallons): 1.20

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
15:41		0.60	7.65	4.01	178.50	26.47	104.00	0.92	5.70	clear	none
15:44	0.20	0.80	7.65	4.02	157.70	26.40	103.00	0.63	6.49	clear	none
15:47	0.20	1.00	7.64	4.03	146.40	26.41	103.00	0.56	4.13	clear	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	.53	TEMP.(°C):	26.42	DO:	<1	CO2:	249	DO High Range:	DO Low Range:
SEC(uS/cm):	103	pH:	4.03	Alkalinity:	5	Ferrous Iron:	3.6	CO2 High Range:	DO Low Range:
ORP(mV):	140.1	TURB(NTU):	3.56	H2S:	0	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate: Nitrate:		Sulfide:			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Josh Clay	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 15:49	SAMPLING ENDED AT: 16:21
PUMP OR TUBING DEPTH IN WELL (feet): 28.00	SAMPLE PUMP FLOW RATE (mL per minute): 189.27	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N
FIELD-FILTERED: ☐ Y ☑ N
Filtration Equipment Type:
FILTER SIZE: NA
DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-21I	2	AG	1 L	None	1 L	4.03	SVOCs	PP
CEF-046-21I	2	AG	1 L	H2SO4	1 L	4.03	TRPH	PP
CEF-046-21I	3	CG	40 ml	HCL	40 ml	4.03	VOCs	RFPP
CEF-046-21I	1	PE	500 ml	None	500 ml	4.03	Sulfate	PP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-24D	SAMPLE ID: 04-41001/3:CEF-046-24D:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 7.99	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (90.45 feet – 7.99 feet) X 0.16 gallons/foot = 13.46 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons+(0.00 gallons/foot X 92.45 feet)+ 0.13 gallons = 0.37 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 88.45	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 88.45	PURGING INITIATED AT: 15:24	PURGING ENDED AT: 15:38	TOTAL VOLUME PURGED (gallons): 1.00

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
15:28		0.30	7.99	4.42	84.40	25.43	512.00	0.40	5.98	clear	none
15:31	0.40	0.70	8.03	4.70	64.00	25.27	493.00	0.37	1.79	clear	none
15:34	0.30	1.00	8.04	4.74	49.50	25.24	488.00	0.25	0.53	clear	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	0.22	TEMP.(°C):	25.20	DO:	<1	CO2:	Interference	DO High Range:	DO Low Range:
SEC(uS/cm):	484	pH:	4.76	Alkalinity:	10	Ferrous Iron:	19	CO2 High Range:	DO Low Range:
ORP(mV):	42.1	TURB(NTU):	0.12	H2S:	0.3	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate: Nitrate:		Sulfide:			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Josh Clay	SAMPLER(S) SIGNATURES: JC	SAMPLING INITIATED AT: 15:38	SAMPLING ENDED AT: 16:07
PUMP OR TUBING DEPTH IN WELL (feet): 88.45	SAMPLE PUMP FLOW RATE (mL per minute): 270.39	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N | FIELD-FILTERED: ☐ Y ☑ N | FILTER SIZE: NA | DUPLICATE: ☐ Y ☑ N
Filtration Equipment Type:

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-24D	1	PE	500 ml	None	500 ml	4.76	Sulfate	PP
CEF-046-24D	3	CG	40 ml	HCL	40 ml	4.76	VOCs	RFPP
CEF-046-24D	2	AG	1 L	None	1 L	4.76	PAHs	PP
CEF-046-24D	2	AG	1 L	H2SO4	1 L	4.76	TRPH	PP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME:	Building 46 - Cecil Field LTM/RAO	SITE LOCATION:	Jacksonville
WELL NO:	CEF-046-25I	SAMPLE ID: 04-41001/3:CEF-046-25I:9/16/08	DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR SAMPLER:
2.00	0.25		7.69	Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (50.45 feet – 7.69 feet) X 0.16 gallons/foot = 6.98 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons+(0.00 gallons/foot X 52.00 feet)+ 0.00 gallons = 0.13 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
48.00	48.00	14:26	14:44	1.10

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
14:28		0.20	7.71	3.63	52.10	25.99	98.00	0.61	18.90	clear	none
14:31	0.10	0.30	7.71	3.99	43.10	26.04	45.00	0.70	16.20	clear	none
14:35	0.30	0.60	7.71	4.48	21.80	25.95	37.00	0.55	19.20	clear	none
14:38	0.15	0.75	7.71	4.48	15.10	25.98	34.00	0.46	18.40	clear	none
14:41	0.15	0.90	7.71	4.46	7.90	26.00	34.00	0.42	14.50	clear	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	.44	TEMP.(°C):	25.94	DO:	<1	CO2:	2.39	DO High Range:	DO Low Range:
SEC(uS/cm):	34	pH:	4.46	Alkalinity:	10	Ferrous Iron:	5.6	CO2 High Range:	DO Low Range:
ORP(mV):	4.3	TURB(NTU):	14.9	H2S:	5	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate: Nitrate:		Sulfide:			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Josh Clay		14:44	15:20

PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:
48.00	231.33	PPE

FIELD DECONTAMINATION: ☑ Y ☐ N
FIELD-FILTERED: ☐ Y ☑ N FILTER SIZE: NA
Filtration Equipment Type:
DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-25I	1	PE	500 ml	None	500 ml	4.46	Sulfate	PP
CEF-046-25I	2	AG	1 L	None	1 L	4.46	SVOCs	PP
CEF-046-25I	2	AG	1 L	H2SO4	1 L	4.46	TRPH	PP
CEF-046-25I	3	CG	40 ml	HCL	40 ml	4.46	VOCs	RFPP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

GROUNDWATER SAMPLING LOG

SITE NAME: Building 46 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-046-26I	SAMPLE ID: 04-41001/3:CEF-046-26I:9/16/08		DATE: 09/16/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 8.53	PURGE PUMP TYPE OR SAMPLER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (47.76 feet – 8.53 feet) X 0.16 gallons/foot = 6.40 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons+(0.00 gallons/foot X 49.74 feet)+ 0.13 gallons = 0.26 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 45.74	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 45.74	PURGING INITIATED AT: 14:22	PURGING ENDED AT: 14:38	TOTAL VOLUME PURGED (gallons): 0.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	DEPTH TO WATER (feet)	pH (standard units)	ORP	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
14:26		0.25	8.55	3.79	-37.50	25.15	366.00	0.32	14.54	clear	none
14:29	0.25	0.50	8.55	3.79	-49.30	25.04	340.00	0.22	8.40	clear	none
14:33	0.20	0.70	8.56	3.79	-56.30	24.99	328.00	0.17	8.69	clear	none

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

FIELD/TEST KIT

Final Purge Readings				Hach Field Data(mg/L)				CHEMetrics Field Data(mg/L)	
DO(mg/L):	0.16	TEMP.(°C):	24.92	DO:	<1	CO2:	Interference	DO High Range:	DO Low Range:
SEC(uS/cm):	327	pH:	3.79	Alkalinity:	5	Ferrous Iron:	9	CO2 High Range:	DO Low Range:
ORP(mV):	-54.8	TURB(NTU):	7.97	H2S:	2	Maganese:		Alkalinity High Range:	Alkalinity Low Range:
Salinity:				Sulfate:		Sulfide:			
				Nitrate:					

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Brian Rebar	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 14:38	SAMPLING ENDED AT: 15:15
PUMP OR TUBING DEPTH IN WELL (feet): 45.74	SAMPLE PUMP FLOW RATE (mL per minute): 165.61	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N	FIELD-FILTERED: ☐ Y ☑ N Filtration Equipment Type:	FILTER SIZE: NA	DUPLICATE: ☐ Y ☑ N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	NO. OF CONTAIN.	MAT CODE	VOL	PRESERV USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
CEF-046-26I	2	AG	1 L	None	1 L	3.79	PAHs	PP
CEF-046-26I	2	AG	1 L	H2SO4	1 L	3.79	TRPH	PP
CEF-046-26I	1	PE	500 ml	None	500 ml	3.79	Sulfate	PP
CEF-046-26I	3	CG	40 ml	HCL	40 ml	3.79	VOCs	RFPP

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

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

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)

pH: + 0.2 units Temperature: + 0.2 oC Specific Conductance: + 5% Dissolved Oxygen: all readings < 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

APPENDIX B

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY

APPENDIX C

THIRD QUARTER AIR SPARGE SYSTEM O&M LOGS AND FIELD NOTES

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

Technician:	J. Clay SC	Time In:	1120
Date:	~~9/22/08~~ 9/24/08	Time Out:	1131

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:	130 °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:	80 °F
Building High Temperature Setting	record number:	135 °F

Compressor

Start/Stop Light	On	Off	Should be red while in operation
Sump Pressure Gauge	record number:	56	PSI
Line Pressure Gauge	record number:	75	PSI
Temperature Gauge	record number:	168	°F
Separator Differential Gauge	record number:	1	PSI
Oil Filter Differential Gauge	record number:	1	PSI
Oil in Sight Glass?	Yes	No	

Manifolds

	Circle One		Flow		Pressure		
Valve 1	Opened	Closed	3.8	SCFM	54	PSI	3.8 54
Valve 2	Opened	Closed	2.5	SCFM	50	PSI	2.0 54
Valve 3	Opened	Closed	0	SCFM	0	PSI	Ø 59
Valve 4	Opened	Closed	0.8	SCFM	68	PSI	0.5 53
Valve 5	Opened	Closed	0.5	SCFM	42	PSI	0.5 56
Valve 6	Opened	Closed	0	SCFM	0	PSI	Ø 50

Air Tank

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

Comments:

none

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

Technician: MILLARD H. SHARP — Time In: 10:30am — RETURN OFFICE
Date: SEPT. 25, 2008 — Time Out: 7:30am — 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:	79°F	°F
Building High Temperature Setting HTS-4	record number:	131°F	°F

Compressor

Start/Stop Light	(On)	Off	Should be red while in operation
Sump Pressure Gauge	record number:	55 PSIG - 90 PSIG	PSI
Line Pressure Gauge	record number:	85 PSIG - 90 PSIG	PSI
Temperature Gauge	record number:	162°F	°F
Separator Differential Gauge	record number:	3.5 PSIG	PSI
Oil Filter Differential Gauge	record number:	1 PSID	PSI - CHANGE OIL FILTER AT 15 PSID. PG 16.
Oil in Sight Glass?	(Yes)	No	FULL TO TOP OF GLASS, INTERIOR CLEAN AND DRY. AIR FILTER CLEAN.

Manifolds

	Circle One		Flow		Pressure	
Valve 1	(Opened)	Closed	3.3-3.8	SCFM	52 PSIG	PSI
Valve 2	(Opened)	Closed	1.85-2.0	SCFM	56 PSIG	PSI
Valve 3	Opened	(Closed)	0	SCFM	18 PSIG	PSI
Valve 4	(Opened)	Closed	0	SCFM	44 PSIG	PSI
Valve 5	(Opened)	Closed	0	SCFM	0 PSIG	PSI
Valve 6	Opened	(Closed)	0	SCFM	0 PSIG	PSI

Air Tank

Tank Pressure Gauge	87 PSIG		PSI
Auto Drain Functioning?	(Yes)	No	
Compressed Air Filter 1 Indicator (MAX GREEN)	(clean)	change	dirty
Compressed Air Filter 2 Indicator	(clean)	change	dirty
Compressed Air Filter 3 Indicator	(clean)	change	dirty

Comments: GOOD CHECK SHEET. INSPECTION FLOW FROM REAR TO FRONT. TRAILER INTERIOR CLEAN AND DRY. USED OIL FILTER IN PAIL BY DOOR; WOULD YOU LIKE IT DISPOSED? UNIT CYCLED NORMALLY THROUGHOUT VISIT WITHOUT ABNORMAL SOUNDS OR PRESSURE SURGES. TRAILER DOORS RELOCKED PRIOR TO DEPARTURE. INSPECTED EXTERIOR HOSES FOR PRESSURE LEAKS - OK.

TO: MR. BRIAN M. REBAR
SOLUTIONS_IES
919 873-1060
FAX 919 873-1074

(22) 9/17/08 NAS Cecil Air Sparge System Install SDS B. Reber & Clay

645 Leave Hotel with Rental AS Trailer from Schroeder Env.
700-715 Stop at Home Depot for Supplies
720-730 Pick up ice at Publix
Arrive onsite HSS mtg
park AS trailer
745 ~~Arrive onsite~~ set up trailer
8-820 Pack coolers
845 Electricians onsite to connect power to trailer
Install 2 influent air vents on top of trailer, install phone line
1030 Opened 6 AS vaults no valves just straight piped 3/4" hose into well 3/4" metal AS wells at well head
1135 offsite to Home Depot
1219-1227 Lunch
1230 Onsite Courier from Accuweft onsite to pick up 7 coolers
Electric Contractors
1250 American Electrical Contracting offsite
1255 offsite to Lowes
1338 offsite from Lowes to a different Lowes
1440 leave last Lowes with all materials
1440 Arrive onsite bldg 46
1500 Turn on system + leave running

NAS Cecil Air Sparge Install (23) 9/17/08

plumb air lines
1520 Identified BD-1,2,3,4,6+7 pipes
connect wells to AS System

well ID	AS ID (labeled inside trailer)
BD-1	AS-1
BD-2	AS-2
BD-3	AS-3
BD-4	AS-4
BD-6	AS-5
BD-7	AS-6

disconnect hoses from wells + blow air through to push out dirt + water
pressure test fittings

BD-1	50psi	
2	50psi	
3	50psi	
4	40psi	
6	40psi	
7	35psi	

} Make when it is the only one open

1645 Reconnect piping at wellheads
Turn on wells, slowly increase pressure @ 20psi none are resistering flow

(27)

9/17/08 NAS Cecil
AS Install

Slowly increase pressures to 30 psi

1655 no flow at any of the wells at 30 psi

1730 Increase ~~flow~~ pressure based on discussion with C. Rutlman (Solutions) to 50 psi/well

flow only registering in AS-1 + 2 @ 2 scfm + 1 scfm, respectively

Blower
- Sump pressure 56 psi
- Line pressure 80 psi
- temp 166°F
- Seperator differential 1.8 psi
- oil filter differential 1 psid

compressed air temp 88 hi 78 low

1800 Final Readings

BD-1	AS-1	48 psi	2 scfm
2	2	50	1
3	3	61	0
4	4	52	0.5
6	5	55	0.2?
7	6	60	0

1805 Offsite for day

1830 Arrive at Hotel

Brit

9/18/08 NAS Cecil
AS Install
Sub cloudy

B. Reber
J-Clay (28)

645 leave Hotel

7-708 Stop for gas

718 Arrive on site H2S mtg

System readings

System off upon arrival

no pressure in tank

30 psi on #4

120 v power light on

Air compressor light on

light in Air compressor enclosure power - on

light on outside of compressor off

Reset System by turning switch inside compressor to off then to Auto resetting faulty. System on

turn on ~~BD-1,2,3~~ AS 1-6

734	AS-1	59 psi	2 scfm	743
	2	53	1.1	
	3	64	off	58 psi
	4	52	0.2	
	5	64	~~[illegible]~~ off	50 psi
	6	65	off	58 psi

suspected power outage last night due to thunderstorms + heavy rain

(26)

9/18/08 NAS Cecil
AS Install

Pressurize AS-3, 5 + 6 to 70psi

751 turn off

AS-1 63psi 3 scfm
AS-2 66 2
AS-4 65 0.8

806 AS- 3 62psi off
5 40psi off
6 52psi off

820 ~~Mike~~ from ERC onsite to go over O+M
Milford Sharp
Show him system

1000 Milford offsite
test Sensaphone acknowledgement code
IS 555 system off

Start up after power outage is as follows:
open main panel turn control to 0 then to A push start then alarm reset
open pane on compressor + turn switch off/reset then back to Auto
Measure CEF-046-BP-7
5' TOC to sand 3/4" Iron pipe
no water

(27)

9/18/08 NAS Cecil
AS Install

~~3 5 + 6~~
BD-3, 6+7 are off
they appear to be filled with soil
AS-1 64psi 2.8 scfm
AS-2 62 2 scfm
AS-4 64 1 scfm
called C. Ruhlman to inform her of lack of flow

1015 offside to Home depot to pick up supplies to blow air into BD-7 to remove the soil

1045 onsite attempt to blow soil out of BD-7
CH2M Hill Craig Hay onsite
blow air into BD-7 using 3/8" tubing
blew out a lot of rust
obstruction at 5' + 33' that we were able to clean out
rest depth 65' pumped with no success + blew more air with no success, reconnect to system
Set pressure at 65 psi + shut valve off no flow + no pressure decrease

1215 Call C. Ruhlman to update

(28) 9/18/08 NAS Cecil
AS Install

1225 CH2MHill offsite soil
AS wells were 90' with 5' scrn.
Pick up
final readings

				Actual flow Conversion for flow/psi
AS-1	63psi	3.2scfm		~7scfm
2	62psi	2scfm		4.57
3	65	0	off	0
4	64	0.8		1.5
5	68	0.5		1.2
6	64	0	off	0

for actual flow see conversion chart
system operating
1240 Offsite for day Head to Raleigh
1300-1315 Lunch
1940 Arrive at office.

COPY

9/24/08 NAS Cecil J. Clay (29)

0530 Arrive Airport
1100 Stop @ supply store on way to site
1120 Arrive on-site H+S Mtg. Sign MASP

1135 Filled out or re log in a 10 minutes. Everything ok. Valve 3 + 6 closed. Called Brian Rebar. Increased PSI in 5 from 42 to 58. Flow increased from 0.5 to 1.1

H_2O and air present @ 06D 07i 85i

BD-3 water @ 6.02
obstruction @ 86.7'

1215 06D Has threaded cap. cannot tighten further. Water is not leaving vault.
Put new cap on 07i. Water is not leaving vault but still

NAS Cecil

9/24/08 J. Clay (29)

0530 Arrives airport

1100 Stop @ Supply Store on way to site

1120 Arrive on-site H+S Mtg. Sign HASP

1135 Filled out or re log in in 10 minutes. Everything ok. Valve 3 + 6 closed. Called Brian Rebar. Increased PSI in 5 from 42 to 58. Flow increased from 0.5 to 2-1

H_2O and air present @ 06D 07 85!

BD-3 water @ 6.02
Obstruction @ 86.7'

1215 06D Has threaded cap. cannot tighten further. Water is not leaving vault.
Put new cap on 07i. Water is not leaving vault but still

(28) (80) 9/24/08 NAS CELL

getting past cap. There is a fitting on well prior to cap.

will shut off BD-4 to de-pressurize line

BD-6 is @ 1.0 CFM @ 60 PSI

~~Plug~~ tightened plug on 5i. No longer leaking air

BD-4 when un-capped is sparging. Put hose back on. Re pressurized.

1315 pumped 1.0 gall out of BD-3. Could not get past 86.2' w/ tubing. After one gallon of water pumped air water mixture for 15 min. with little water -

9/24/08 NAS CELL: (81)

1355 Blew air in well @ 40 psi for 15 minutes. tubing could not penetrate past 86.7'

was not able to pump any water out afterwards

1415 Hooked BD-3 back up to system 68 PSI no flow.

BD-4 still not getting any flow

1435 B4 is blocked at 84.5 but is sparging when pressure is removed

Valve 5 is @ 1.5 @ 62 psi

1500 Shut system down to allow to cool and to work on 4 other wells:

BD-6, BD-4, BD-1, BD-2 off site

(32) 9/24/08 NAS CECIL

1530 Back on-site

1555 purged ~1.5 gal from BD-4 some sed. observed in tubing still @ 84.5

1610 Setup @ BD-6 water @ 25.5' Blockage @ 66.3

1633 wc @ BD-2 is 2.5' Blockage @ 4.0'

1639 purged ~1.0 gal from BD-6

1645 cannot get past blockage @ BD-2 BD-1 is unable to open. Releasing called Carrie Ruhlman and Brian Reber. Closed all sparge wells. Back pressure for 40 minutes

1730 start oil filter change

1800 filter change complete System Running ok

9/24/08 NAS CECIL (33)

1815 J. Clay off site

1900 ARRIVE HOME

(34) 9/25/08 NAS CECIL 2 day

0800 ARRIVE AIRPORT
RETURN RENTAL CAR
CALLED WILLARD SHARP.
GOT ANSWERING SERVICE
LEFT MESSAGE THAT OIL
FILTER HAS ALREADY BEEN
CHANGED. AND TO CALL
CHARLIE IF HE HAS ANY
QUESTIONS.

LEFT (4) BUCKETS, OIL
PAN, SPAN WRENCH
IN TRAILER.

1530 ARRIVE OFFICE

JTZ