N60200.AR.005029
NAS CECIL FIELD, FL
5090.3a

MARCH 2008 NATURAL ATTENUATION MONITORING REPORT FOR DAY TANK 1 NAS CECIL FIELD FL

5/12/2008

SOLUTIONS-IES INC

MARCH 2008
NATURAL ATTENUATION MONITORING REPORT

DAY TANK 1
FORMER NAS CECIL FIELD
JACKSONVILLE, FL

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

Prepared for:

NAVFAC SOUTHEAST
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SOLUTIONS-IES PROJECT NO. 4080.08A2.CECI

MAY 12, 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.

James L. Young, P.G., REM Terraine Project Manager Terraine, Inc.	5/12/08 Date	PG-FL2090, REM-6089 Registration Nos.

JAMES L YOUNG
LICENSE
NO. 2090
STATE OF
FLORIDA
PROFESSIONAL GEOLOGIST

Walter J. Beckwith Director of Technical Services Solutions-IES, Inc.	5/12/08 Date

Carrie Ruhlman Project Manager Solutions-IES, Inc.	5/12/08 Date

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N60200, DT1, UST, 20080430, 2008_1stSemiAnnRpt.pdf

1.0 INTRODUCTION

Solutions-IES, Inc. (Solutions-IES) has been contracted by the Navy (NAVFAC Southeast), to provide long-term groundwater monitoring services at the Day Tank 1 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 semi-annual groundwater monitoring in March and September. Solutions-IES subcontracts Terraine, Inc. (Terraine), the previous BOA Contractor at this site, to assist with groundwater monitoring and reporting requirements. This Natural Attenuation Monitoring Report details the activities performed at the site in March 2008.

1.1 SITE LOCATION AND DESCRIPTION

The Day Tank 1 site is located at the former NAS Cecil Field, approximately 1/8 mile south of the "A" Avenue gate on Jet Road. A site map is included in **Appendix A (Figure 1)**.

1.2 SITE HISTORY

A biosparge/vapor extraction system was previously in operation at the Day Tank 1 site to reduce the concentrations of petroleum-related contaminants in the groundwater and unsaturated soils to target levels specified in Chapter 62-777 Florida Administrative Code (FAC). Due to the substantial reduction of contaminant concentrations in wells within the area of influence of the remediation system, the Florida Department of Environmental Protection (FDEP) approved deactivating the remediation system on August 15, 2003. Post-active remediation monitoring in accordance with Chapter 62-770.750, FAC began at that time.

In October 2006, the FDEP issued a Natural Attenuation Monitoring Plan Approval Order (Order) for the site. The sampling schedule includes semi-annual monitoring of 12 wells for volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). Eight of the 12 wells previously served as vapor extraction wells during active remediation.

2.0 GROUNDWATER MONITORING SUMMARY

During this monitoring event, the wells listed below were inventoried, gauged for water levels and sampled for VOCs and PAHs. Locations of the wells at this site are described in the table below and illustrated on **Figure 2** (**Appendix A**).

Monitoring Well	Location
CEF-293-2	Within plume
CEF-293-9	Within plume
CEF-293-13	Perimeter well
CEF-293-22	Perimeter well
VEW-1	Within plume
VEW-2	Within plume
VEW-3	Perimeter well
VEW-4	Within plume
VEW-5	Perimeter well
VEW-6	Perimeter well
VEW-7	Within plume
VEW-8	Within plume

2.1 WELL INVENTORY

The wells were inventoried and examined for damage during the March 2008 sampling event. Other easily identified wells on-site were visually observed to ensure no obvious damage. Well inspection reports for all active wells can be found in **Appendix B**.

No extensive damage (i.e., the need for well replacement or abandonment) to the wells was noted by the field team during the March 2008 event. Well locks, well tags and bolts for the well covers will be replaced during the next field event, as recommended in the inspection reports.

2.2 WATER LEVEL MEASUREMENTS

Depth-to-groundwater and light non-aqueous phase liquid (LNAPL) measurements were recorded on March 5 and 6, 2008 at the Day Tank 1 site. The top-of-casing elevations, historical depth-to-LNAPL measurements, depth-to-water measurements, historical calculated LNAPL thickness, and calculated water level elevations are provided in **Table 1**, **Appendix C**.

As a result of previous construction activities, soil excavation, and the relocation of several wells at the site, top of casing elevations for some vapor extraction wells and monitoring wells are not available, or may no longer be accurate. However, a groundwater contour map, showing the water levels measured during the March 2008 event, has been prepared based on available information, and can be found in **Appendix A** (**Figure 3**). In order to determine an accurate groundwater flow direction at the site, the top-of-casings of all vapor extraction wells and monitoring wells should be resurveyed.

No LNAPL was detected in monitoring well VEW-1 during the March 2008 sampling event. LNAPL has not been observed in this well since September 2003. VEW-1 had 0.5 ft. of LNAPL at that time. LNAPL has not been detected in any other wells at the site since 2000, when 5.52 ft. was measured in VEW-2.

2.3 GROUNDWATER SAMPLING

2.3.1 Methodology

Groundwater sampling was conducted at the Day Tank 1 site on March 5 and 6, 2008. Four monitoring wells (CEF-293-2, CEF-293-9, CEF-293-13, and CEF-293-22) and eight vapor extraction wells (VEW-1, VEW-2, VEW-3, VEW-4, VEW-5, VEW-6, VEW-7, and VEW-8) were purged and sampled using the low-flow methodology.

Wells were purged immediately before sampling using a low flow peristaltic pump, at a rate equal or less than the groundwater recharge rate, until field parameters (temperature, pH, conductivity, turbidity, dissolved oxygen [DO] and oxidation reduction potential [ORP]) stabilized. Water levels in the wells were continuously monitored to maintain a drawdown of less than 0.3 feet.

Groundwater sampling was conducted in general accordance with applicable state and local guidelines, and the Solutions-IES Work Plan (February 2008). All samples collected were stored on ice and delivered to Test America in Orlando within 24 hours under Chain-of-Custody procedures.

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

2.3.2 Laboratory Analyses

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

- VOCs by EPA Method 8260B
- PAHs by EPA Method 8270C

A Level II data report was provided by the laboratory.

2.4 INVESTIGATION DERIVED WASTE (IDW)

Purge, wash and rinse water was collected in 5-gallon containers and transferred to a 55-gallon drum. The drum is being staged on-site. Arrangements will be made during the next sampling event to dispose of the IDW at an approved treatment facility.

3.0 SAMPLING AND ANALYTICAL RESULTS

This section presents groundwater data and compares it to the Groundwater Clean-up Target Levels (GCTLs) and Natural Attenuation Default Source Concentrations (NADSCs).

3.1 DATA VALIDATION

A review of data collected during the March 2008 sampling event was performed by Solutions-IES and Terraine personnel to ensure completeness. None of the data were rejected as a result of the data review. Data qualifiers are shown with the analyte concentrations in **Table 3, Appendix C**.

During the March 2008 sampling event, an equipment blank (CEF-293-EB1) was collected by running deionized water through new silicon tubing connected to the peristaltic pump. Naphthalene was detected in this sample at 0.650 I µg/L. The qualifier (I) indicates that the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit. The naphthalene detected in this sample is likely related to vapors present during sample collection. No other constituents were detected in the equipment blank.

3.2 GROUNDWATER RESULTS

Naphthalene and 1,2,4-trimethylbenzene were the only constituents detected above the groundwater clean-up target levels (GCTLs) in March 2008. Vapor extraction wells VEW-4 and VEW-7 both yielded naphthalene concentrations above the GCTL (14 µg/L) by EPA Method 8260B. VEW-4 had a naphthalene concentration of 33.4 µg/L, and VEW-7 had a naphthalene concentration of 33.8 µg/L. However, neither of the concentrations exceeded the Natural Attenuation Default Source Concentration (NADSC) of 140 µg/L.

Naphthalene concentrations by EPA Method 8270C for both VEW-4 and VEW-7 were also above the GCTL (14 µg/L). VEW-4 had a naphthalene concentration of 29.9 µg/L, and VEW-7 had a naphthalene concentration of 18.7 µg/L. Neither of the concentrations exceeded the NADSC concentration of 140 µg/L.

Figure 4, **Appendix A** illustrates the historical naphthalene trends in these two wells. In general, concentrations have fluctuated over time. However, concentrations in both wells have decreased since the last sampling event.

Several wells that have exhibited concentrations of naphthalene above the GCTL in the recent past, had results below the applicable limit during the March 2008 sampling event. These wells include CEF-293-2, CEF-293-9, VEW-1 (Methods 8260B and 8270C) and VEW-8 (Method 8260B). Complete historical sampling results can be found in **Table 3**, **Appendix C**.

The sample from well VEW-4 had a 1,2,4-trimethylbenzene concentration of 28.0 µg/L. Though this value is greater than the GCTL (10 µg/L), it is less than the corresponding NADSC (100 µg/L). Historical results for 1,2,4-trimethylbenzene in this well suggest a recent decline in concentration, however, they have been variable (see **Figure 5**, **Appendix A**).

Methylene chloride was detected in sample CEF-239-02 (0.970 I µg/L) and acetone was detected in sample VEW-04 (2.74 µg/L). Both of these compounds are commonly used in laboratories. The presence of these compounds is likely due to laboratory contamination. The presence of acetone and methylene chloride will continue to be monitored in all samples.

4.0 CONCLUSIONS AND RECOMMENDATIONS

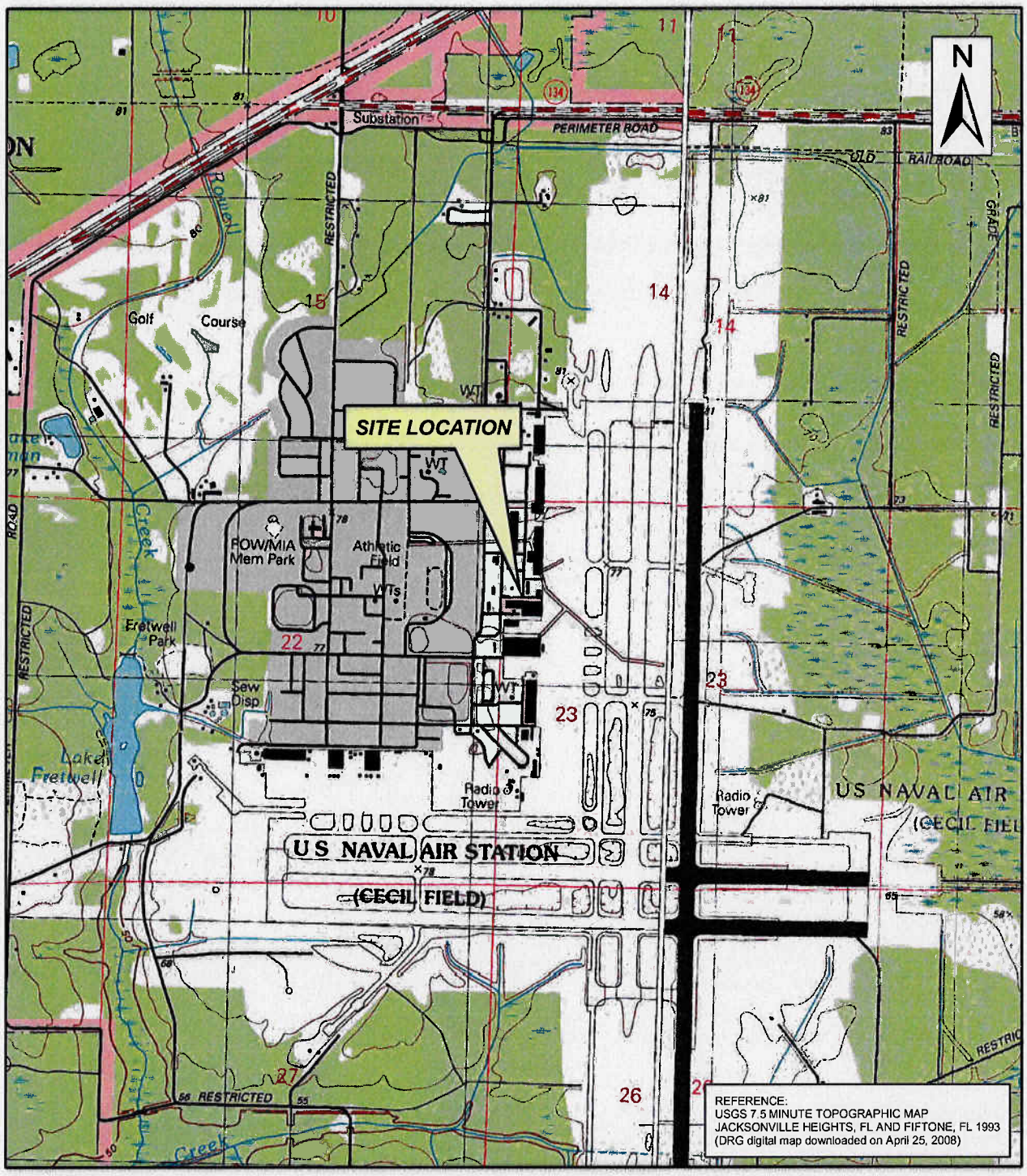
Water level data suggests that groundwater at this site flows in an east-southeast direction. When measuring water levels, no LNAPL was detected in vapor extraction well VEW-1. Only naphthalene and 1,2,4-trimethylbenzene were detected above the GCTL in the wells sampled this reporting period. However, neither of these constituents exceeded the NADSCs. In general, concentrations have decreased since the last reporting period.

No changes have been made to the Natural Attenuation Monitoring Plan Approval Order since Solutions-IES was awarded this contract in January 2008. The March 2008 sampling was conducted in general accordance with the Order and previous sampling events. Based on analytical results obtained to date, Solutions-IES recommends the following:

- Continue semi-annual water level and LNAPL measurements and groundwater sampling at wells CEF-293-2, CEF-293-9, CEF-293-13, CEF-293-22, VEW-1, VEW-2, VEW-3, VEW-4, VEW-5, VEW-6, VEW-7, and VEW-8 for VOCs by EPA Method 8260B and PAHs by EPA Method 8270C.
- Resurvey all wells at the Day Tank 1 site to determine accurate top of casing and groundwater elevations in order to determine groundwater flow direction at the site.

APPENDIX A

FIGURES



1:24,000

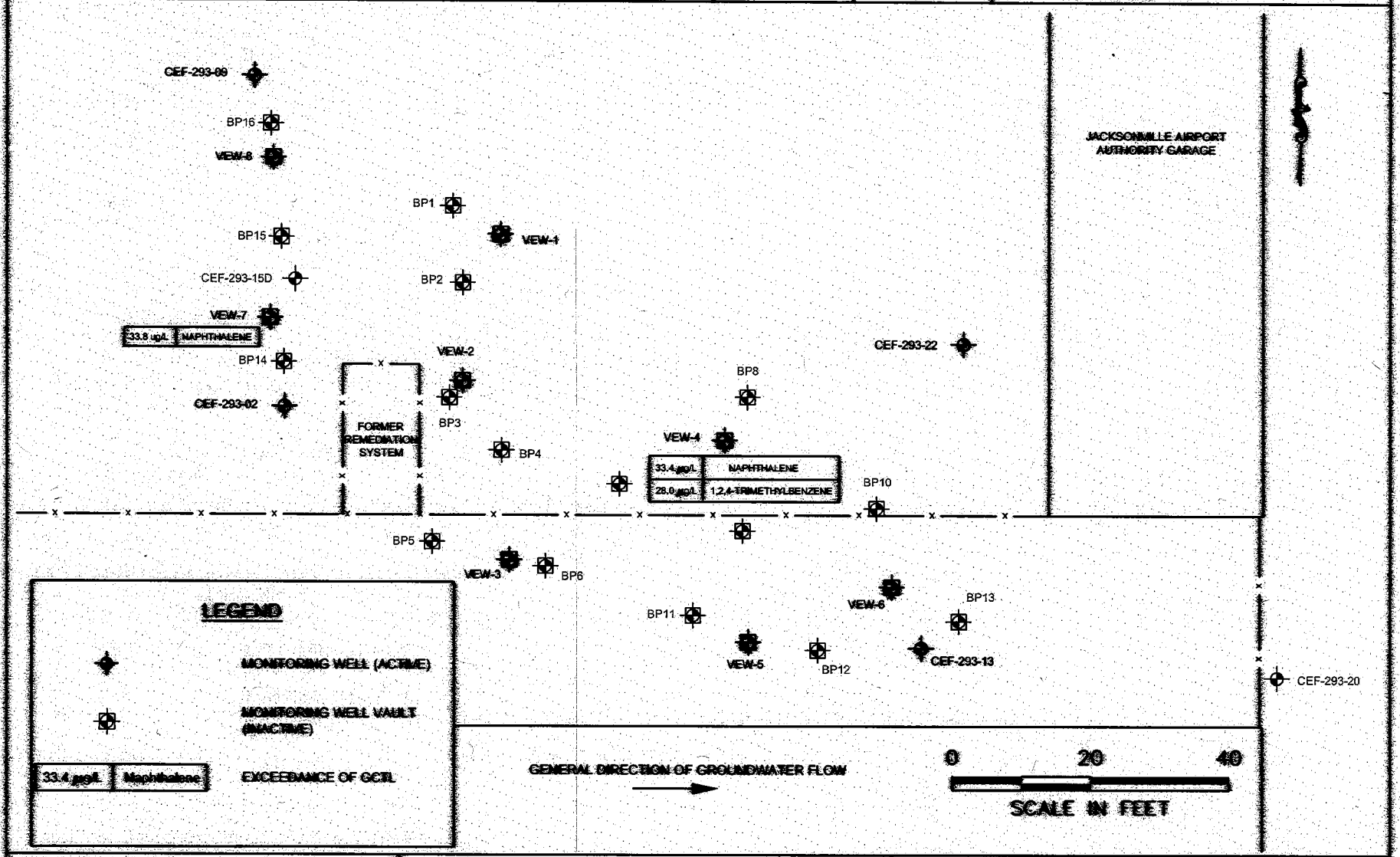
SITE LOCATION MAP
DAY TANK 1
NAS CECIL FIELD
DUVAL COUNTY, FLORIDA

Solutions-IES
Industrial & Environmental Services

1101 Nowell Road, Raleigh, NC 27609
Phone (919) 873-1060, Fax (919) 873-1074

Created by: JC Checked by: File: Figure 1.mxd Software: ESRI ArcMap 9.2	Project: 4080.08A2.CECI Date: APRIL 2008 FIGURE 1

FILE	DATE	PROJECT MANAGER	CHECKED BY	DRAFTER	PROJECT NUMBER
DT1Basemap.dwg	APRIL 2008	CR	JD	JC	4080.08A2.CEGI



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1101 MOWELL ROAD
RALEIGH, NORTH CAROLINA 27607
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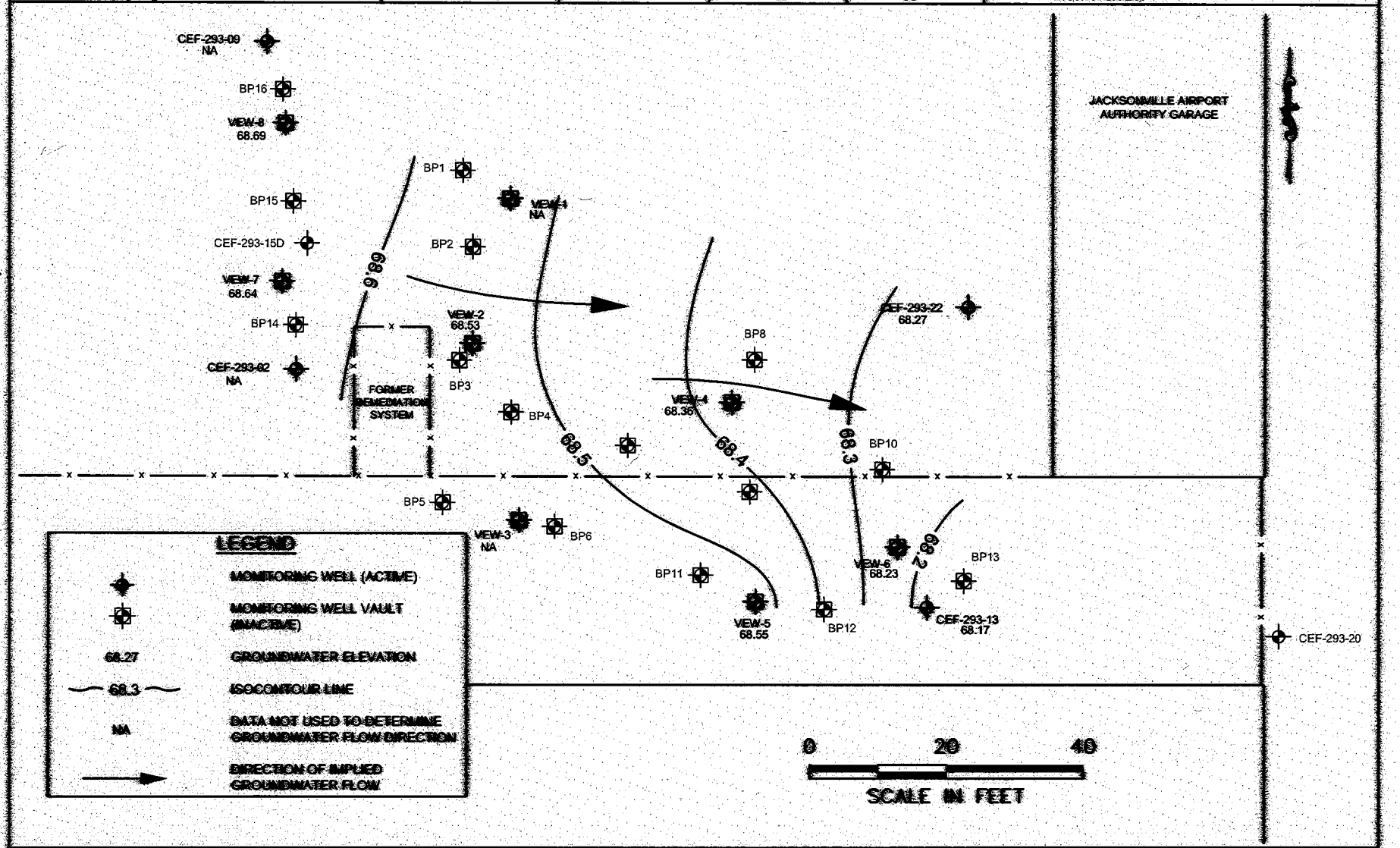
NOTES:
1) WELL LOCATIONS ARE APPROXIMATE AND BASED ON AVAILABLE SURVEY DATA
2) ONLY CONCENTRATIONS ABOVE THE GCTLs ARE SHOWN.
3) BASEMAP PROVIDED BY TERRAINE ENVIRONMENTAL.

WELL LOCATION AND
VOC CONCENTRATION MAP
DAY TANK 1 SITE - NAS CECIL FIELD
JACKSONVILLE, FL
MARCH 2008

FIGURE:
2

FILE	DATE	PROJECT MANAGER	CHECKED BY	DRAFTER	PROJECT NUMBER
DT1Basemap.dwg	APRIL 2006	CR	JD	JC	4080.06A2.CECI



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NOTES:

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

2) BASEMAP PROVIDED BY TERRAINE ENVIRONMENTAL.

GROUNDWATER CONTOUR MAP
MARCH 05, 2008
DAY TANK 1 SITE - NAS CECIL FIELD
JACKSONVILLE, FL

FIGURE:

3

FIGURE 4
Historical Napthalene Concentrations

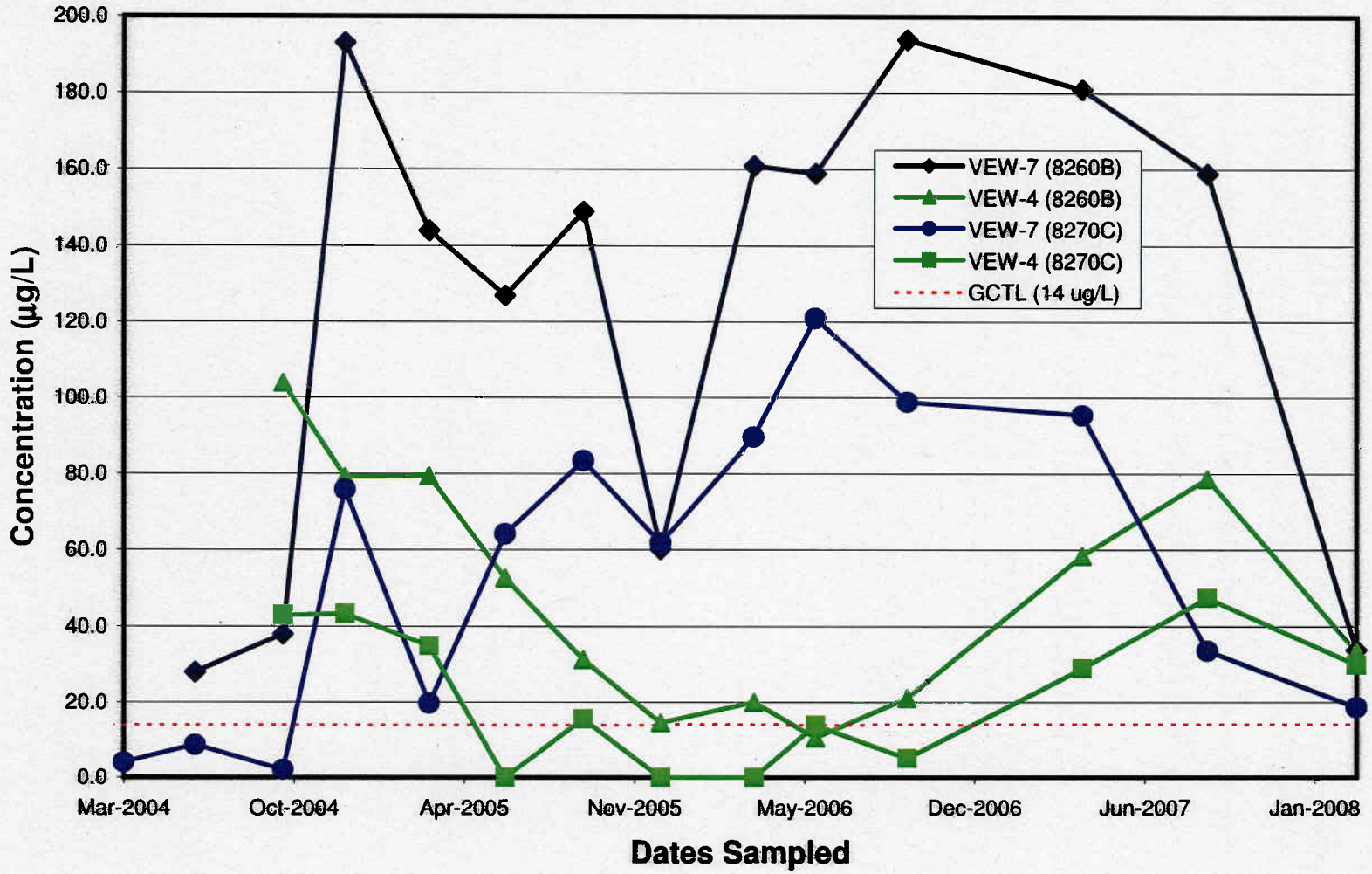
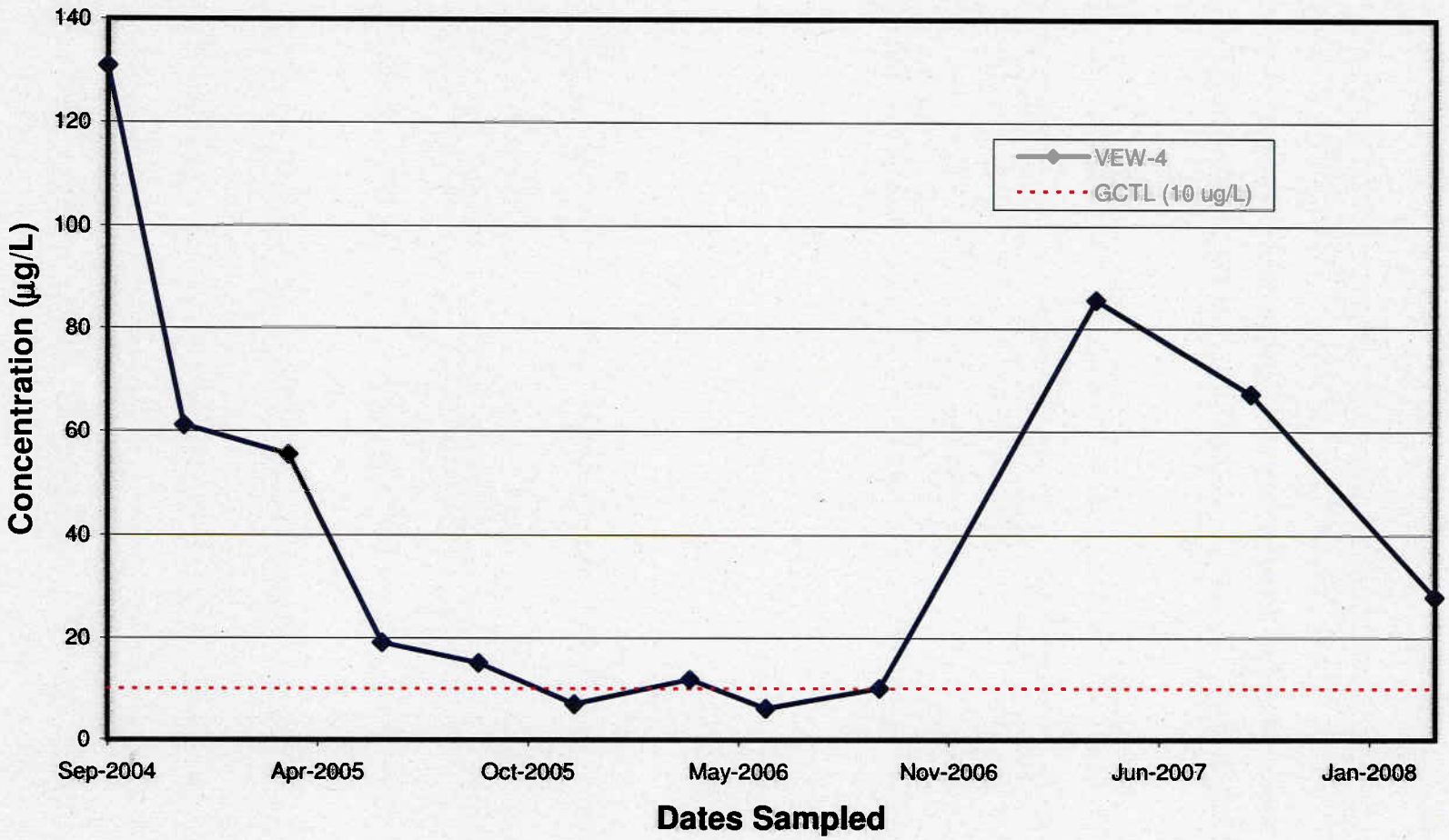


FIGURE 5
1,2,4-Trimethylbenzene Concentration
in Vapor Extraction Well VEW-4



APPENDIX B

WELL INSPECTION REPORTS

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WELL INSPECTION REPORT

Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-02 / Monitoring Well
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:28
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	15.00	Survey Northing	2,143,943.6800
Screen Interval (ft)		Survey Easting	377,776.2500
Well Diameter (in)	2	North (decimal degrees)	
Well Material		East (decimal degrees)	
Completion Type:	Flush Mount	TOC Elevation	0

WELL CONDITIONS		FIELD RECOMMENDATIONS	
		Abandon or Retain	Retain Well
Well Pad	good	Replace Well Pad	No
Well Tag	properly attached	Replace Well Tag	No
Well Cover	non-bolting	Replace Well Cover	No
Well Cap	good	Replace Well Cap	No
Well Lock	Damaged	Replace Well Lock	Yes
Protective Casing	good	Replace Protective Casing	No

WELL PHOTOGRAPH

COMMENTS

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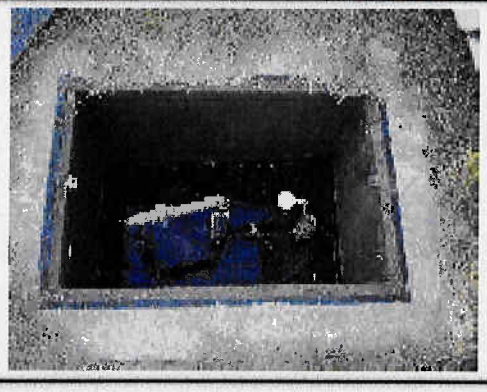
WELL INSPECTION REPORT

Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-VEW08
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:50
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	15.00	Survey Northing	2,144,013.1200
Screen Interval (ft)		Survey Easting	377,775.9200
Well Diameter (in)	2	North (decimal degrees)	
Well Material		East (decimal degrees)	
Completion Type:	Vault	TOC Elevation	76.43

WELL CONDITIONS		FIELD RECOMMENDATIONS	
		Abandon or Retain	Retain Well
Well Pad	good	Replace Well Pad	No
Well Tag	paint pen	Replace Well Tag	Yes
Well Cover	bolts missing	Replace Well Cover	No
Well Cap	good	Replace Well Cap	No
Well Lock	Missing	Replace Well Lock	Yes
Protective Casing	good	Replace Protective Casing	No

WELL PHOTOGRAPH



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Industrial & Environmental Services

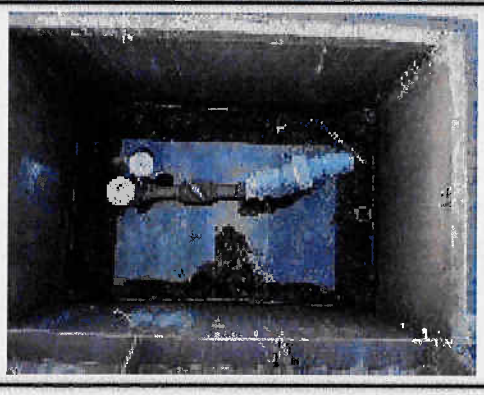
WELL INSPECTION REPORT

Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-VEW04
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:43
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	15.10	Survey Northing	2,143,926.8600
Screen Interval (ft)		Survey Easting	377,900.6300
Well Diameter (in)	2	North (decimal degrees)	
Well Material		East (decimal degrees)	
Completion Type:	Vault	TOC Elevation	75.54

WELL CONDITIONS		FIELD RECOMMENDATIONS	
		Abandon or Retain	Retain Well
Well Pad	good	Replace Well Pad	No
Well Tag	paint pen	Replace Well Tag	Yes
Well Cover	bolts missing	Replace Well Cover	No
Well Cap	good	Replace Well Cap	No
Well Lock	Missing	Replace Well Lock	Yes
Protective Casing	good	Replace Protective Casing	No

WELL PHOTOGRAPH



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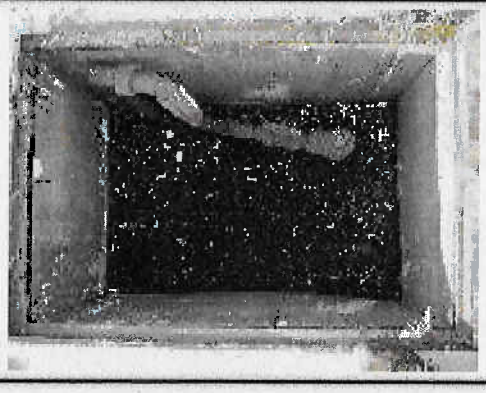
WELL INSPECTION REPORT

Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-VEW01
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:36
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	14.50	Survey Northing	2,143,990.9400
Screen Interval (ft)		Survey Easting	377,838.0300
Well Diameter (in)	2	North (decimal degrees)	
Well Material		East (decimal degrees)	
Completion Type:	Vault	TOC Elevation	76.32

WELL CONDITIONS		FIELD RECOMMENDATIONS	
		Abandon or Retain	Retain Well
Well Pad	good	Replace Well Pad	No
Well Tag	paint pen	Replace Well Tag	Yes
Well Cover	bolts missing	Replace Well Cover	No
Well Cap	good	Replace Well Cap	No
Well Lock	Missing	Replace Well Lock	Yes
Protective Casing	good	Replace Protective Casing	No

WELL PHOTOGRAPH



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WELL INSPECTION REPORT

Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-VEW05
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:45
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	16.85	Survey Northing	2,143,868.2000
Screen Interval (ft)		Survey Easting	377,907.5300
Well Diameter (in)	2	North (decimal degrees)	
Well Material		East (decimal degrees)	
Completion Type:	Vault	TOC Elevation	74.63

WELL CONDITIONS		FIELD RECOMMENDATIONS	
		Abandon or Retain	Retain Well
Well Pad	good	Replace Well Pad	No
Well Tag	paint pen	Replace Well Tag	Yes
Well Cover	bolts missing	Replace Well Cover	No
Well Cap	good	Replace Well Cap	No
Well Lock	Missing	Replace Well Lock	Yes
Protective Casing	good	Replace Protective Casing	No

WELL PHOTOGRAPH

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Industrial & Environmental Services

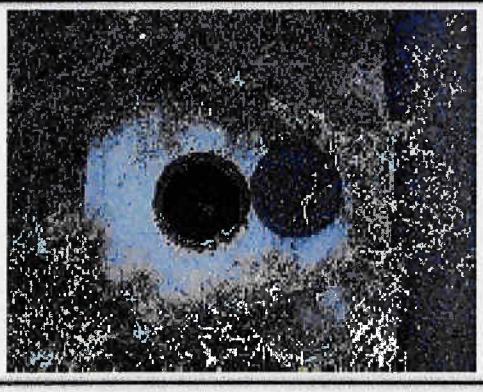
WELL INSPECTION REPORT

Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-09 / Monitoring Well
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:31
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	14.00	Survey Northing	2,144,030.0400
Screen Interval (ft)		Survey Easting	377,762.3300
Well Diameter (in)	2	North (decimal degrees)	
Well Material	PVC SCH 40	East (decimal degrees)	
Completion Type:	Flush Mount	TOC Elevation	77.36

WELL CONDITIONS		FIELD RECOMMENDATIONS	
		Abandon or Retain	Retain Well
Well Pad	good	Replace Well Pad	No
Well Tag	properly attached	Replace Well Tag	No
Well Cover	good	Replace Well Cover	No
Well Cap	good	Replace Well Cap	No
Well Lock	Missing	Replace Well Lock	Yes
Protective Casing	good	Replace Protective Casing	No

WELL PHOTOGRAPH



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Industrial & Environmental Services

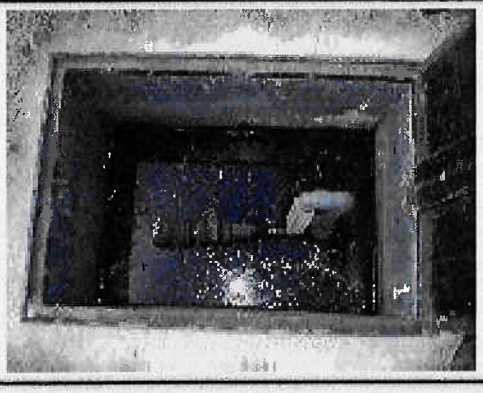
WELL INSPECTION REPORT

Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-VEW02
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:39
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	16.00	Survey Northing	2,143,948.0500
Screen Interval (ft)		Survey Easting	377,826.6900
Well Diameter (in)	2	North (decimal degrees)	
Well Material		East (decimal degrees)	
Completion Type:	Vault	TOC Elevation	75.86

WELL CONDITIONS		FIELD RECOMMENDATIONS	
		Abandon or Retain	Retain Well
Well Pad	good	Replace Well Pad	No
Well Tag	paint pen	Replace Well Tag	Yes
Well Cover	good	Replace Well Cover	No
Well Cap	good	Replace Well Cap	No
Well Lock	Missing	Replace Well Lock	Yes
Protective Casing	good	Replace Protective Casing	No

WELL PHOTOGRAPH



COMMENTS

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Solutions-IES
Industrial & Environmental Services

WELL INSPECTION REPORT

Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-VEW06
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:47
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	16.35	Survey Northing	2,143,885.4500
Screen Interval (ft)		Survey Easting	377,949.9300
Well Diameter (in)	2	North (decimal degrees)	
Well Material		East (decimal degrees)	
Completion Type:	Vault	TOC Elevation	74.31

WELL CONDITIONS		FIELD RECOMMENDATIONS	
		Abandon or Retain	Retain Well
Well Pad	good	Replace Well Pad	No
Well Tag	paint pen	Replace Well Tag	Yes
Well Cover	bolts missing	Replace Well Cover	No
Well Cap	good	Replace Well Cap	No
Well Lock	Missing	Replace Well Lock	Yes
Protective Casing	good	Replace Protective Casing	No

WELL PHOTOGRAPH

COMMENTS

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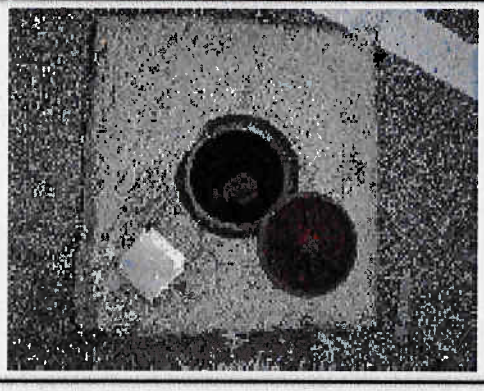
WELL INSPECTION REPORT

Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-13 / Monitoring Well
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:33
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	14.80	Survey Northing	2,143,858.7400
Screen Interval (ft)		Survey Easting	377,956.5900
Well Diameter (in)	2	North (decimal degrees)	
Well Material		East (decimal degrees)	
Completion Type:	Flush Mount	TOC Elevation	75.97

WELL CONDITIONS		FIELD RECOMMENDATIONS	
		Abandon or Retain	Retain Well
Well Pad	good	Replace Well Pad	No
Well Tag	properly attached	Replace Well Tag	No
Well Cover	non-bolting	Replace Well Cover	No
Well Cap	good	Replace Well Cap	No
Well Lock	Damaged	Replace Well Lock	Yes
Protective Casing	good	Replace Protective Casing	No

WELL PHOTOGRAPH



COMMENTS

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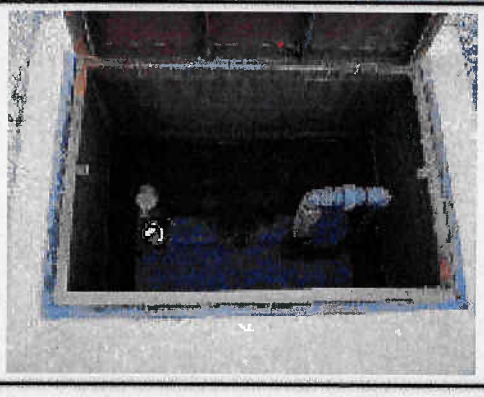
WELL INSPECTION REPORT

Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-VEW03
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:41
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	13.98	Survey Northing	2,143,891.8600
Screen Interval (ft)		Survey Easting	377,833.1000
Well Diameter (in)	2	North (decimal degrees)	
Well Material		East (decimal degrees)	
Completion Type:	Vault	TOC Elevation	75.28

WELL CONDITIONS		FIELD RECOMMENDATIONS	
		Abandon or Retain	Retain Well
Well Pad	good	Replace Well Pad	No
Well Tag	paint pen	Replace Well Tag	Yes
Well Cover	good	Replace Well Cover	No
Well Cap	good	Replace Well Cap	No
Well Lock	Missing	Replace Well Lock	Yes
Protective Casing	good	Replace Protective Casing	No

WELL PHOTOGRAPH



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WELL INSPECTION REPORT

Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-VEW07
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:48
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	16.40	Survey Northing	2,143,969.2500
Screen Interval (ft)		Survey Easting	377,773.9500
Well Diameter (in)	2	North (decimal degrees)	
Well Material		East (decimal degrees)	
Completion Type:	Vault	TOC Elevation	76.44

WELL CONDITIONS		FIELD RECOMMENDATIONS	
		Abandon or Retain	Retain Well
Well Pad	good	Replace Well Pad	No
Well Tag	paint pen	Replace Well Tag	Yes
Well Cover	bolts missing	Replace Well Cover	No
Well Cap	good	Replace Well Cap	No
Well Lock	Missing	Replace Well Lock	Yes
Protective Casing	good	Replace Protective Casing	No

WELL PHOTOGRAPH

COMMENTS

SIGNATURE

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WELL INSPECTION REPORT

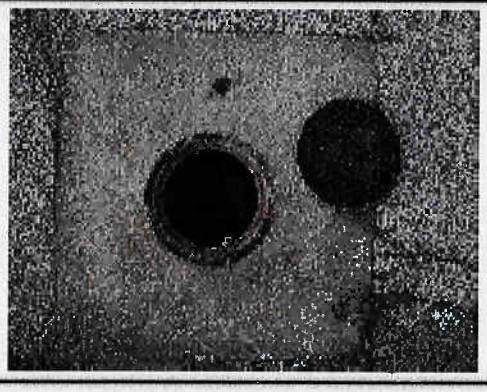
Facility Name	Naval Air Station, Cecil Field	**Well ID / Well Type**	CEF-293-22 / Monitoring Well
Facility Location	Jacksonville, FL	**Inspection Date**	03/06/2008
Site Name	Day Tank 1	**Inspection Time**	21:34
Site Status	Active	**Field Inspector**	Josh Clay

WELL CONSTRUCTION DETAILS		WELL COORDINATES	
Total Depth (ft)	14.70	Survey Northing	2,143,944.9400
Screen Interval (ft)		Survey Easting	377,983.1200
Well Diameter (in)	2	North (decimal degrees)	
Well Material		East (decimal degrees)	
Completion Type:	Flush Mount	TOC Elevation	75.95

WELL CONDITIONS	
Well Pad	good
Well Tag	properly attached
Well Cover	bolts missing
Well Cap	good
Well Lock	Damaged
Protective Casing	good

FIELD RECOMMENDATIONS	
Abandon or Retain	Retain Well
Replace Well Pad	No
Replace Well Tag	No
Replace Well Cover	No
Replace Well Cap	No
Replace Well Lock	Yes
Replace Protective Casing	No

WELL PHOTOGRAPH



COMMENTS

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APPENDIX C

TABLES

TABLE 1
DEPTH TO GROUNDWATER/LNAPL MEASUREMENTS

DAY TANK 1
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Date	Top of Casing Elevation (Feet)	Depth to LNAPL (Feet)	Depth to Water (Feet)	LNAPL Thickness (Feet)	Water Level Elevation (Feet)
CEF-293-02	12/08/05	NA	none present	8.60	0.00	NA
	04/18/07		none present	10.25	0.00	NA
	06/20/07		none present	9.72	0.00	NA
	09/12/07		none present	9.37	0.00	NA
	03/05/08		none present	8.44	0.00	NA
CEF-293-09	06/13/00	77.36	none present	9.93	0.00	67.43
	03/11/03		none present	6.09	0.00	71.27
	06/06/03		none present	7.85	0.00	69.51
	09/02/03		none present	7.29	0.00	70.07
	12/12/03		none present	9.62	0.00	67.74
	03/17/04		none present	9.84	0.00	67.52
	06/09/04		none present	9.83	0.00	67.53
	09/20/04		none present	6.30	0.00	71.06
	12/02/04		none present	8.75	0.00	68.61
	03/11/05		none present	8.79	0.00	68.57
	06/08/05		none present	8.65	0.00	68.71
	09/08/05		none present	7.08	0.00	70.28
	12/08/05		none present	8.72	0.00	68.64
	03/28/06		none present	8.90	0.00	68.46
	06/08/06		none present	9.86	0.00	67.50
	09/24/06		none present	9.95	0.00	67.41
	04/18/07		none present	11.13	0.00	66.23
	06/20/07		NM	NM	NM	NM
	09/12/07		none present	10.28	0.00	67.08
	03/05/08		none present	9.35	0.00	68.01
CEF-293-13	12/08/05	75.97	none present	7.92	0.00	68.05
	04/19/07		none present	9.53	0.00	66.44
	06/20/07		none present	8.99	0.00	66.98
	09/13/07		none present	8.64	0.00	67.33
	03/05/08		none present	7.80	0.00	68.17
CEF-293-22	06/13/00	75.95	none present	8.88	0.00	67.07
	03/11/03		none present	8.33	0.00	67.62
	06/07/03		none present	7.00	0.00	68.95
	09/02/03		none present	6.34	0.00	69.61
	12/12/03		none present	8.65	0.00	67.30
	03/17/04		none present	8.80	0.00	67.15
	06/09/04		none present	8.56	0.00	67.39
	09/20/04		none present	5.60	0.00	70.35
	12/02/04		none present	7.90	0.00	68.05
	03/11/05		none present	7.90	0.00	68.05
	06/08/05		none present	7.71	0.00	68.24
	09/08/05		none present	6.31	0.00	69.64
	12/08/05		none present	7.79	0.00	68.16
	03/28/06		none present	7.98	0.00	67.97
	06/08/06		none present	8.82	0.00	67.13
	09/24/06		none present	8.84	0.00	67.11
	04/18/07		none present	9.36	0.00	66.59
	06/20/07		none present	8.85	0.00	67.10
	09/12/07		none present	8.54	0.00	67.41
	03/05/08		none present	7.68	0.00	68.27
VEW-01	06/13/00	NA	8.60	10.89	2.29	NA
	03/11/03		5.08	5.80	0.72	NA
	06/07/03		6.90	7.40	0.50	NA
	09/02/03		4.40	4.90	0.50	NA
	12/12/03		none present	NM	0.00	NA
	03/17/04		none present	NM	0.00	NA
	06/09/04		none present	8.40	0.00	NA
	09/20/04		none present	4.90	0.00	NA
	12/02/04		none present	7.44	0.00	NA
	03/11/05		none present	7.39	0.00	NA
	06/08/05		none present	7.24	0.00	NA
	09/08/05		none present	5.63	0.00	NA
	12/08/05		none present	7.32	0.00	NA
	03/28/06		none present	7.58	0.00	NA
	06/08/06		none present	8.40	0.00	NA
	09/24/06		none present	8.44	0.00	NA
	04/18/07		none present	8.94	0.00	NA
	06/20/07		none present	8.39	0.00	NA
	09/12/07		none present	8.10	0.00	NA
	03/05/08		none present	7.17	0.00	NA

TABLE 1
DEPTH TO GROUNDWATER/LNAPL MEASUREMENTS

DAY TANK 1
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Date	Top of Casing Elevation (Feet)	Depth to LNAPL (Feet)	Depth to Water (Feet)	LNAPL Thickness (Feet)	Water Level Elevation (Feet)
VEW-02	06/13/00	75.86	7.50	13.02	5.52	62.84
	03/11/03		none present	4.71	0.00	71.15
	06/07/03		none present	6.50	0.00	69.36
	09/02/03		none present	5.96	0.00	69.90
	12/12/03		none present	11.04	0.00	64.82
	03/17/04		none present	8.40	0.00	67.46
	06/09/04		none present	8.54	0.00	67.32
	09/20/04		none present	5.01	0.00	70.85
	12/02/04		none present	7.61	0.00	68.25
	03/11/05		none present	7.52	0.00	68.34
	06/08/05		none present	7.39	0.00	68.47
	09/08/05		none present	5.81	0.00	70.05
	12/08/05		none present	7.32	0.00	68.54
	03/28/06		none present	7.66	0.00	68.20
	06/08/06		none present	8.58	0.00	67.28
	09/24/06		none present	9.63	0.00	66.23
	04/18/07		none present	9.11	0.00	66.75
	06/20/07		none present	8.59	0.00	67.27
	09/12/07		none present	8.24	0.00	67.62
	03/05/08		none present	7.33	0.00	68.53
VEW-03	06/13/00	75.28	none present	8.05	0.00	67.23
	12/11/02		none present	6.23	0.00	69.05
	03/11/03		none present	4.07	0.00	71.21
	06/06/03		none present	6.10	0.00	69.18
	09/02/03		none present	5.35	0.00	69.93
	12/12/03		none present	7.80	0.00	67.48
	03/17/04		none present	8.02	0.00	67.26
	06/09/04		none present	8.01	0.00	67.27
	09/20/04		none present	4.30	0.00	70.98
	12/02/04		none present	7.10	0.00	68.18
	03/11/05		none present	7.05	0.00	68.23
	06/08/05		none present	6.90	0.00	68.38
	09/08/05		none present	5.35	0.00	69.93
	12/08/05		none present	6.90	0.00	68.38
	03/28/06		none present	7.15	0.00	68.13
	06/08/06		none present	8.01	0.00	67.27
	09/24/06		none present	8.09	0.00	67.19
	04/16/07		none present	8.61	0.00	66.67
	06/20/07		none present	8.09	0.00	67.19
	09/13/07		none present	7.73	0.00	67.55
	03/05/08		none present	6.83	0.00	68.45
VEW-04	06/13/00	75.54	none present	8.38	0.00	67.16
	03/11/03		none present	4.66	0.00	70.88
	06/07/03		none present	6.50	0.00	69.04
	09/02/03		none present	5.80	0.00	69.74
	12/12/03		none present	8.12	0.00	67.42
	03/17/04		none present	8.30	0.00	67.24
	06/09/04		none present	8.37	0.00	67.17
	09/20/04		none present	4.95	0.00	70.59
	12/02/04		none present	7.50	0.00	68.04
	03/11/05		none present	7.45	0.00	68.09
	06/08/05		none present	7.20	0.00	68.34
	09/08/05		none present	5.74	0.00	69.80
	12/08/05		none present	7.32	0.00	68.22
	03/28/06		none present	7.50	0.00	68.04
	06/08/06		none present	8.34	0.00	67.20
	09/24/06		none present	9.40	0.00	66.14
	04/18/07		none present	8.90	0.00	66.64
	06/20/07		none present	8.40	0.00	67.14
	09/12/07		none present	8.03	0.00	67.51
	03/05/08		none present	7.18	0.00	68.36

TABLE 1
DEPTH TO GROUNDWATER/LNAPL MEASUREMENTS

DAY TANK 1
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Date	Top of Casing Elevation (Feet)	Depth to LNAPL (Feet)	Depth to Water (Feet)	LNAPL Thickness (Feet)	Water Level Elevation (Feet)
VEW-05	06/13/00	74.63	none present	7.53	0.00	67.10
	03/11/03		none present	3.80	0.00	70.83
	06/06/06		none present	6.75	0.00	67.88
	09/02/03		none present	4.95	0.00	69.68
	12/12/03		none present	7.40	0.00	67.23
	03/17/04		none present	7.50	0.00	67.13
	06/09/04		none present	7.55	0.00	67.08
	09/20/04		none present	4.10	0.00	70.53
	12/02/04		none present	6.80	0.00	67.83
	03/11/05		none present	6.25	0.00	68.38
	06/08/05		none present	6.10	0.00	68.53
	09/08/05		none present	4.70	0.00	69.93
	12/08/05		none present	6.20	0.00	68.43
	03/28/06		none present	6.35	0.00	68.28
	06/08/06		none present	7.22	0.00	67.41
	09/24/06		none present	7.30	0.00	67.33
	04/19/07		none present	7.80	0.00	66.83
	06/20/07		none present	7.27	0.00	67.36
	09/13/07		none present	6.93	0.00	67.70
	03/05/08		none present	6.08	0.00	68.55
VEW-06	12/08/05	74.31	none present	6.20	0.00	68.11
	04/19/07		none present	8.80	0.00	65.51
	06/20/07		none present	7.26	0.00	67.05
	09/13/07		none present	6.92	0.00	67.39
	03/05/08		none present	6.08	0.00	68.23
VEW-07	06/13/00	76.44	none present	9.06	0.00	67.38
	03/11/03		none present	5.01	0.00	71.43
	06/07/03		none present	6.97	0.00	69.47
	09/04/03		none present	6.45	0.00	69.99
	12/12/03		none present	8.90	0.00	67.54
	03/17/04		none present	9.00	0.00	67.44
	06/09/04		none present	8.99	0.00	67.45
	09/20/04		none present	5.39	0.00	71.05
	12/02/04		none present	8.37	0.00	68.07
	03/11/05		none present	7.96	0.00	68.48
	06/08/05		none present	7.90	0.00	68.54
	09/08/05		none present	6.25	0.00	70.19
	12/08/05		none present	7.91	0.00	68.53
	03/28/06		none present	8.00	0.00	68.44
	06/08/06		none present	9.03	0.00	67.41
	09/24/06		none present	9.11	0.00	67.33
	04/18/07		none present	9.67	0.00	66.77
	06/20/07		none present	9.07	0.00	67.37
	09/12/07		none present	8.71	0.00	67.73
	03/05/08		none present	7.80	0.00	68.64
VEW-08	12/08/05	76.43	none present	7.84	0.00	68.59
	04/18/07		none present	9.55	0.00	66.88
	06/20/07		none present	8.98	0.00	67.45
	09/12/07		none present	8.65	0.00	67.78
	03/05/08		none present	7.74	0.00	68.69

LNAPL = Light Non-Aqueous Phase Liquid
NA = Not available/Not applicable
NM = Not Measured
Elevation is referenced to National Geodetic Vertical Datum (NGVD) 1929
Depth to LNAPL is measured from top of casing
Depth to water is measured from top of casing

TABLE 2
FIELD ANALYTICAL RESULTS

DAY TANK 1
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

	Date	pH (S.U.)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Temperature (°C)
CEF-293-02	12/8/2005	5.35	0.31	1.60	83.20	22.82
	4/18/2007	4.40	0.155	0.24	-65.00	22.25
	9/12/2007	5.19	0.170	0.40	-78.90	27.46
	3/6/2008	5.06	0.173	0.50	-38.30	20.78
CEF-293-09	1/25/2000	5.99	0.088	NM	NM	21.40
	3/11/2003	5.90	0.29	4.29	177.00	20.85
	6/6/2003	6.00	0.472	0.00	-26.00	23.26
	9/2/2003	5.84	0.730	0.93	-90.00	26.10
	12/12/2003	5.86	0.998	0.01	-41.00	23.22
	3/17/2004	5.40	0.279	1.00	NM	21.10
	6/9/2004	5.61	0.280	0.26	-109.60	24.03
	9/20/2004	5.66	0.283	0.15	-148.80	25.79
	12/2/2004	5.82	0.342	0.19	-196.90	24.97
	3/11/2005	8.34	0.240	1.49	-118.00	22.08
	6/8/2005	5.44	0.263	0.23	-196.50	23.67
	9/8/2005	5.25	0.526	0.69	-249.90	25.97
	12/8/2005	5.84	0.343	0.72	-34.50	22.72
	3/28/2006	4.76	0.285	0.27	3.50	22.23
	6/8/2006	4.52	0.262	0.45	25.90	26.00
	9/24/2006	5.28	0.243	0.32	-93.80	26.62
	4/18/2007	5.50	0.234	0.56	-160.90	22.48
	9/12/2007	5.50	0.270	1.26	-86.20	28.55
	3/6/2008	5.60	0.275	0.95	-95.00	22.54
CEF-293-13	12/8/2005	5.38	0.322	0.95	124.00	22.88
	4/19/2007	4.67	0.190	0.69	33.30	21.04
	9/13/2007	5.29	0.165	0.83	42.90	27.82
	3/5/2008	4.91	0.137	0.79	-41.60	21.24
CEF-293-22	1/25/2000	6.44	0.126	NM	NM	23.00
	3/11/2003	3.95	0.508	3.13	193.00	21.50
	6/7/2003	5.72	0.428	0.12	-20.00	25.90
	9/2/2003	5.57	0.929	0.72	52.00	28.75
	12/12/2003	5.63	0.626	4.24	99.00	24.35
	3/17/2004	5.71	0.480	NM	74.00	23.01
	6/9/2004	4.96	0.172	0.90	15.00	25.32
	9/20/2004	4.97	0.478	0.35	70.00	27.10
	12/2/2004	5.68	0.716	0.33	6.00	26.08
	3/11/2005	5.23	0.518	0.25	-83.30	21.87
	6/8/2005	5.41	0.378	0.09	-98.80	25.54
	9/8/2005	5.68	0.507	0.46	45.40	28.60
	12/8/2005	5.61	0.548	1.42	194.30	22.99
	3/28/2006	5.5	0.407	0.95	-77.10	22.36
	6/8/2006	4.26	0.252	0.65	132.70	26.54
	9/24/2006	4.66	0.250	0.74	-93.50	27.93
	4/18/2007	4.72	0.166	0.37	-17.90	23.62
	9/12/2007	5.11	0.305	0.77	-32.20	30.23
	3/5/2008	5.50	0.236	1.49	34.90	22.00
VEW-01	12/2/2004	5.92	0.302	0.10	-216.50	25.40
	3/11/2005	7.46	0.120	0.00	-100.00	21.55
	6/8/2005	5.16	0.134	0.08	-198.20	23.18
	9/8/2005	6.13	0.091	1.97	48.10	27.26
	12/8/2005	5.56	0.214	0.54	-24.40	22.89
	3/28/2006	5.41	0.149	0.50	-76.40	22.75
	6/8/2006	4.45	0.129	0.36	-3.20	25.29
	9/24/2006	4.62	0.147	0.40	-79.30	27.49
	4/18/2007	5.38	0.177	0.62	-129.30	21.67
	9/12/2007	5.46	0.191	0.87	-28.10	26.65
	3/5/2008	5.91	0.077	0.58	-52.10	21.11

TABLE 2
FIELD ANALYTICAL RESULTS

DAY TANK 1
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

	Date	pH (S.U.)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Temperature (°C)
VEW-02	1/25/2000	5.63	0.085	NM	NM	22.70
	3/11/2003	5.90	0.110	2.51	-53.00	21.10
	6/7/2003	6.09	0.132	0.00	-86.00	22.90
	9/4/2003	5.60	0.342	1.34	-163.00	26.85
	12/12/2003	5.82	0.563	4.01	23.00	22.78
	3/17/2004	5.48	0.172	0.80	NM	21.30
	6/9/2004	5.57	0.172	0.16	-75.90	23.45
	9/20/2004	6.49	0.777	0.10	-141.60	25.98
	12/2/2004	5.91	0.404	0.05	-225.70	24.79
	3/11/2005	8.53	0.310	0.98	-170.00	21.92
	6/8/2005	5.67	0.280	0.06	-209.00	23.53
	9/8/2005	5.57	0.710	0.39	-85.30	26.71
	12/8/2005	6.19	0.511	0.74	-125.60	22.10
	3/28/2006	6.10	0.392	0.62	-87.70	22.53
	6/8/2006	4.92	0.306	0.45	-122.70	23.94
	9/24/2006	5.36	0.295	0.38	-33.70	26.33
	4/18/2007	5.14	0.283	0.19	-85.40	22.76
	9/12/2007	5.59	0.317	0.69	-84.30	26.42
	3/5/2008	6.31	0.374	0.41	-203.40	21.57
VEW-03	1/25/2000	5.90	0.070	NM	NM	22.10
	3/11/2003	4.84	0.166	6.06	202.00	21.30
	6/7/2003	5.61	0.159	0.34	30.00	25.10
	9/2/2003	5.06	0.306	0.51	NM	27.40
	12/12/2003	5.10	0.354	0.66	-223.00	24.60
	3/17/2004	5.40	0.398	NM	176.00	21.80
	6/9/2004	4.70	0.145	0.42	70.00	25.63
	9/20/2004	5.62	0.137	0.00	-42.00	27.32
	12/2/2004	5.39	0.341	0.45	32.00	25.51
	3/11/2005	5.01	0.275	0.31	-10.30	22.06
	6/8/2005	4.91	0.145	0.82	-9.90	26.13
	9/8/2005	5.33	0.315	1.65	-156.20	23.50
	12/8/2005	5.47	0.369	1.10	164.60	23.83
	3/28/2006	4.56	0.221	0.50	65.10	23.85
	6/8/2006	4.79	0.247	0.62	-132.10	26.75
	9/24/2006	4.52	0.222	0.83	-100.50	27.91
	4/19/2007	5.10	0.205	0.58	-125.10	22.90
	6/20/2007	5.05	0.154	0.83	-106.70	26.19
	9/12/2007	5.14	0.136	0.82	10.10	28.25
	3/5/2008	5.04	0.132	0.44	-85.70	23.38
VEW-04	1/25/2000	5.59	0.078	NM	NM	23.00
	3/11/2003	4.35	0.126	5.85	190.00	22.40
	6/7/2003	5.60	0.109	0.00	-41.00	25.10
	9/2/2003	5.35	0.277	0.00	106.00	27.53
	12/12/2003	5.37	0.358	0.28	182.00	24.34
	3/17/2004	5.17	0.316	NM	200.00	22.73
	6/9/2004	4.63	0.128	0.57	210.00	25.43
	9/20/2004	5.15	0.282	0.07	-46.10	27.60
	12/2/2004	4.83	0.683	0.27	103.20	26.27
	3/11/2005	4.39	0.393	0.24	44.90	22.55
	6/8/2005	4.69	0.203	0.05	64.30	26.93
	9/8/2005	5.24	0.254	0.30	150.80	29.26
	12/8/2005	4.93	0.232	1.00	237.90	23.27
	3/28/2006	4.95	0.221	0.57	-94.30	23.40
	6/8/2006	3.65	0.223	0.50	256.30	27.25
	9/24/2006	4.57	0.210	0.46	202.60	28.47
	4/18/2007	4.54	0.142	0.62	0.70	23.88
	9/12/2007	4.45	0.130	0.75	-32.10	29.15
	3/5/2008	4.76	0.123	0.68	-82.60	22.61

TABLE 2
FIELD ANALYTICAL RESULTS

DAY TANK 1
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

	Date	pH (S.U.)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Temperature (°C)
VEW-05	1/25/2000	6.28	0.113	NM	NM	21.50
	3/11/2003	4.35	0.104	5.25	227.00	20.70
	6/6/2003	5.10	0.122	0.02	40.00	24.70
	9/2/2003	4.84	0.319	0.08	158.00	27.69
	12/12/2003	4.68	0.278	0.36	-214.00	23.62
	3/17/2004	5.00	0.245	NM	232.00	21.51
	6/9/2004	4.47	0.106	0.11	238.00	25.83
	9/20/2004	3.94	0.110	0.04	144.00	26.88
	12/2/2004	5.11	0.227	0.62	159.20	24.44
	3/11/2005	5.24	0.253	0.23	53.50	20.82
	6/8/2005	4.62	0.127	0.25	206.10	25.33
	9/8/2005	5.70	0.202	1.11	-168.20	28.55
	12/8/2005	6.21	0.220	3.68	149.50	21.98
	3/28/2006	4.85	0.245	0.44	181.90	23.77
	6/8/2006	4.75	0.218	0.53	-81.70	26.69
	9/24/2006	5.08	0.165	0.91	34.50	28.02
	4/18/2007	4.94	0.266	0.78	140.10	22.21
	9/13/2007	4.80	0.343	0.46	116.40	28.79
	3/5/2008	4.68	0.237	0.32	-24.90	21.08
VEW-06	12/8/2005	5.67	0.484	0.94	151.60	23.67
	4/19/2007	4.99	0.255	0.44	79.60	22.37
	9/13/2007	5.61	0.219	0.58	136.90	29.71
	3/5/2008	5.36	0.196	0.34	-22.40	22.89
VEW-07	1/25/2000	5.63	0.074	NM	NM	21.80
	3/11/2003	4.98	0.111	2.69	86.00	18.50
	6/7/2003	5.70	0.134	0.00	-36.00	22.00
	9/4/2003	5.01	0.318	2.26	-42.00	25.31
	12/12/2003	5.07	0.469	0.17	-307.00	23.18
	3/17/2004	5.44	0.186	1.20	NM	21.40
	6/9/2004	5.36	0.214	0.18	-65.60	24.23
	9/20/2004	5.41	0.220	0.24	-137.90	25.36
	12/2/2004	5.71	0.295	0.18	-145.90	24.95
	3/11/2005	7.92	0.260	3.32	-107.00	22.00
	6/8/2005	5.26	0.241	0.3	-138.00	23.08
	9/8/2005	5.16	0.421	0.59	-203.60	25.70
	12/8/2005	5.33	0.448	1.45	84.30	22.43
	3/28/2006	4.91	0.268	0.25	-7.00	23.36
	6/8/2006	4.45	0.262	0.76	-106.50	24.98
	9/24/2006	4.79	0.275	0.55	-103.80	26.06
	4/18/2007	4.72	0.223	0.24	-57.70	22.12
	9/12/2007	5.3	0.223	0.54	-66.30	26.00
	3/5/2008	5.24	0.139	0.22	-85.20	21.81
VEW-08	12/8/2005	5.68	0.273	0.89	-35.10	22.18
	4/18/2007	5.84	0.350	0.43	-199.10	23.10
	9/12/2007	5.72	0.310	0.29	-115.30	27.51
	3/5/2008	5.36	0.126	0.6	-131.7	21.7

S.U. = standard units
mS/cm = millisiemens per centimeter
mg/L = Milligrams per liter
°C = degrees Centigrade
NM = not measured

TABLE 3
Groundwater Analytical Results
Day Tank 1
NAS Cecil Field
Jacksonville, Florida

Sample I.D.	Date	Benzene	Ethylbenzene	Toluene	Xylenes (total)	Acenapthylene	Acenapthene	Fluoranthene	Pyrene	Chrysene	Benzo (a) anthracene	Benzo(b) Fluoranthene	Benzo(k) Fluoranthene	Benzo(a) Pyrene	Benzo(g,h,i) Perylene	Indeno (1,2,3-cd) Pyrene	Napthalene by Method 8270C-SIM	Napthalene by Method 8260B	1-Methylnapthalene	2-Methylnapthalene	Phenanthrene	Fluorene	Isopropylbenzene	Chloroform	n-Propylbenzene	sec-Butylbenzene	n-Butylbenzene	T-butylbenzene	1,2,4 Trimethylbenzene	1,3,5 Trimethylbenzene	p-Isopropyltoluene
Cleanup Goal - RAP		1	NA	NA	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GCTL		1	30	40	20	210	20	280	210	4.8	0.05	0.05	0.5	0.2	210	0.05	14	14	28	28	210	280	–	70	NA	NA	NA	NA	10	10	NA
NADSC		100	300	400	200	2100	200	2800	2100	480	5	5	50	20	2100	5	140	140	280	280	2100	2800	–	700	NA	NA	NA	NA	100	100	NA
CEF-293-2	12/08/05	ND	1.83 I	ND	2.89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30.1	22.1	ND	ND	ND	ND	2.06	ND	2.90	2.02	ND	ND	8.72	2.43	ND
	04/18/07	0.320 I	1.04	ND	ND	ND	0.220 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.28	4.01 I	5.93	0.200 I	ND	2.49	ND	3.26	2.82	ND	ND	ND	ND	0.830 I
	09/12/07	ND	0.720 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24.1	23.5	6.67	10.2	ND	ND	2.09	ND	3.32	2.25	ND	ND	2.93	0.430 I	ND
	03/05/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.37	ND	ND	ND	ND	ND	ND	ND
CEF-293-9	01/25/00	43.1	[illegible]	[illegible]	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	[illegible]	–	138	182	ND	–	–	–	–	–	–	–	–	–	–
	12/09/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	ND	ND	ND	–	–	–	–	–	–	–	–	–	–
	06/06/03	2.6	4.3	ND	20.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9	–	ND	ND	ND	ND	5.8	ND	–	–	ND	–	ND	ND	–
	09/02/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.36	–	0.20	ND	ND	ND	ND	ND	–	–	ND	–	ND	ND	–
	12/12/03	2.9	5.8	ND	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	47.5	88	19.4	18.4	ND	ND	11.8	ND	12.5	3.3	1.9	–	2.3	ND	–
	03/17/04	2.3	5.7	ND	ND	ND	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	136	144	47.1	50.4	ND	ND	7.9	ND	13.1	4.1	2.4	–	ND	ND	1.2
	06/09/04	ND	6.96	ND	1.54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	63.8	81.6	24.6	22.4	ND	ND	12.2	ND	15.9	6.63	ND	ND	6.93	2.98	3.47
	09/20/04	ND	1.25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.4	24.1	3.8	4.5	ND	ND	3.6	ND	4.48	1.04	ND	ND	3.75	3.06	ND
	12/02/04	ND	7.180	ND	3.25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33.84	72.84	16.1 J3	22.7 J3	ND	ND	12.51	ND	15.37	6.20	ND	ND	26.34	7.77	5.53
	03/11/05	ND	6.060	ND	1.46 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19.2	95.2	7.48	12.2	ND	ND	17.4	ND	22.0	8.20	ND	ND	30.7	6.50	5.56
	06/08/05	ND	17.8	ND	21.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.8	29.2	7.21	12.1	ND	ND	17.5	ND	16.9	5.24	ND	ND	36.4	13.80	4.11
	09/08/05	ND	41.1	1.18 I	47.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50.4	75.4	26.9	43.3	ND	ND	18.9	ND	23.5	7.42	ND	ND	70.9	31.80	8.81
	12/08/05	ND	4.69	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.0	67.7	ND	9.24	ND	ND	10.5	ND	18.2	9.38	ND	ND	25.1	11.4	7.31
	03/28/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/08/06	ND	4.55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.7	31.5	6.35	14.3	ND	ND	6.3	ND	8.00	4.30	ND	ND	12.4	2.29	2.63
	09/24/06	ND	20.8	0.790 I	31.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	46.6	56.1	20.90	33.0	ND	ND	12.4	ND	14.2	6.56	ND	ND	50.3	19.7	6.23
	04/18/07	ND	14.4	0.310 I	44.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20.3	44.4	7.60	16.1	ND	ND	11.0	ND	11.3	3.44	ND	ND	38.1	11.4	2.59
	09/12/07	ND	13.3	ND	18.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	39.1	40.2	13.50	28.8	ND	ND	7.9	ND	8.19	1.55	0.800 I	ND	30.6	8.41	1.48
	03/05/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.48	11.6	5.23	16.4	ND	ND	2.66	ND	3.49	2.30	0.96 I	ND	ND	ND	0.580 I
CEF-293-13	12/08/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	04/19/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.9	ND	ND	ND	ND	ND	ND	ND	ND
	09/12/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.30	ND	ND	ND	ND	ND	ND	ND	ND
	03/05/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.24	ND	ND	ND	ND	ND	ND	ND	ND
CEF 293-22	01/25/00	24.2	19.4	0.88	47.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	142	–	29.6	67	ND	–	–	–	–	–	–	–	–	–	–
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	ND	2.4	ND	–	–	–	–	–	–	–	–	–	–
	06/09/03	ND	ND	ND	ND	ND	ND	ND	0.11	ND	ND	ND	ND	ND	ND	ND	0.64	–	4.97	3.76	0.21	0.13	ND	ND	–	–	ND	–	ND	ND	–
	09/02/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	1.34	0.96	0.12	ND	ND	ND	–	–	ND	–	ND	ND	–
	12/12/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.07	0.86	0.23	ND	ND	ND	ND	ND	ND	–	ND	ND	–
	03/17/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.35	1.20	0.16	ND	ND	ND	ND	ND	ND	–	ND	ND	ND
	06/09/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.780 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/02/04	3.67	ND	ND	1.80 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/11/05	3.59	1.56 I	ND	3.73	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.09	ND	ND	ND	ND	ND	3.56	1.44 I	ND
	06/08/05	2.74	1.66 I	ND	5.89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.86	ND	1.10 I	ND	ND	ND	11.7	4.36	ND
	09/08/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.13 I	ND	ND	ND	ND	ND	1.12 I	ND	ND	ND	ND	ND	1.80 I	1.09 I	ND
	12/08/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.13 I	1.35 I	ND	ND	ND	ND	0.360 I	ND	ND	ND	ND	ND	0.630 I	0.470 I	ND
	03/28/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.300 I	0.210 I	ND	ND	0.240 I	ND	ND	0.610 I	ND	ND	0.640 I	0.420 I	0.420 I
	06/08/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.16	ND	ND	ND	ND	ND	ND	ND	1.17	ND	ND	ND	ND	0.600 I
	09/24/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.370 I	ND	ND	ND	ND	ND	ND	1.27	ND	ND	ND	ND	0.610 I
	04/18/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.97	2.96	5.34	4.60 I	0.670 I	ND	ND	ND	ND	1.98	ND	ND	ND	ND	1.29
	09/12/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.38 I	1.07 I	ND	ND	ND	ND	ND	0.660 I	ND	ND	ND	ND	ND
	03/05/08	ND	1.13	ND	0.940 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.01	ND	ND
VEW-1	01/25/00	16.8	257	59.4	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	350	–	220	307	ND	–	–	–	–	–	–	–	–	–	–
	06/13/00	FREE PRODUCT																FREE PRODUCT													
	03/11/03	FREE PRODUCT																FREE PRODUCT													
	06/07/03	FREE PRODUCT																FREE PRODUCT													
	09/04/03	FREE PRODUCT																FREE PRODUCT													
	12/12/03	NOT SAMPLED																NOT SAMPLED													
	03/17/04	NOT SAMPLED																NOT SAMPLED													
	06/09/04	NOT SAMPLED																NOT SAMPLED													
	09/20/04	NOT SAMPLED																NOT SAMPLED													
	12/02/04	ND	16.17	0.0790 I	26.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.590	ND J3	ND J3	ND	ND	4.7	ND	4.290	2.20	ND	ND	32.06	3.13	4.060
	03/11/05	ND	11.6	0.450 I	26.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.4	ND	ND	ND	ND	ND	4.86	ND	ND	2.25	ND	ND	39	3.57	5.25
	06/08/05	ND	28.4	1.29 I	63.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35.2	ND	ND	ND	ND	12.0	ND	15.8	10.60	ND	ND	84.1	19.5	17.0
	09/08/05	ND	0.410 I	ND	0.510 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.430 I	ND	ND
	12/08/05	ND	19.5	0.460 I	16.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18.2	22.5	16.2	6.02	ND	ND	8.11	ND	8.89	6.29	ND	ND	57.2	4.57	7.59
	03/28/06	ND	16.9	0.610 I	30.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	23.0	38.8	29.4	28.5	ND	0.210 I	10.9	ND	13.1	8.97	ND	ND	83.2	14.2	12.9
	06/08/06	ND	10.6	0.290 I	19.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.5	19.5	12.9	13.6	ND	ND	8.17	ND	10.9	5.66	ND	ND	54.2	8.17	ND
	09/24/06	ND	10.6	0.440 I	28.7	ND	0.190 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	18.0	17.6	20.1	17.7	ND	ND	8.68	ND	11.4	8.82	ND	ND	ND	20.8	12.7
	04/18/07	ND	4.60	ND	5.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.4	11.5	33.7	24.0	ND	0.290 I	7.35	ND	8.02	5.83	ND	ND	44.4	3.65	6.93
	09/12/07	ND	1.60	ND	1.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.26	0.830 I	ND	ND	ND	1.97	ND	2.06	1.60	0.830 I	ND	17.1	ND	ND
	03/05/08	ND	0.740 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.81 I	ND	ND	ND	ND	1.11	ND	1.06	0.650 I	ND	ND	5.01	ND	0.530 I
VEW-2	01/25/00	91.6	148	29.2	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	[illegible]		114	129	ND	–	–	–	–	–	–	–	–	–	–
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	ND	ND	ND	–	–	–	–	–	–	–	–	–	–
	06/07/03	ND	ND	ND	ND	ND	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	ND	–	1.05	0.42	ND	ND	ND	ND	–	–	3.2	–	2.3	6.00	–
	09/04/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	1.4	0.54	ND	ND	ND	ND	–	–	ND	–	ND	3.80	–
	12/12/03	ND	ND	ND	3.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	0.16	ND	ND	ND	3.2	ND	ND	ND	ND	–	2.2	1.60	–
	03/17/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.56	ND	1.27	1.09	ND	ND	ND	ND	ND	ND	ND	–	2.0	ND	ND
	06/09/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.284 I	ND	ND	0.396 I	ND	ND	ND	ND	ND	ND	ND	ND	2.23	1.33	ND
	09/20/04	ND	ND	ND	2.45	ND, J3	ND, J3	ND	ND	ND	ND	ND	ND	ND	ND, J3	ND	ND, J3	ND	ND, J3	ND, J3	ND	ND, J3	ND	ND	ND	ND	ND	ND	5.95	1.63	ND
	12/02/04	ND	1.310 I	ND	3.85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.16 I	10.03	3.18 J3 I	2.05 J3 I	ND	ND	1.590 I	ND	2.14	1.93 I	ND	ND	16.56	1.70 I	3.52
	03/11/05	ND	0.930 I	ND	1.25 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.557 I	13.0	1.29 I	1.15 I	ND	ND	1.48 I	ND	2.45	1.94 I	ND	ND	13.30	ND	2.64
	06/08/05	ND	0.560 I	ND	0.460 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.9	ND	ND	ND	ND	1.16 I	ND	1.43 I	2.02	ND	ND	11.70	0.750 I	1.93 I
	09/08/05	ND	0.560 I	ND	1.23 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.52 I	ND	4.23 I	4.40 I	ND	ND	1.53 I	ND	2.46	2.52	ND	ND	16.80	3.5	3.73
	12/08/05	ND	0.480 I	ND	0.650 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.8	6.60	7.42	ND	ND	1.88 I	ND	2.69	3.51	ND	ND	14.1	3.06	2.82
	03/28/06	ND	0.340 I	ND	0.340 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.30	6.36	7.02	ND	ND	1.52	ND	2.97	2.97	ND	ND	7.82	1.88	2.30
	06/08/06	1.16	0.340 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.19	7.59	8.35	ND	ND	ND	ND	2.85	3.88	ND	ND	10.0	0.980 I	2.61
	09/24/06	1.34	1.98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.510 I	1.48	7.79	8.17	ND	ND	4.37	ND	2.96	4.03	ND	ND	6.9	ND	1.81
	04/18/07	0.860 I	5.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.5	ND	ND	ND	ND	11.4	ND	9.08	4.72	ND	ND	4.35	ND	1.83
	09/12/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.43	11.4	3.88 I	6.54	ND	ND	2.46	ND	4.19	2.92	ND	ND	6.79	0.700 I	ND
	03/05/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.450 I	ND	2.87 I	4.65 I	ND	ND	1.45	ND	2.98	6.46	ND	ND	2.59	ND	4.82

TABLE 3
Groundwater Analytical Results
Day Tank 1
NAS Cecil Field
Jacksonville, Florida

Sample I.D.	Date	Benzene	Ethylbenzene	Toluene	Xylenes (total)	Acenapthylene	Acenapthene	Fluoranthene	Pyrene	Chrysene	Benzo (a) anthracene	Benzo(b) Fluoranthene	Benzo(k) Fluoranthene	Benzo(a) Pyrene	Benzo(g,h,i) Perylene	Indeno (1,2,3-cd) Pyrene
Cleanup Goal - RAP		1	NA	NA	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GCTL		1	30	40	20	210	20	280	210	4.8	0.05	0.05	0.5	0.2	210	0.05
NADSC		100	300	400	200	2100	200	2800	2100	480	5	5	50	20	2100	5
VEW-3	01/25/00	24.4	[illegible]	11.5	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/11/03	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/06/03	ND	ND	ND	4.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/02/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/12/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/17/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/09/04	ND	ND	ND	2.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/04	ND	ND	ND	ND	ND, J3	ND, J3	ND	ND	ND	ND	ND	ND	ND	ND, J3	ND
	12/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/11/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/08/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/06/05	ND	0.460 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/28/06	0.350 I	0.800 I	ND	0.380 I	ND	0.190 I	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/08/06	ND	0.510 I	ND	ND	ND	0.340 I	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/06	0.700 I	2.02	ND	0.610 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	04/19/07	0.530 I	3.29	ND	1.21	ND	0.220 I	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/20/07	0.650 I	4.10	ND	0.640 I	ND	0.290 I	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/13/07	ND	1.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/05/08	0.400 I	1.68	ND	1.39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VEW-4	01/25/00	41	[illegible]	7.4	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/07/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/02/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/12/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/17/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/09/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/04	8.16	41	ND	[illegible]	ND, J3	ND, J3	ND	ND	ND	ND	ND	ND	ND	ND, J3	ND
	12/02/04	1.50 I	23.39	ND	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/11/05	2.31	18.40	ND	14.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/06/05	1.38 I	15.3	ND	15.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/05	0.670 I	13.3	ND	18.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/08/05	0.920 I	1.39 I	ND	31.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/28/06	0.460 I	2.83	ND	25.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/08/06	0.770 I	1.03	ND	27.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/06	ND	3.93	ND	9.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	04/18/07	ND	27.9	ND	4.60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/12/07	ND	10.2	ND	10.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/05/08	ND	6.93	ND	12.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VEW-5	01/25/00	[illegible]	72.5	11.3	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/06/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/02/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/12/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/17/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/09/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/04	ND	ND	ND	ND	ND, J3	ND, J3	ND	ND	ND	ND	ND	ND	ND	ND, J3	ND
	12/02/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/11/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/08/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/08/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/28/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/08/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	04/19/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/05/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VEW-6	12/06/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	04/19/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/05/08	ND	ND	ND	1.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VEW-7	01/25/00	[illegible]	[illegible]	[illegible]	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/11/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/07/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/02/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/12/03	ND	ND	ND	3.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/17/04	2.2	1.2	ND	7.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/09/04	8.78	3.28	ND	2.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/04	4.2	5.55	ND	ND	ND, J3	ND, J3	ND	ND	ND	ND	ND	ND	ND	ND, J3	ND
	12/02/04	4.95	21.00	ND	5.78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/11/05	3.70	14.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/08/05	4.58	15.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/05	2.40	14.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/08/05	2.05	10.3	ND	1.45 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/28/06	3.07	29.6	0.390 I	22.5	ND	0.220 I	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/08/06	1.73	23.2	ND	5.26	ND	0.390 I	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/06	2.76	18.5	0.330 I	8.87	ND	0.200 I	ND	ND	ND	ND	ND	ND	ND	ND	ND
	04/18/07	2.37	16.4	0.270 I	19.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/12/07	0.930 I	4.22	ND	3.67	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/05/08	0.410 I	2.52	ND	3.84	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VEW-8	12/06/05	ND	5.34	0.300 I	4.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	04/18/07	ND	7.75	ND	1.81	ND	0.230 I	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/12/07	ND	1.44	ND	0.450 I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/05/08	ND	0.840	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Sample I.D.	Date	Naphthalene by Method 8270C-SIM	Napthalene by Method 8260B	1-Methylnapthalene	2-Methylnapthalene	Phenanthrene	Fluorene	Isopropylbenzene	Chloroform	n-Propylbenzene	sec-Butylbenzene	n-Butylbenzene	T-butylbenzene	1,2,4 Trimethyl-benzene	1,3,5 Trimethylbenzene	p-Isopropyltoluene
Cleanup Goal - RAP		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GCTL		14	14	28	28	210	280	–	70	NA	NA	NA	NA	10	10	NA
NADSC		140	140	280	280	2100	2800	–	700	NA	NA	NA	NA	100	100	NA
VEW-3	01/25/00	[illegible]	–	76	102	ND	–	–	–	–	–	–	–	–	–	–
	03/11/03	ND	–	ND	ND	ND	–	–	–	–	–	–	–	–	–	–
	06/06/03	ND	–	ND	ND	ND	ND	ND	1.8	–	–	ND	–	ND	ND	–
	09/02/03	ND	–	ND	ND	ND	ND	ND	ND	–	–	ND	–	ND	ND	–
	12/12/03	ND	ND	ND	ND	ND	ND	3.2	ND	ND	ND	ND	–	ND	ND	–
	03/17/04	1.87	ND	2.27	1.46	ND	ND	3.6	ND	4.2	ND	ND	–	ND	ND	ND
	06/09/04	2.02 I	ND	3.01	1.18 I	ND	ND	17.5	ND	17.2	3.21	ND	1.11	ND	2.18	6.02
	09/20/04	5.29, J3	30.6	2.86, J3	2.88 J3	ND	ND, J3	19	ND	24.2	11.6	ND	ND	17	13	12.8
	12/02/04	1.09 I	7.340	7.68 J3	7.05 J3	ND	ND	1.580 I	ND	2.32	4.73	3.32	ND	2.130 I	0.4900 I	6.44
	03/11/05	ND	3.50	8.39	8.98	ND	ND	1.25 I	ND	2.41	4.55	ND	ND	1.44 I	ND	ND
	06/08/05	ND	ND	1.08 I	ND	ND	ND	0.480 I	ND	1.09 I	3.09	ND	ND	0.590 I	0.430 I	2.14
	09/08/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.510 I	ND	ND	ND	ND	ND
	12/06/05	ND	ND	ND	ND	ND	ND	0.820 I	ND	0.490 I	0.850 I	ND	ND	1.33 I	ND	ND
	03/28/06	ND	ND	3.20 I	2.53 I	ND	ND	2.24	ND	1.31	1.69	ND	ND	3.45	1.50	0.710 I
	06/08/06	ND	ND	4.55 I	4.25 I	ND	ND	1.53	ND	1.17	1.37	ND	ND	2.25	0.700 I	0.370 I
	09/24/06	0.800 I	1.65	1.23 I	0.870 I	ND	ND	2.80	ND	2.67	3.12	0.640 I	ND	9.49	2.80	0.690 I
	04/19/07	2.44 I	4.28	5.01	6.49	ND	ND	3.93	ND	5.06	4.86	ND	ND	23.3	7.98	1.80
	06/20/07	2.99 I	4.37	5.49	7.57	ND	ND	3.09	ND	3.71	4.46	ND	ND	17.6	3.56	1.71
	09/13/07	ND	2.81	1.33 I	1.13 I	ND	ND	1.10	ND	2.02	1.44	ND	ND	6.85	1.23	ND
	03/05/08	1.30 I	1.15	3.79 I	4.91 I	ND	ND	2.89	ND	2.88	3.00	ND	ND	9.70	1.58	0.730 I
VEW-4	01/25/00	[illegible]	–	[illegible]	[illegible]	ND	–	–	–	–	–	–	–	–	–	–
	03/11/03	ND	–	ND	ND	ND	–	–	–	–	–	–	–	–	–	–
	06/07/03	ND	–	ND	ND	ND	ND	ND	ND	–	–	ND	–	ND	ND	–
	09/02/03	ND	–	ND	ND	ND	ND	ND	ND	–	–	ND	–	ND	ND	–
	12/12/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	ND	ND	–
	03/17/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	ND	ND	ND
	06/09/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	ND	ND	ND
	09/20/04	43.0, J3	104.0	7.00, J3	6.91, J3	ND	ND, J3	20.4	2.03	16.8	10.4	ND	–	[illegible]	48.8	13.4
	12/02/04	43.36	79.27	11.3 J3	11.0 J3	ND	ND	10.49	1.01 I	10.16	6.83	ND	ND	61.23	22.41	7.43
	03/11/05	34.9	79.4	10.2	10.2	ND	ND	11.6	ND	12.6	4.88	ND	ND	55.6	28.6	6.29
	06/06/05	ND	52.7	10.1	7.42	ND	ND	15.1	ND	11.4	7.36	ND	ND	19.2	29.8	7.75
	09/08/05	15.8	31.3	9.9	6.02	ND	ND	11.2	ND	5.24	4.40	ND	ND	16.1	19.2	5.09
	12/08/05	ND	14.6	ND	ND	ND	ND	6.76	ND	1.26 I	2.06	ND	0.390 I	7.00	ND	2.66
	03/28/06	ND	20.1	ND	ND	ND	ND	6.79	ND	2.80	2.21	ND	ND	11.80	4.81	2.53
	06/08/06	14.0	10.6	4.16 I	2.67 I	ND	ND	7.65	ND	1.49	1.58	ND	ND	6.12	2.05	1.57
	09/24/06	5.1	21.1	2.00 I	1.00 I	ND	ND	6.48	ND	2.13	3.79	ND	ND	10.10	3.55	2.84
	04/18/07	28.9	58.5	10.5	12.5	ND	ND	12.8	ND	14.3	8.52	ND	ND	85.6	7.39	10.0
	09/12/07	47.5	78.7	14.5	18.2	ND	ND	10.0	ND	8.88	4.99	2.20	ND	67.4	6.29	5.24
	03/05/08	[illegible]	[illegible]	10.6	12.8	ND	ND	4.74	ND	3.83	3.59	ND	ND	[illegible]	8.90	5.47
VEW-5	01/25/00	[illegible]	–	[illegible]	86.1	ND	–	–	–	–	–	–	–	–	–	–
	03/11/03	ND	–	ND	ND	ND	–	–	–	–	–	–	–	–	–	–
	06/06/03	ND	–	ND	ND	ND	ND	ND	ND	–	–	ND	–	ND	ND	–
	09/02/03	ND	–	ND	ND	ND	ND	ND	ND	–	–	ND	–	ND	ND	–
	12/12/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	ND	ND	–
	03/17/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	ND	ND	ND
	06/09/04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/04	ND, J3	ND	ND, J3	ND, J3	ND	ND, J3	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/02/04	ND	ND	ND, J3	ND, J3	ND	ND, J3	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/11/05	34.6	ND	10.0	10.3	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/08/05	ND	11.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.290 I	0.370 I	ND
	09/08/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/08/05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/28/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/08/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	04/19/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/13/07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/05/08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VEW-6	12/06/05	ND	ND	ND	ND	ND	ND	0.490 I	ND	ND	ND	ND	ND	ND	ND	ND
	04/19/07	0.930 I	0.670 I	ND	ND	ND	ND	3.86	ND	ND	ND	ND	ND	ND	ND	ND
	09/13/07	ND	6.26	ND	ND	ND	ND	5.28	ND	1.87	0.830 I	ND	ND	ND	ND	ND
	03/05/08	0.380 I	2.02	ND	ND	ND	ND	3.97	ND	ND	1.79	ND	ND	0.780 I	0.630 I	ND
VEW-7	01/25/00	[illegible]	–	[illegible]	[illegible]	ND	–	–	–	–	–	–		–	–	–
	03/11/03	ND	–	ND	ND	ND	–	–	–	–	–	–		–	–	–
	06/07/03	ND	–	ND	ND	ND	ND	ND	1.6	–	–	ND		ND	ND	–
	09/02/03	ND	–	0.13	ND	ND	ND	ND	ND	–	–	ND		ND	ND	–
	12/12/03	ND	ND	ND	ND	ND	ND	3.2	ND	ND	ND	ND		ND	ND	–
	03/17/04	4.09	ND	0.22	0.2	ND	ND	1	ND	1	ND	ND		5.7	ND	ND
	06/09/04	8.74	28.0	ND	0.641 I	ND	ND	2.70	ND	3.29	1.53	ND	ND	ND	2.63	ND
	09/20/04	2.06, J3	38.0	ND, J3	0.214 J3	ND	ND, J3	5.17	ND	3.78	1.42	ND	ND	3.81	7.51	ND
	12/02/04	75.9	[illegible]	11.4 J3	7.11 J3	ND	ND	12.05	ND	15.83	7.18	ND	ND	58.72	12.02	6.520
	03/11/05	19.8	144.0	7.34	3.19 I	ND	ND	11.8	ND	17.0	13.2	ND	ND	19.3	0.470 I	ND
	06/08/05	64.2	127.0	25.6	18.1	ND	ND	12.3	ND	16.3	12.3	ND	ND	14.9	ND	2.78
	09/08/05	83.4	149.0	38.1	29.6	ND	ND	12.0	ND	19.0	11.4	ND	0.900 I	8.01	0.710 I	2.82
	12/08/05	61.9	60.2	21.9	20.8	ND	ND	5.91	ND	8.52	6.22	ND	ND	7.43	2.19	1.76 I
	03/28/06	[illegible]	[illegible]	34.2	37.7	ND	ND	13.7	ND	[illegible]	9.20	ND	ND	86.8	[illegible]	6.26 ?
	06/08/06	121.0	159	43.7	47.2	ND	ND	12.7	ND	20.1	10.20	ND	ND	[illegible]	20.2	8.37
	09/24/06	98.9	194	27.8	35.8	ND	ND	10.5	ND	16.2	10.0	ND	ND	51.5	19.6	7.03
	04/18/07	95.4	181	42.2	53.7	ND	0.250 I	13.0	ND	19.3	10.4	ND	ND	55.7	22.3	9.74
	09/12/07	33.6	159	10.4	14.4	ND	ND	7.07	ND	10.4	7.20	6.30	ND	23.4	10.2	4.85
	03/05/08	16.7	33.6	8.42	9.78	ND	ND	3.34	ND	4.45	3.51	ND	ND	9.13	1.38	1.93
VEW-8	12/06/05	[illegible]	[illegible]	ND	ND	ND	ND	16.1	ND	[illegible]	7.48	ND	ND	76.4	27.2	ND
	04/18/07	10.6	20.4	10.0	10.0	ND	ND	10.5	ND	8.11	4.61	ND	ND	11.8	2.16	2.14
	09/12/07	5.65	14.7	6.47	6.41	ND	ND	3.26	ND	3.25	2.20	ND	ND	1.40	1.03	ND
	03/05/08	7.36	7.22	5.43	7.22	ND	ND	2.06	ND	2.49	2.47	ND	ND	0.680 I	0.570 I	0.750 I

Notes: 1. All concentrations are in µg/L.
2. ND= Not Detect
3. NS = Not Sampled
4. NA = Not Applicable
5. I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
6. J3=The reported value failed to meet the established quality control criteria for either precision and/or accuracy.
7. Red = Rejected during data validation
Greater than GCTL
Greater than the NADSC
8. Data prior to March 2008 was reported by others.

APPENDIX D

GROUNDWATER SAMPLING LOGS

Solutions-IES

Industrial & Environmental Services

GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-293-02	SAMPLE ID: 04-41001/5:CEF-293-02:3/6/08		DATE: 03/06/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 8.43	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 – 8.43 feet) X 0.16 gallons/foot = 1.07 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable) = gallons+(0.01 gallons/foot X 15.00 feet) + 0.13 gallons = 0.22 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 11.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 11.00	PURGING INITIATED AT: 17:00	PURGING ENDED AT: 17:20	TOTAL VOLUME PURGED (gallons): 0.55

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
17:10		0.30	0.03	8.54	5.04	20.85	173.00	0.68	135.00	turbid	
17:14	0.10	0.40	0.03	8.54	5.06	20.82	174.00	0.60	156.00	turbid	
17:17	0.10	0.50	0.03	8.54	5.06	20.78	173.00	0.54	173.00	turbid	

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): 0.50	TEMP.(°C): 20.78	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 173	pH: 5.06	Alkalinity:	Ferrous: Iron:	CO2 High Range:	DO Low Range:
ORP(mV): -38.3	TURB(NTU): 179	H2S:	Maganese:	Alkalinity High Range:	Alkalinity Low Range:
Salinity:		Sulfate:	Sulfide:		
		Nitrate:			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Robert Brookshire	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 17:20	SAMPLING ENDED AT: 17:34
PUMP OR TUBING DEPTH IN WELL (feet): 11.00	SAMPLE PUMP FLOW RATE (mL per minute): 104.10	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☑ Y ☐ N | FIELD-FILTERED: ☐ Y ☑ N | FILTER SIZE: 0.45 um | 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-293-02	3	CG	40 ml	HCL				SM
CEF-293-02	1	AG	1 L	None				VT

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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-293-22	SAMPLE ID: 04-41001/5:CEF-293-22:3/5/08		DATE: 03/05/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 7.71	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) = (14.70 feet – 7.71 feet) X 0.16 gallons/foot = 1.14 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+(0.01 gallons/foot X 16.70 feet) + 0.13 gallons = 0.23 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 12.70	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 12.70	PURGING INITIATED AT: 13:20	PURGING ENDED AT: 13:42	TOTAL VOLUME PURGED (gallons): 0.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
13:35		0.30	0.02	7.90	5.51	21.99	232.00	1.76	15.36	clear	none
13:38	0.20	0.50	0.03	7.89	5.50	21.99	233.00	1.50	13.95	clear	none
13:41	0.10	0.60	0.03	7.88	5.50	21.98	236.00	1.53	13.53	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): 1.49	TEMP.(°C): 22.00	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 236	pH: 5.50	Alkalinity:	Ferrous Iron:	CO2 High Range:	DO Low Range:
ORP(mV): 34.9	TURB(NTU): 11.87	H2S:	Manganese:	Alkalinity High Range:	Alkalinity Low Range:
Salinity:		Sulfate: Nitrate:	Sulfide:		

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Josh Clay	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 13:42	SAMPLING ENDED AT: 14:02
PUMP OR TUBING DEPTH IN WELL (feet): 12.70	SAMPLE PUMP FLOW RATE (mL per minute): 120.44	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☐ Y ☑ N | FIELD-FILTERED: ☐ Y ☑ N | FILTER SIZE: 0.45 um | 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-293-22	3	CG	40 ml	HCL				RFPP
CEF-293-22	1	AG	1 L	None				VT

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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-293-VEW07	SAMPLE ID: 04-41001/5:CEF-293-VEW07:3/5/08		DATE: 03/05/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 7.80	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)
= (16.40 feet – 7.80 feet) X 0.16 gallons/foot = 1.40 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons+(0.01 gallons/foot X 18.00 feet) + 0.13 gallons = 0.24 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14.00	PURGING INITIATED AT: 16:51	PURGING ENDED AT: 17:15	TOTAL VOLUME PURGED (gallons): 0.80

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
17:05		0.40	0.03	7.83	5.23	21.69	130.00	0.41	71.50	orange	none
17:09	0.20	0.60	0.05	7.84	5.24	21.75	133.00	0.29	71.30	orange	
17:13	0.15	0.75	0.04	7.84	5.24	21.80	136.00	0.24	71.80	orange	

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): 21.81	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 139	pH: 5.24	Alkalinity:	Ferrous: Iron:	CO2 High Range:	DO Low Range:
ORP(mV): -85.2	TURB(NTU): 68.8	H2S:	Maganese:	Alkalinity High Range:	Alkalinity Low Range:
Salinity:		Sulfate: Nitrate:	Sulfide:		

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Robert Brookshire	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 17:15	SAMPLING ENDED AT: 17:36
PUMP OR TUBING DEPTH IN WELL (feet): 14.00	SAMPLE PUMP FLOW RATE (mL per minute): 126.18	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☐ Y ☑ N | FIELD-FILTERED: ☐ Y ☑ N | FILTER SIZE: 0.45 um | 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-293-VEW07	1	AG	1 L	None				VT
CEF-293-VEW07	3	CG	40 ml	HCL				SM

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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-293-VEW01	SAMPLE ID: 04-41001/5:CEF-293-VEW01:3/5/08		DATE: 03/05/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 7.25	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)
= (14.50 feet - 7.25 feet) X 0.16 gallons/foot = 1.16 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+(0.01 gallons/foot X 16.50 feet) + 0.13 gallons = 0.23 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 12.50	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 12.50	PURGING INITIATED AT: 15:40	PURGING ENDED AT: 16:05	TOTAL VOLUME PURGED (gallons): 0.65

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
15:55		0.30	0.02	7.25	5.92	21.17	78.00	1.21	42.10	clear	none
15:58	0.10	0.40	0.02	7.25	5.92	21.22	76.00	0.68	47.70	clear	none
16:01	0.20	0.60	0.06	7.25	5.91	21.14	77.00	0.60	43.70	clear	slight 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): .58	TEMP.(°C): 21.11	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 77	pH: 5.91	Alkalinity:	Ferroue: Iron:	CO2 High Range:	DO Low Range:
ORP(mV): -52.1	TURB(NTU): 37.2	H2S:	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: 16:05	SAMPLING ENDED AT: 16:24
PUMP OR TUBING DEPTH IN WELL (feet): 12.50	SAMPLE PUMP FLOW RATE (mL per minute): 98.42	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☐ Y ☑ N	FIELD-FILTERED: ☐ Y ☑ N Filtration Equipment Type:	FILTER SIZE: 0.45 um	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-293-VEW01	1	AG	1 L	None				VT
CEF-293-VEW01	3	CG	40 ml	HCL				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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-293-VEW02	SAMPLE ID: 04-41001/5:CEF-293-VEW02:3/5/08		DATE: 03/05/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 7.38	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) = (16.00 feet – 7.38 feet) X 0.16 gallons/foot = 1.41 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+(0.01 gallons/foot X 18.00 feet) + 0.13 gallons = 0.24 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14.00	PURGING INITIATED AT: 14:57	PURGING ENDED AT: 15:16	TOTAL VOLUME PURGED (gallons): 0.60

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
15:08		0.30	0.03	7.38	6.32	21.58	379.00	0.50	6.98	clear	none
15:11	0.10	0.40	0.03	7.38	6.32	21.58	377.00	0.48	4.69	clear	none
15:15	0.20	0.60	0.09	7.38	6.31	21.56	375.00	0.44	4.11	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): .41	TEMP.(°C): 21.57	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 374	pH: 6.31	Alkalinity:	Ferrous: Iron:	CO2 High Range:	DO Low Range:
ORP(mV): -203.4	TURB(NTU): 3.89	H2S:	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: 15:16	SAMPLING ENDED AT: 15:35
PUMP OR TUBING DEPTH IN WELL (feet): 14.00	SAMPLE PUMP FLOW RATE (mL per minute): 119.54	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☐ Y ☑ N	FIELD-FILTERED: ☐ Y ☑ N Filtration Equipment Type:	FILTER SIZE:	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-293-VEW02	1	AG	1 L	None				VT
CEF-293-VEW02	3	CG	40 ml	HCL				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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-293-VEW06	SAMPLE ID: 04-41001/5:CEF-293-VEW06:3/5/08		DATE: 03/05/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 6.07	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)
= (16.35 feet – 6.07 feet) X 0.16 gallons/foot = 1.68 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons+(0.01 gallons/foot X 18.00 feet) + 0.13 gallons = 0.24 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 14.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 14.00	PURGING INITIATED AT: 15:51	PURGING ENDED AT: 16:15	TOTAL VOLUME PURGED (gallons): 0.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
16:02		0.30	0.03	6.10	5.46	22.66	199.00	0.59	2.80	clear	
16:06	0.10	0.40	0.03	6.10	5.42	22.79	198.00	0.45	2.60	clear	
16:09	0.10	0.50	0.03	6.10	5.37	22.85	196.00	0.35	3.20	clear	

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): 0.34	TEMP.(°C): 22.89	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 196	pH: 5.36	Alkalinity:	Ferrous Iron:	CO2 High Range:	DO Low Range:
ORP(mV): -22.4	TURB(NTU): 1.99	H2S:	Maganese:	Alkalinity High Range:	Alkalinity Low Range:
Salinity:		Sulfate: Nitrate:	Sulfide:		

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Robert Brookshire	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 16:15	SAMPLING ENDED AT: 16:29
PUMP OR TUBING DEPTH IN WELL (feet): 14.00	SAMPLE PUMP FLOW RATE (mL per minute): 118.29	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☐ Y ☑ N | FIELD-FILTERED: ☐ Y ☑ N | FILTER SIZE: 0.45 um | 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-293-VEW06	3	CG	40 ml	HCL				SM
CEF-293-VEW06	1	AG	1 L	None				VT

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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO	SITE LOCATION: Jacksonville

WELL NO: CEF-293-VEW04	SAMPLE ID: 04-41001/5:CEF-293-VEW04:3/5/05	DATE: 03/05/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 7.21	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) = (15.10 feet – 7.21 feet) X 0.16 gallons/foot = 1.29 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+(0.01 gallons/foot X 17.10 feet) + 0.13 gallons = 0.23 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 13.10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13.10	PURGING INITIATED AT: 14:15	PURGING ENDED AT: 14:34	TOTAL VOLUME PURGED (gallons): 0.60

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
14:26		0.30	0.03	7.21	4.78	22.59	125.00	0.75	8.88	clear	none
14:30	0.10	0.40	0.03	7.23	4.77	22.57	124.00	0.77	6.56	clear	none
14:33	0.20	0.60	0.06	7.22	4.76	22.62	123.00	0.70	8.31	clear	slight 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): .68	TEMP.(°C): 22.61	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 123	pH: 4.76	Alkalinity:	Ferrous: Iron:	CO2 High Range:	DO Low Range:
ORP(mV): -82.6	TURB(NTU): 5.17	H2S:	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: 14:34	SAMPLING ENDED AT: 14:54
PUMP OR TUBING DEPTH IN WELL (feet): 13.10	SAMPLE PUMP FLOW RATE (mL per minute): 119.54	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☐ Y ☑ N	FIELD-FILTERED: ☐ Y ☑ N Filtration Equipment Type:	FILTER SIZE: 0.45 um	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-293-VEW04	1	AG	1 L	None				VT
CEF-293-VEW04	3	CG	40 ml	HCL				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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO	SITE LOCATION: Jacksonville
WELL NO: CEF-293-VEW03	SAMPLE ID: 04-41001/5:CEF-293-VEW03:3/5/08 — DATE: 03/05/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 6.81	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)
= (13.98 feet – 6.81 feet) X 0.16 gallons/foot = 1.17 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons+(0.01 gallons/foot X 4.00 feet) + 0.13 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 14:58	PURGING ENDED AT: 15:25	TOTAL VOLUME PURGED (gallons): 0.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
15:10		0.30	0.03	6.84	5.10	23.35	138.00	0.92	1.97	clear	sulfuric
15:15	0.30	0.60	0.03	6.84	5.04	23.36	133.00	0.81	1.86	clear	sulfuric
15:20	0.10	0.70	0.01	6.84	5.09	23.31	135.00	0.71	1.85	clear	sulfuric

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): 0.44	TEMP.(°C): 23.38	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 132	pH: 5.04	Alkalinity:	Ferrous Iron:	CO2 High Range:	DO Low Range:
ORP(mV): -85.7	TURB(NTU): 2.02	H2S:	Maganese:	Alkalinity High Range:	Alkalinity Low Range:
Salinity:		Sulfate:	Sulfide:		
		Nitrate:			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Robert Brookshire	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 15:25	SAMPLING ENDED AT: 15:40
PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute): 105.15	TUBING MATERIAL CODE: PPE	
FIELD DECONTAMINATION: ☐ Y ☑ N	FIELD-FILTERED: ☐ Y ☑ N — Filtration Equipment Type:	FILTER SIZE: 0.45 um	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-293-VEW03	1	AG	1 L	None				VT
CEF-293-VEW03	3	CG	40 ml	HCL				SM

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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-293-VEW05	SAMPLE ID: 04-41001/5:CEF-293-VEW05:3/5/08		DATE: 03/05/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 6.08	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) = (16.85 feet – 6.08 feet) X 0.16 gallons/foot = 1.76 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable) = gallons+(0.01 gallons/foot X 19.00 feet) + 0.13 gallons = 0.24 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 15.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 15.00	PURGING INITIATED AT: 14:03	PURGING ENDED AT: 14:30	TOTAL VOLUME PURGED (gallons): 0.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
14:15		0.30	0.03	6.10	4.73	21.19	242.00	0.54	3.97	clear	
14:18	0.20	0.50	0.03	6.10	4.71	21.09	239.00	0.41	2.39	clear	
14:23	0.20	0.70	0.04	6.10	4.69	21.07	237.00	0.36	2.26	clear	

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): 0.32	TEMP.(°C): 21.08	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 237	pH: 4.68	Alkalinity:	Ferrous Iron:	CO2 High Range:	DO Low Range:
ORP(mV): -24.9	TURB(NTU): 2.90	H2S:	Maganese:	Alkalinity High Range:	Alkalinity Low Range:
Salinity:		Sulfate:	Sulfide:		
		Nitrate:			

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Robert Brookshire	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 14:30	SAMPLING ENDED AT: 14:43
PUMP OR TUBING DEPTH IN WELL (feet): 15.00	SAMPLE PUMP FLOW RATE (mL per minute): 105.15	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☐ Y ☑ N | FIELD-FILTERED: ☐ Y ☑ N | FILTER SIZE: 0.45 um | 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-293-VEW05	3	CG	40 ml	HCL				RFPP
CEF-293-VEW05	1	AG	1 L	None				VT

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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-293-VEW08	SAMPLE ID: 04-41001/5:CEF-293-VEW08:3/5/08		DATE: 03/05/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 7.71	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) = (15.00 feet – 7.71 feet) X 0.16 gallons/foot = 1.19 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+(0.01 gallons/foot X 17.00 feet) + 0.13 gallons = 0.23 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 13.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13.00	PURGING INITIATED AT: 16:54	PURGING ENDED AT: 17:14	TOTAL VOLUME PURGED (gallons): 0.65

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
17:05		0.30	0.03	7.71	5.32	21.70	120.00	0.85	57.00	clear	none
17:09	0.10	0.40	0.03	7.71	5.32	21.71	121.00	0.77	59.60	clear	none
17:12	0.20	0.60	0.06	7.71	5.35	21.71	124.00	0.62	57.50	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): .60	TEMP.(°C): 21.73	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 126	pH: 5.36	Alkalinity:	Ferrous Iron:	CO2 High Range:	DO Low Range:
ORP(mV): -131.7	TURB(NTU): 49.5	H2S:	Manganese:	Alkalinity High Range:	Alkalinity Low Range:
Salinity:		Sulfate: Nitrate:	Sulfide:		

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Josh Clay	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 17:14	SAMPLING ENDED AT: 17:35
PUMP OR TUBING DEPTH IN WELL (feet): 13.00	SAMPLE PUMP FLOW RATE (mL per minute): 123.03	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☐ Y ☑ N	FIELD-FILTERED: ☐ Y ☑ N Filtration Equipment Type:	FILTER SIZE: 0.45 um	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-293-VEW08	1	AG	1 L	None				VT
CEF-293-VEW08	3	CG	40 ml	HCL				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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-293-EB1	SAMPLE ID: 04-41001/5:CEF-293-EB1:3/5/08		DATE: 03/05/2008

PURGING DATA

WELL DIAMETER (inches): 0.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 0.00	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)
= (0.00 feet – 0.00 feet) X 0.00 gallons/foot = 0.00 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+(0.01 gallons/foot X 4.00 feet) + 0.13 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 17:46	PURGING ENDED AT: 17:46	TOTAL VOLUME PURGED (gallons): 0.00

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

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):	TEMP.(°C):	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm):	pH:	Alkalinity:	Ferrous: Iron:	CO2 High Range:	DO Low Range:
ORP(mV):	TURB(NTU):	H2S:	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: 17:46	SAMPLING ENDED AT: 17:46
PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute): 0.00	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☐ Y ☑ N | FIELD-FILTERED: ☐ Y ☑ N | FILTER SIZE: 0.45 um | 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-293-EB1	1	AG	1 L	None				VT
CEF-293-EB1	3	CG	40 ml	HCL				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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO	SITE LOCATION: Jacksonville
WELL NO: CEF-293-09	SAMPLE ID: 04-41001/5:CEF-293-09:3/6/08 — DATE: 03/06/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 9.34	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)
= (14.00 feet – 9.34 feet) X 0.16 gallons/foot = 0.76 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/feet X 16.00 feet) + 0.00 gallons = 0.00 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 12.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 12.00	PURGING INITIATED AT: 17:03	PURGING ENDED AT: 17:23	TOTAL VOLUME PURGED (gallons): 0.55

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
17:16		0.30	0.02	9.42	5.52	22.55	311.00	1.06	77.50	milky	none
17:19	0.10	0.40	0.02	9.42	5.58	22.55	287.00	0.96	81.90	milky	none
17:23	0.10	0.50	0.03	9.42	5.60	22.55	280.00	0.95	82.00	milky	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): .95	TEMP.(°C): 22.54	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 275	pH: 5.60	Alkalinity:	Ferrous Iron:	CO2 High Range:	DO Low Range:
ORP(mV): -95.0	TURB(NTU): 78.4	H2S:	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: 17:23	SAMPLING ENDED AT: 17:32
PUMP OR TUBING DEPTH IN WELL (feet): 12.00	SAMPLE PUMP FLOW RATE (mL per minute): 104.10	TUBING MATERIAL CODE: PPE	
FIELD DECONTAMINATION: ☑ Y ☐ N	FIELD-FILTERED: ☐ Y ☑ N Filtration Equipment Type:	FILTER SIZE: 0.45 um	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-293-09	1	AG	1 L	None				VT
CEF-293-09	3	CG	40 ml	HCL				SM

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)

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GROUNDWATER SAMPLING LOG

SITE NAME: Day Tank 1 - Cecil Field LTM/RAO		SITE LOCATION: Jacksonville	
WELL NO: CEF-293-13	SAMPLE ID: 04-41001/5:CEF-293-13:3/5/08		DATE: 03/05/2008

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.38	WELL SCREEN INTERVAL DEPTH (feet):	STATIC DEPTH TO WATER (feet): 7.80	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) = (14.80 feet – 7.80 feet) X 0.16 gallons/foot = 1.14 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable) = gallons+(0.01 gallons/foot X 17.00 feet) + 0.13 gallons = 0.23 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 13.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 13.00	PURGING INITIATED AT: 12:45	PURGING ENDED AT: 13:25	TOTAL VOLUME PURGED (gallons): 1.40

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.(°C)	SEC (uS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
13:11		0.90	0.03	7.85	4.93	21.33	137.00	0.95	4.13	clear	
13:17	0.20	1.10	0.04	7.85	4.92	21.23	137.00	0.94	3.53	clear	
13:21	0.20	1.30	0.05	7.85	4.91	21.25	137.00	0.83	3.03	clear	

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): 0.79	TEMP.(°C): 21.24	DO:	CO2:	DO High Range:	DO Low Range:
SEC(uS/cm): 137	pH: 4.91	Alkalinity:	Ferrous Iron:	CO2 High Range:	DO Low Range:
ORP(mV): -41.6	TURB(NTU): 3.06	H2S:	Maganese:	Alkalinity High Range:	Alkalinity Low Range:
Salinity:		Sulfate: Nitrate:	Sulfide:		

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Robert Brookshire	SAMPLER(S) SIGNATURES: RB	SAMPLING INITIATED AT: 13:25	SAMPLING ENDED AT: 13:25
PUMP OR TUBING DEPTH IN WELL (feet): 13.00	SAMPLE PUMP FLOW RATE (mL per minute): 132.49	TUBING MATERIAL CODE: PPE	

FIELD DECONTAMINATION: ☐ Y ☑ N | FIELD-FILTERED: ☐ Y ☑ N | FILTER SIZE: 0.45 um | 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-293-13	3	CG	40 ml	HCL				SM
CEF-293-13	1	AG	1 L	None				VT

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)