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YEAR 2 EVENT 1 SEMI-ANNUAL GROUNDWATER MONITORING LETTER REPORT FOR
OCALA F-18 CRASH SITE DRAFT ACTING AS FINAL NAS CECIL FIELD FL
6/8/2007
TETRA TECH NUS INC



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June 8, 2007

Project Number 112GN4093

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Reference: CLEAN III Contract Number N62467-94-D-0888
Contract Task Order 0209

Subject: Semi-Annual Groundwater Monitoring Report, Year 2, Event 1 – February 2007
Ocala F-18 Crash Site
Naval Air Station Cecil Field
Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this Semi-Annual Groundwater Monitoring Report for the referenced Contract Task Order (CTO) for the Ocala F-18 Crash Site. This report was prepared for the United States Navy, Naval Facilities Engineering Command Southeast (NAVFAC SE) under the Comprehensive Long-Term Environmental Action Navy (CLEAN) III Contract Number N62467-94-D-0888. This report summarizes the field work and laboratory analytical results for the first semi-annual sampling event for Year 2 conducted on February 8, 2007 in accordance with the Natural Attenuation Monitoring Plan Approval Order (NAMPAO) issued by the Florida Department of Environmental Protection (FDEP), and Chapter 62-770, Florida Administrative Code (F.A.C.). Groundwater sampling activities were performed in general accordance with FDEP Standard Operating Procedures (SOPs) 1001 and FS 2002 and TtNUS SOP SA-1.1.

BACKGROUND

The Ocala F-18 Crash Site is located in the Ocala National Forest approximately 82 miles south of Naval Air Station Cecil Field, Jacksonville, Florida and approximately 22 miles southeast of Ocala, Florida. The general site location is depicted on Figure 1.

In June 1994, a Navy F-18 jet crashed in the Ocala National Forest. A site assessment and initial remedial action were conducted by Bechtel Environmental, Inc. In September 1997, Harding Lawson Associates (HLA) sampled monitoring wells CEF-CS1A, CEF-CS2, and CEF-CS3 to evaluate the groundwater quality at the site. Concentrations of benzene, ethylbenzene, total xylenes, and naphthalene detected in monitoring well CEF-CS1A exceeded Groundwater Cleanup Target Levels (GCTLs) cited in Chapter 62-777, F.A.C. An additional monitoring well (CEF-CS7) was installed on November 20, 1997, to assess downgradient groundwater quality. Following approval of monitoring only natural attenuation (MONA), HLA recommended semi-annual monitoring. HLA submitted a MONA plan to FDEP dated January 20, 1998. The MONA plan was subsequently revised and approved in April 1998. HLA performed quarterly groundwater monitoring from May 4, 1998, through February 22, 1999. TtNUS



resumed sampling after the February 1999 sampling event. During the third year of monitoring in October 2002, TtNUS recommended preparation of a treatability study to use an innovative technology to remediate the site because the concentrations of contaminants of concern (COCs) had not decreased. Instead, during a BCT meeting, members decided to continue with the monitoring instead of the treatability study, so the treatability study was not initiated at the site. The COCs, as defined in the MONA, were benzene, toluene, ethylbenzene, xylenes, methyl tert-butyl ether, and polynuclear aromatic hydrocarbons (PAHs). Monitoring continued in April 2003, and the COCs appeared to be within milestones set by the MONA order. Therefore, continued monitoring was recommended. However, FDEP reviewed the Monitoring Only Plan Report and stated that 5 years had transpired without a decrease in COCs to concentrations less than GCTLs. The response from FDEP required an additional well directly downgradient of the source well and also required sampling, reporting, and recommendations. Considering the remoteness of the site and the need for a more refined delineation of the plume centered on well CEF-CS1A, TtNUS mobilized to the site to install three perimeter wells (CS-8, CS-9, and CS-10)

Results of the sampling event conducted after the installation of the new monitoring wells in 2005 showed concentrations of benzene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene in exceedance of GCTLs at CEF-CS1A. Isopropyl benzene was also detected in the source well. In addition, benzo(a)anthracene and benzo(b)fluoranthene were detected in exceedance of GCTLs in monitoring well CEF-CS8. Based on the new sampling data, a revised MONA was proposed with new milestone objectives for different COCs and different wells: benzene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. FDEP approved the recommendation for a Natural Attenuation Monitoring Plan Approval Order (NAMPAO) in October 2005 (see Attachment A). A summary of groundwater results for the first semi-annual Year 2 sampling event based on the revised NAMPAO is provided below.

FIELD ACTIVITIES

Groundwater samples were collected on February 8, 2007, using low-flow methods from the source monitoring well (CEF-CS1A) and three perimeter wells (CEF-CS3, CEF-CS8, and CEF-CS10). Locations of the monitoring wells are shown on Figure 2. Following collection, the groundwater samples were placed on ice and shipped under chain of custody to Accutest Laboratories in Orlando, Florida for analysis. All samples were analyzed for volatile organic compounds (VOCs) using United States Environmental Protection Agency (USEPA) Method SW-846 8260B and for PAHs using USEPA Method SW-846 8310.

Prior to obtaining groundwater samples, water level measurements and total well depths were measured and recording on a site-specific groundwater level measurement sheet (see Attachment B). The depth to water ranged from 23.52 feet below top of casing (btoc) (CEF-CS4) to 27.07 feet btoc (CEF-CS2). General protocols were in accordance with FDEP SOPs and TtNUS SOP SA-1.1. The data were recorded on groundwater sample log sheets and low-flow purge data sheets (see Attachment B). The depth-to-water measurements, top-of-casing elevations, and groundwater elevations are presented in Table 1.

RESULTS

The groundwater elevation data indicate that flow is to the north-northwest, as shown on Figure 2. This estimate is consistent with historical groundwater flow measurements.

Analytical results from the February 2007 sampling event indicated benzene and 1,2,4-trimethylbenzene in excess of their respective GCTLs in source well CEF-CS1A at concentrations of 2.0 micrograms per liter ($\mu\text{g/L}$) and 49.2 $\mu\text{g/L}$, respectively. In addition, 1-methylnaphthalene and 2-methylnaphthalene were detected in CEF-CS1A at concentrations greater than their respective GCTLs, at 32.8 $\mu\text{g/L}$ and 32.2 $\mu\text{g/L}$, respectively. 1,3,5-Trimethylbenzene and naphthalene were detected at less than their respective GCTLs in CEF-CS1A, at 3.7 $\mu\text{g/L}$ and 20.1 $\mu\text{g/L}$, respectively. Benzo(a)pyrene was detected at a



concentration less than its GCTL in the source well, CEF-CS1A. The laboratory results for samples collected from perimeter monitoring wells CEF-CS3, CEF-CS8, and CEF-CS10 indicated that all target analytes were not detected at concentrations greater than their associated detection limits. Laboratory analytical results from the February 2007 sampling event are presented on Figure 3 and summarized in Table 2.

The historical laboratory analytical results and milestone objectives are summarized in Table 3. The laboratory analytical report is provided as Attachment C.

CONCLUSIONS AND RECOMMENDATIONS

For the February 2007 sampling event, 1,2,4-trimethylbenzene, benzene, 1-methylnaphthalene, and 2-methylnaphthalene concentrations in source well CEF-CS1A were greater than the End of Year 2 milestone objectives for the source well specified in the NAMP AO. 1,3,5-Trimethylbenzene and naphthalene concentrations in source well CEF-CS1A were less than the milestone objectives in the NAMP AO. 1,3,5-Trimethylbenzene was detected in CEF-CS1A at a concentration less than its GCTL of 10 µg/L, but naphthalene was detected in excess of its GCTL of 14 µg/L. All contaminants detected in perimeter wells were at concentrations less than their respective GCTLs and milestone objectives for perimeter wells specified in the NAMP AO. GCTL exceedances in source well CEF-CS1A included 1,2,4-trimethylbenzene, benzene, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene.

Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene concentrations slightly increased in the source well, CS-1A since the previous sampling event in September 2006. The naphthalene concentration significantly decreased since the previous concentration to less than the End of Year 1 milestone of 50 µg/L but was still greater than its GCTL. The benzene concentration did not change significantly from the previous sampling event.

At this time, it is recommended that groundwater sampling continues per the NAMP AO, including isopropyl benzene as a COC for the Year 2, Event 2 only. The next sampling event is scheduled for August 2007.

If you have any questions regarding this submittal, please feel free to contact Kara Wimble at (904) 730-4669, extension 214, or via e-mail at Kara.Wimble@ttnus.com.

Sincerely,

Mark A. Peterson, P.G.
Task Order Manager
Florida License Number PG-0001864

Kara F. Wimble
Project Scientist

MAP/KW

Attachments (9)

c: M. Davidson, NAVFAC SE (CD only)
J. Thorsen, Seminole Ranger District
M. Perry, TtNUS (unbound and CD)
R. Simcik, TtNUS (bookcase file)
D. Humbert, TtNUS (cover letter only)
CTO 209 Project File
J. Johnson, TtNUS (Information Repository)



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Mr. David Grabka
FDEP
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CERTIFICATION

The information contained herein is based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of any additional information on the information described in this report. This Semi-Annual Groundwater Monitoring Report, Year 2, Event 1 – February 2007, was developed for the Ocala F-18 Crash Site and should not be construed to apply to any other site.

June 8, 2007

Mark A. Peterson, P.G.

Florida License Number PG-0001852

TABLES

Table 1
Groundwater Elevation and Monitoring Well Construction Data

Groundwater Monitoring Report
 Ocala F-18 Crash Site
 Naval Air Station Cecil Field
 Jacksonville, Florida
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Monitoring Well Identification	Total Well Depth (ft bgs)	Screened Interval (ft bls)	TOC Elevation (ft above msl)*	May 4, 1998		August 26, 1998		November 23, 1998		February 22, 1999	
				Depth to Water (ft btoc)	Water Level Elevation (ft above msl)	Depth to Water (ft btoc)	Water Level Elevation (ft above msl)	Depth to Water (ft btoc)	Water Level Elevation (ft above msl)	Depth to Water (ft btoc)	Water Level Elevation (ft above msl)
CEF-CS1A	31	15.5 to 30.5	81.30	20.30	61.00	21.85	59.45	20.23	61.07	22.39	58.91
CEF-CS2	29.5	14.0 to 29.0	83.54	22.52	61.02	24.17	59.37	22.42	61.12	24.60	58.94
CEF-CS3	32	16.5 to 31.5	80.98	20.08	60.90	21.60	59.38	20.00	60.98	22.16	58.82
CEF-CS4	29.5	14.0 to 29.0	79.88	19.05	60.83	20.55	59.33	18.96	60.92	21.12	58.76
CEF-CS5	33	17.5 to 32.5	80.66	19.79	60.87	21.06	59.60	19.50	61.16	21.68	58.98
CEF-CS6	53.5	48.0 to 53.0	81.59	20.61	60.98	22.15	59.44	20.52	61.07	22.67	58.92
CEF-CS7	29.9	19.0 to 29.0	80.89	20.11	60.78	21.64	59.25	20.00	60.89	22.15	58.74
Monitoring Well Identification	Total Well Depth (ft bgs)	Screened Interval (ft bls)	TOC Elevation (ft above msl)*	February 22, 1999		October 4, 1999		March 7, 2000		September 27, 2000	
				Depth to Water (ft btoc)	Water Level Elevation (ft above msl)	Depth to Water (ft btoc)	Water Level Elevation (ft above msl)	Depth to Water (ft btoc)	Water Level Elevation (ft above msl)	Depth to Water (ft btoc)	Water Level Elevation (ft above msl)
CEF-CS1A	31	15.5 to 30.5	81.30	22.39	58.91	25.05	56.25	25.98	55.32	28.49	52.81
CEF-CS2	29.5	14.0 to 29.0	83.54	24.60	58.94	27.33	56.21	28.28	55.26	30.77	52.77
CEF-CS3	32	16.5 to 31.5	80.98	22.16	58.82	24.84	56.14	25.82	55.16	28.26	52.72
CEF-CS4	29.5	14.0 to 29.0	79.88	21.12	58.76	23.79	56.09	24.80	55.08	27.19	52.69
CEF-CS5	33	17.5 to 32.5	80.66	21.68	58.98	24.33	56.33	25.35	55.31	27.77	52.89
CEF-CS6	53.5	48.0 to 53.0	81.59	22.67	58.92	25.37	56.22	26.33	55.26	28.78	52.81
CEF-CS7	29.9	19.0 to 29.0	80.89	22.15	58.74	24.84	56.05	25.81	55.08	28.27	52.62

See notes at end of table.

Table 1 (Continued)
Groundwater Elevation and Monitoring Well Construction Data

Groundwater Monitoring Report
 Ocala F-18 Crash Site
 Naval Air Station Cecil Field
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Monitoring Well Identification	Total Well Depth (ft bgs)	Screened Interval (ft bls)	TOC Elevation (ft above msl)*	March 7, 2001		October 4, 2002		April 21, 2003		January 19, 2005	
				Depth to Water (ft btoc)	Water Level Elevation (ft above msl)	Depth to Water (ft btoc)	Water Level Elevation (ft above msl)	Depth to Water (ft btoc)	Water Level Elevation (ft above msl)	Depth to Water (ft btoc)	Water Level Elevation (ft above msl)
CEF-CS1A	31	15.5 to 30.5	81.30	30.29	51.01	24.23	57.07	21.76	59.54	21.42	59.88
CEF-CS2	29.5	14.0 to 29.0	83.54	31.91	51.63	26.59	56.95	24.13	59.41	23.71	59.83
CEF-CS3	32	16.5 to 31.5	80.98	30.07	50.91	23.98	57.00	21.53	59.45	21.21	59.77
CEF-CS4	29.5	14.0 to 29.0	79.88	29.02	50.86	22.89	56.99	20.44	59.44	20.17	59.71
CEF-CS5	33	17.5 to 32.5	80.66	29.6	51.06	23.43	57.23	20.96	59.70	20.73	59.93
CEF-CS6	53.5	48.0 to 53.0	81.59	30.59	51.00	24.55	57.04	22.10	59.49	21.72	59.87
CEF-CS7	29.9	19.0 to 29.0	80.89	DRY	<50.99	23.97	56.92	21.52	59.37	21.19	59.70
CEF-CS8	32.4	17.4 to 32.4	81.75	N/A	N/A	N/A	N/A	N/A	N/A	21.85	59.90
CEF-CS9	32.9	17.9 to 32.9	82.31	N/A	N/A	N/A	N/A	N/A	N/A	22.45	59.86
CEF-CS10	32.7	17.7 to 32.7	82.09	N/A	N/A	N/A	N/A	N/A	N/A	22.76	59.33

See notes at end of table.

Table 1 (Continued)
Groundwater Elevation and Monitoring Well Construction Data

Groundwater Monitoring Report
Ocala F-18 Crash Site
Naval Air Station Cecil Field
Jacksonville, Florida
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Monitoring Well Identification	Total Well Depth (ft bgs)	Screened Interval (ft bls)	TOC Elevation (ft above msl)*	March 15, 2006		September 19, 2006		February 8, 2007	
				Depth to Water (ft btoc)	Water Level Elevation (ft above msl)	Depth to Water (ft btoc)	Water Level Elevation (ft above msl)	Depth to Water (ft btoc)	Water Level Elevation (ft above msl)
CEF-CS1A	31	15.5 to 30.5	81.30	20.73	60.57	22.72	58.80	24.76	56.54
CEF-CS2	29.5	14.0 to 29.0	83.54	23	60.54	25.08	58.46	27.07	56.47
CEF-CS3	32	16.5 to 31.5	80.98	20.55	60.43	22.58	58.40	24.56	56.42
CEF-CS4	29.5	14.0 to 29.0	79.88	19.52	60.36	21.50	58.38	23.52	56.36
CEF-CS5	33	17.5 to 32.5	80.66	20.08	60.58	22.07	58.59	24.08	56.58
CEF-CS6	53.5	48.0 to 53.0	81.59	21.06	60.53	23.04	58.55	25.09	56.50
CEF-CS7	29.9	19.0 to 29.0	80.89	20.55	60.34	22.54	58.35	24.55	56.34
CEF-CS8	32.4	17.4 to 32.4	81.75	21.18	60.57	23.22	58.53	25.23	56.52
CEF-CS9	32.9	17.9 to 32.9	82.31	21.94	60.37	23.83	58.48	25.81	56.50
CEF-CS10	32.7	17.7 to 32.7	82.09	21.61	60.48	23.65	58.44	25.61	56.48

Notes:

*Top-of-casing elevations for monitoring wells CEF-CS1A through CEF-CS6 were surveyed by ARC Surveying, Inc. for the Remediation Closure Report. Following installation, monitoring well CEF-CS7 was surveyed by HLA personnel based on ARC Surveying, Inc.'s data.

bls = below ground surface btoc = below top of casing msl = mean sea level N/A = not applicable < = less than

Table 2
Summary of Detections in Groundwater, February 2007

Groundwater Monitoring Report
Ocala F-18 Crash Site
Naval Air Station Cecil Field
Jacksonville, Florida

Contaminant	Monitoring Well Location					Cleanup Criteria*	
	CEF-CS1A (source)		CEF-CS3 (perimeter)	CEF-CS8 (perimeter)	CEF-CS10 (perimeter)	GCTL ⁽¹⁾	Milestone Objectives (end)
	Sample	Duplicate					
VOCs (USEPA Method 8260B) (µg/L)							
Benzene	2.0	1.9	0.5 U	0.5 U	0.5 U	1	2
Toluene	NS	NS	NS	NS	NS	40	NA
Ethylbenzene	NS	NS	NS	NS	NS	30	NA
Total Xylenes	NS	NS	NS	NS	NS	20	NA
1,3,5-Trimethylbenzene	3.7	3.5	1 U	1 U	1 U	10	14
1,2,4-Trimethylbenzene	49.2	49.3	1 U	1 U	1 U	10	40
PAHs (USEPA Method 8270C SIM) (µg/L)							
Benzo(a)anthracene	NS	NS	NS	NS	NS	0.05	NA
Benzo(b)fluoranthene	NS	NS	NS	NS	NS	0.05	NA
Naphthalene	20.1	21	0.95 U	0.97 U	0.95 U	21	25
1-Methylnapthalene	32.8	34.2	0.48 U	0.49 U	0.48 U	28	32
2-Methylnapthalene	32.2	33.8	0.48 U	0.49 U	0.48 U	28	32
Benzo(a)pyrene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2	NE

Notes:

* Action levels and milestones based on the NAMP AO.

(1) GCTL as defined by Chapter 62-777, F.A.C., Table I (as amended April 2005).

Bold font indicates a GCTL exceedance.

NS = not sampled

NE = not established

NA = no value presented in the current Approval Order from NAMP AO.

U = not detected at detection limit shown

Table 3
Summary of Historical Detections in Groundwater

Groundwater Monitoring Report
Ocala F-18 Crash Site
Naval Air Station Cecil Field
Jacksonville, Florida
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Compounds	FDEP GCTL ⁽¹⁾ (µg/L)	Milestone Objectives					CEF-CS1A (source) ⁽²⁾															CEF-CS2	
		End of Year 1 (2006)	End of Year 2 (2007)	End of Year 3 (2008)	End of Year 4 (2009)	End of Year 5 (2010)	Aug 98	Nov 98	Feb 99	Oct 99	Mar 00	Mar 00	Sep 00	Mar 01	Oct 02	Oct 02	April 03	Jan 05	Mar 06	Sep 06	Feb 07	Oct 99	Jan 05
VOCs (µg/L)																							
Benzene	1	3	2	1	1 U	1 U	16	14	13	16.9	16.6	16.6	42	39	1.0	1.2	ND	1.5	0.745 J	1.4	2.0	ND	ND
Ethylbenzene	30	NA	NA	NA	NA	NA	44	31	34	43.2	31.2	31.2	31	50	28.0	30.2	10.6	22	0.8	19.4	NS	ND	ND
Toluene	40	NA	NA	NA	NA	NA	7.1	3.5	1.8	3.4	2.1	2.1	6	8.9	ND	0.61	0.56	0.73	23	0	NS	ND	ND
Total Xylenes	20	NA	NA	NA	NA	NA	115	63	33	80.4	38.4	38.4	39	53	16.2	16.3	9.2	10	10.5	8.6	NS	ND	ND
1,3,5-Trimethylbenzene	10	15	14	13	12	10 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	12	1 U	1.9	3.7	NS	ND
1,2,4-Trimethylbenzene	10	50	40	30	20	10 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	48	74.65 J	115	49.2	NS	ND
PAHs⁽³⁾ (µg/L)																							
Naphthalene	14	30	25	20	15	14 U	52	75	39	16	29.5	16.8	34	61	34.5	33.5	13.4	20	9.05	13.5	20.1	ND	ND
1-Methylnaphthalene	28	33	32	31	30	28 U	45	87	31	27	37.2	20.3	20	32	62.4	62.2	30.7	31	19.95	22.5	32.8	ND	ND
2-Methylnaphthalene	28	33	32	31	30	28 U	75	59	42	17	33.1	19.6	18	38	58.7	57.5	30.4	32	19	23.4	32.2	ND	ND
Benzo(a)pyrene	0.2	NE	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.096 U	NS	NS

See notes at end of table.

Table 3
Summary of Historical Detections in Groundwater

Groundwater Monitoring Report
Ocala F-18 Crash Site
Naval Air Station Cecil Field
Jacksonville, Florida
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Compounds Detected	FDEP GCTLs ⁽¹⁾	Milestone Objectives					CEF-CS3 (perimeter)													CEF-CS4	CEF-CS5	CEF-CS6	CEF-CS7	
	Ground water Criteria (µg/L)	End of Year 1 (2006)	End of Year 2 (2007)	End of Year 3 (2008)	End of Year 4 (2009)	End of Year 5 (2010)	Aug 98	Nov 98	Feb 99	Oct 99	Mar 00	Aug 00	Mar 01	Oct 02	April 03	April 03	Mar 06	Sep 06	Feb 07	Jan 05	Jan 05	Jan 05	Aug 98	Nov 98
VOCs (µg/L)																								
Benzene	1	3	2	1	1 U	1 U	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	0.5 U	0.2 U	0.5 U	ND	ND	ND	ND	ND
Ethylbenzene	30	NA	NA	NA	NA	NA	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	0.5 U	0.3 U	NS	ND	ND	ND	ND	ND
Toluene	40	NA	NA	NA	NA	NA	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	0.5 U	0.2 U	NS	ND	ND	ND	ND	ND
Total Xylenes	20	NA	NA	NA	NA	NA	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	0.5 U	0.3 U	NS	ND	ND	ND	1.2	ND
1,3,5-Trimethylbenzene	210	15	14	13	12	10 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1 U	0.2 U	1 U	ND	ND	ND	NS	NS
1,2,4-Trimethylbenzene	10	50	40	30	20	10 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1 U	0.6	1 U	ND	ND	ND	NS	NS
PAHs⁽³⁾ (µg/L)																								
Naphthalene	14	30	25	20	15	14 U	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	0.97 U	0.02 U	0.95 U	ND	ND	ND	ND	ND
1-Methylnaphthalene	28	33	32	31	30	28 U	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	0.49 U	0.02 U	0.48 U	ND	ND	ND	ND	ND
2-Methylnaphthalene	28	33	32	31	30	28 U	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	0.49 U	0.02 U	0.48 U	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.2	NE	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.1 U	NS	NS	NS	NS	NS

See notes at end of table.

Table 3
Summary of Historical Detections in Groundwater

Groundwater Monitoring Report
Ocala F-18 Crash Site
Naval Air Station Cecil Field
Jacksonville, Florida
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Compounds Detected	FDEP GCTLs ⁽¹⁾	Milestone Objectives					CEF-CS7 (perimeter) ⁽²⁾							CEF-CS8			CEF-CS9	CEF-CS10					
	(µg/L)	End of Year 1 (2006)	End of Year 2 (2007)	End of Year 3 (2008)	End of Year 4 (2009)	End of Year 5 (2010)	Feb 99	Oct 99	Mar 00	Sep 00	Mar 01	Oct 02	April 03	Jan 05	Jan 05	Mar 06	Sep 06	Feb 07	Jan 05	Jan 05	Mar 06	Sep 06	Feb 07
VOCs (µg/L)																							
Benzene	1	3	2	1	1 U	1 U	ND	ND	ND	ND	NS	ND	ND	ND	ND	0.5 U	0.2 U	0.5 U	ND	ND	0.5 U	0.2 U	0.5 U
Ethylbenzene	30	NA	NA	NA	NA	NA	ND	ND	ND	ND	NS	ND	ND	ND	ND	0.5 U	0.3 U	NS	ND	ND	0.5 U	0.3 U	NS
Toluene	40	NA	NA	NA	NA	NA	ND	ND	ND	ND	NS	ND	ND	ND	ND	0.5 U	0.2 U	NS	ND	ND	0.5 U	0.2 U	NS
Total Xylenes	20	NA	NA	NA	NA	NA	ND	ND	ND	ND	NS	ND	ND	ND	ND	0.5 U	0.3 U	NS	ND	ND	0.5 U	0.3 U	NS
1,3,5-Trimethylbenzene	210	15	14	13	12	10 U	NS	NS	NS	NS	NS	NS	NS	ND	ND	0.5 U	0.2 U	1 U	ND	ND	0.5 U	0.2 U	1 U
1,2,4-Trimethylbenzene	10	50	40	30	20	10 U	NS	NS	NS	NS	NS	NS	NS	ND	ND	0.5 U	0.6	1 U	ND	ND	0.5 U	0.6	1 U
PAHs⁽³⁾ (µg/L)																							
Naphthalene	14	30	25	20	15	14 U	ND	ND	ND	ND	NS	ND	ND	ND	ND	1 U	0.02 U	0.97 U	ND	ND	0.5 U	0.06	0.95 U
1-Methylnaphthalene	28	33	32	31	30	28 U	ND	ND	ND	ND	NS	ND	ND	ND	ND	0.52 U	0.02 U	0.49 U	ND	ND	0.5 U	0.35	0.48 U
2-Methylnaphthalene	28	33	32	31	30	28 U	ND	ND	ND	ND	NS	ND	ND	ND	ND	0.52 U	0.02 U	0.49 U	ND	ND	0.5 U	0.28	0.48 U
Benzo(a)pyrene	0.2	NE	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.1 U	NS	NS	NS	NS	0.1 U

Notes:

- GCTLs as defined in Chapter 62-777, F.A.C.
- Data from May 1998 sampling has been deleted for format reasons. It can be found in previous monitoring reports.
- May 1998 to February 1999, USEPA Method 625; October 1999 to March 2000; USEPA Method 8310; September 2000, USEPA Method 8270C.

Bold indicates GCTL exceedance.

ND = not detected

NA = no value presented in the current Approval Order

NS = not sampled

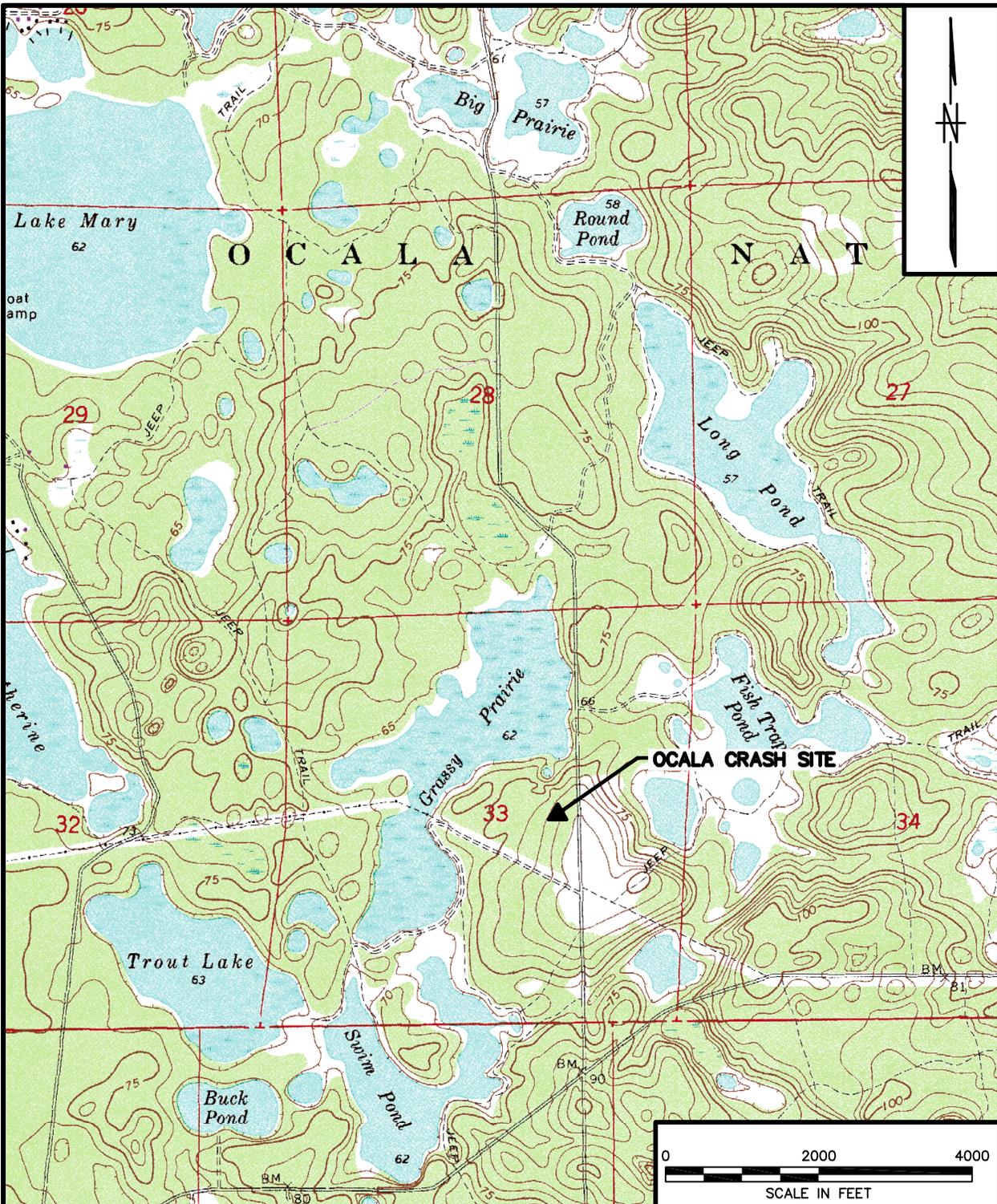
NE = not established

J = estimated value

U = not detected at detection limit shown

FIGURES

ACAD: 4093CM01.dwg 12/03/02 HUB PIT



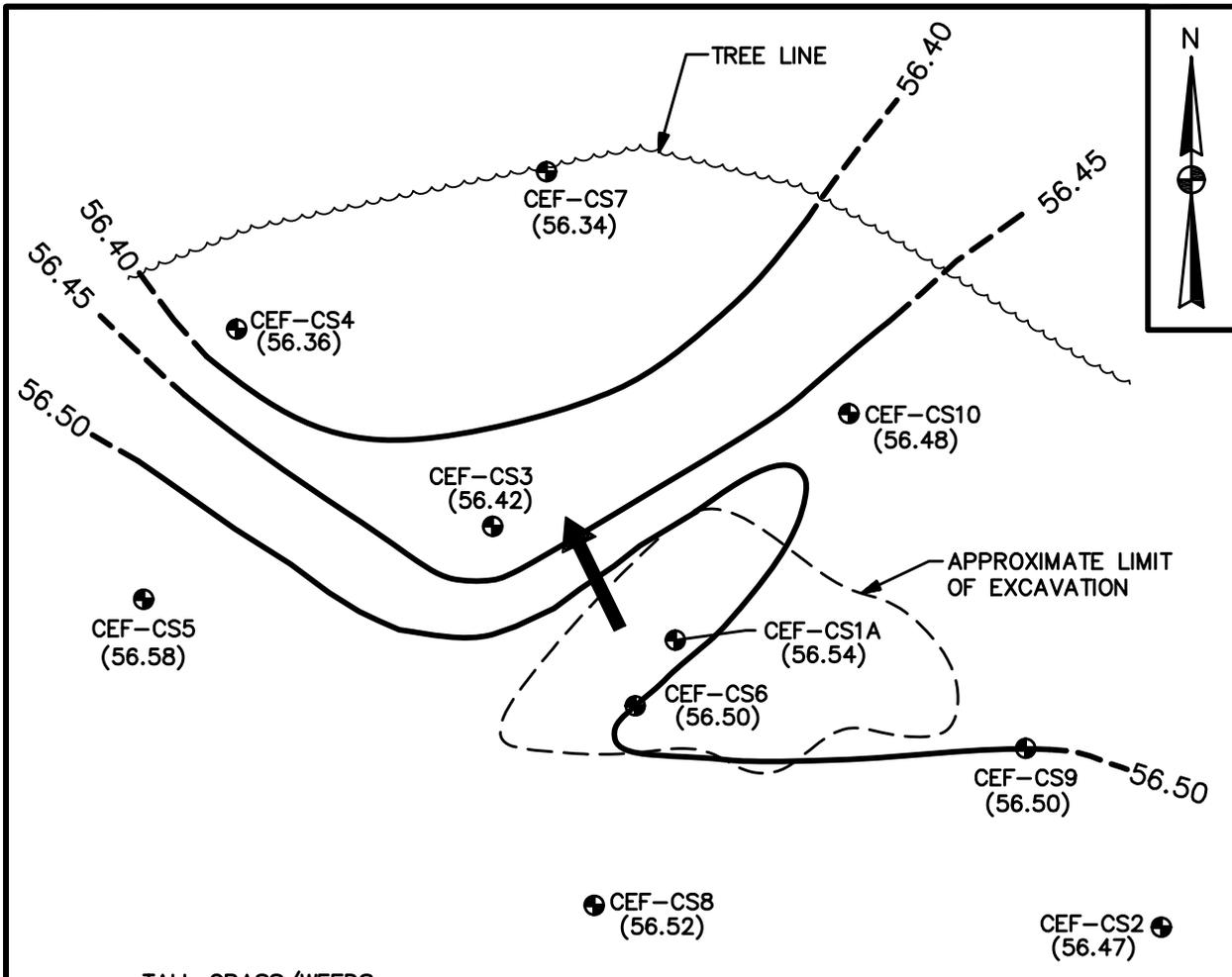
DRAWN BY HJB	DATE 12/2/02
CHECKED BY	DATE
COST/SCHED-AREA	
SCALE AS NOTED	



SITE LOCATION MAP
OCALA F-18 CRASH SITE
OCALA NATIONAL FOREST
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NO. 4093	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 1	REV. 0

ACAD: 4093GT12.dwg 04/24/07 DT PIT



LEGEND:

- CEF-CS2 MONITORING WELL LOCATION
- 58.40 — POTENTIOMETRIC SURFACE CONTOUR (FT. MSL) (DASHED WHERE INFERRED)
- (58.46) GROUNDWATER ELEVATION (FT. MSL)
- ➔ GROUNDWATER FLOW DIRECTION

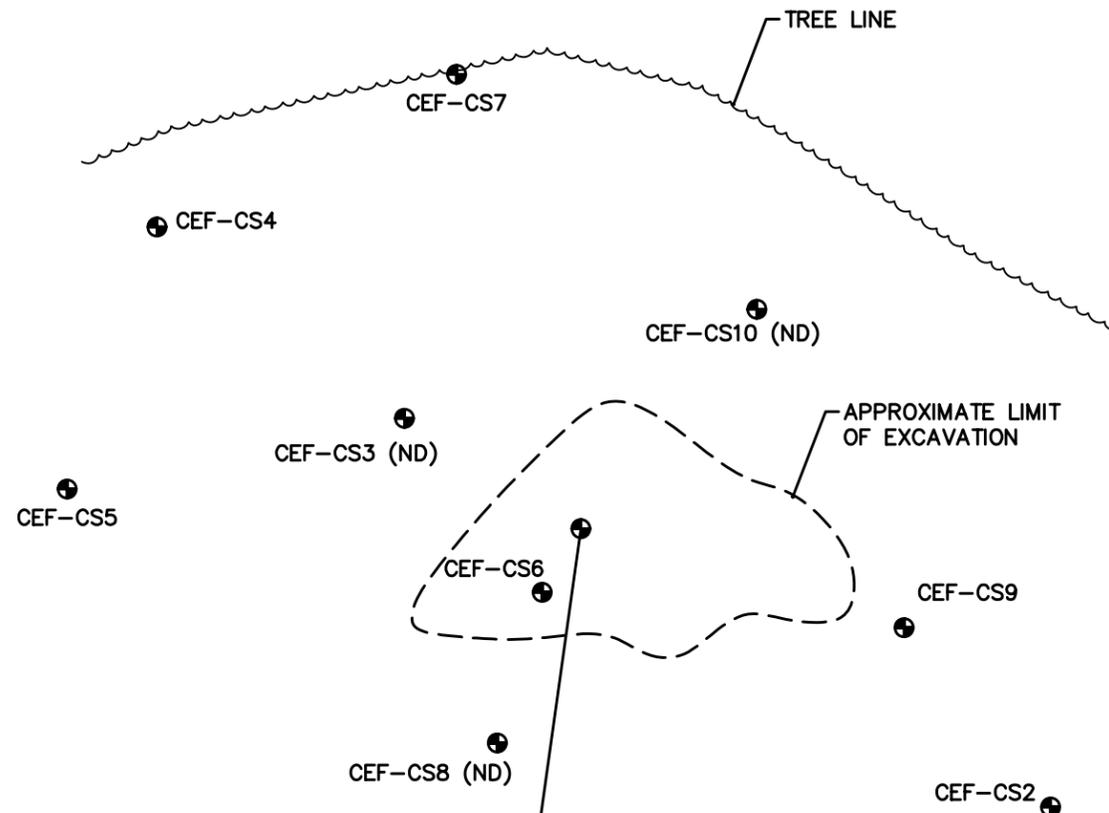
0 20 40
 APPROXIMATE SCALE IN FEET

DRAWN BY MF	DATE 4/12/07
CHECKED BY	DATE
REVISED BY	DATE
SCALE AS NOTED	



POTENTIOMETRIC SURFACE MAP
FEBRUARY 8, 2007
OCALA F-18 CRASH SITE
OCALA NATIONAL FOREST
NAVAL AIR STATION CECL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NO. 4093	
OWNER NO.	
APPROVED BY	DATE
DRAWING NO. FIGURE 2	REV. 0



CEF-CS1A		GCTL	CEF-CS1A (DUP)	
BENZENE	2.0	1	BENZENE	1.9
1,3,5-TRIMETHYLBENZENE	3.7	10	1,3,5-TRIMETHYLBENZENE	3.5
1,2,4-TRIMETHYLBENZENE	49.2	10	1,2,4-TRIMETHYLBENZENE	49.3
NAPHTHALENE	20.1	14	NAPHTHALENE	20
1-METHYLNAPHTHALENE	32.8	28	1-METHYLNAPHTHALENE	34.2
2-METHYLNAPHTHALENE	32.2	28	2-METHYLNAPHTHALENE	33.8
BENZO(A)PYRENE	< 0.1	0.2	BENZO(A)PYRENE	< 0.1

LEGEND:

- MONITORING WELL AND DESIGNATION
- CEF-CS2
- μg/L MICROGRAMS PER LITER
- (ND) NOT DETECTED
- GCTL GROUNDWATER CLEANUP TARGET LEVEL
- NS NOT SAMPLED

NOTE:

1. CONCENTRATIONS SHOWN ARE IN μg/L.
2. EXCEEDANCES ARE SHOWN BOLD.

DRAWN BY MF CHECKED BY REVISED BY SCALE AS NOTED	DATE 4/12/07 DATE DATE 		GROUNDWATER ANALYTICAL RESULTS FEBRUARY 8, 2007 OCALA F-18 CRASH SITE OCALA NATIONAL FOREST NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NO. 4093
				OWNER NO. APPROVED BY DATE DRAWING NO. FIGURE 3

ATTACHMENT A

NATURAL ATTENUATION MONITORING PLAN APPROVAL ORDER



JEO Bush
Governor

115-122

Department of Environmental Protection

Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

October 21, 2005

Commanding Officer
Attn: Mr. Gabe Magwood
Code ES24 (UST RPM)
Southern Division
Naval Facilities Engineering Command
P.O. Box 190010
North Charleston, South Carolina 29419-9010

RE: Supplemental Site Assessment Letter Report, Ocala F-18 Crash
Site, Naval Air Station Cecil Field, Florida

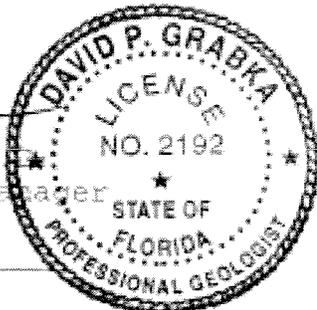
Dear Mr. Magwood:

I have completed the review of the Supplemental Site Assessment Letter Report, Ocala F-18 Crash Site, Naval Air Station Cecil Field, dated August 3, 2005 (received August 5, 2005), prepared and submitted by Tetra Tech NUS, Inc. While the site is associated with Naval Air Station Cecil Field, the physical location of the site is within the Ocala National Forest. Based upon my review, the enclosed Natural Attenuation Monitoring Plan Approval Order (NAMPAO) was signed by Mr. Doug Jones, Chief, Bureau of Waste Cleanup.

If I can be of any further assistance with this matter, please contact me at (850) 245-8997.

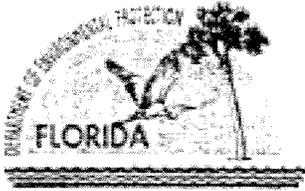
Sincerely,

David P. Grabka, P.E.
Remedial Project Manager
14 October 2005
Date



cc: Mark Davidson, SouthDiv, Charleston
Mike Fitzsimmons, FDEP, Northeast District
Doyle Brittain, USEPA Region 4

JJC  ESN 



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

October 21, 2005

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Commanding Officer
Attn: Mr. Gabe Magwood
Code ES24 (UST RPM)
Southern Division
Naval Facilities Engineering Command
P.O. Box 190010
North Charleston, South Carolina 29419-9010

Subject: Natural Attenuation Monitorina Plan Approval Order
Ocala F-18 Crash Site
Naval Air Station Cecil Field
Ocala National Forest
Marion County

Dear Mr. Magwood:

The Bureau of Waste Cleanup has reviewed the Supplemental Site Assessment Letter Report and Natural Attenuation Monitoring Plan dated August 3, 2005 (received August 5, 2005), prepared and submitted by Tetra Tech NUS, Inc. for the petroleum product discharge discovered at this site. Pursuant to paragraph 62-770.690(5)(a), Florida Administrative Code (F.A.C.), the Florida Department of Environmental Protection (Department) approves the Natural Attenuation Monitoring Plan. Pursuant to rule 62-770.690(8), F.A.C., you are required to complete the monitoring program outlined below. The first sampling event must be performed within 60 days of receipt of this Natural Attenuation Monitoring Plan Approval Order (Order). Water-level measurements must be made immediately prior to each sampling event. The analytical results (laboratory report), chain of custody record form, cumulative summary tables as required by subparagraph 62-770.600(8)(a)25., F.A.C. (updated as applicable), site map(s) that illustrate the most recent analytical results, and the water-level elevation information (cumulative summary table and most recent flow interpretation map), must be submitted to the Department within 60 days of sample collection.

The monitoring wells to be sampled, the sampling parameters, and the sampling frequency for the first year are as follows:

"More Protection, Less Process"

Printed on recycled paper

<u>Monitoring Wells</u>	<u>Contaminants of Concern</u>	<u>Frequency</u>	<u>Duration</u>
CEF-CS1A; CEF-CS3; and CEF-CS-10	VOCs, PAHs	Semi- Annually	One year
CEF-CS8	PAHs		

The approved Remedial Action by Natural Attenuation monitoring period is five years. The sampling frequency will be evaluated following the submittal of the first annual report to determine whether semiannual or annual sampling may be appropriate.

The following are the expected annual reductions of concentrations of petroleum products' contaminants concern in monitoring wells that will be used for annual evaluation of remediation progress by natural attenuation. If the annual rate of expected cleanup progress is not achieved, then the monitoring report must include a proposal pursuant to paragraph 62-770.690(8)(f), F.A.C.:

	<u>CEF-CS1A</u>		<u>CEF-CS1A</u>
<u>Benzene</u>		<u>Naphthalene</u>	
End of year 1	3 µg/L	End of year 1	30 µg/L
End of year 2	2 µg/L	End of year 2	25 µg/L
End of year 3	1 µg/L	End of year 3	20 µg/L
End of year 4	<1 µg/L	End of year 4	15 µg/L
End of year 5	<1 µg/L	End of year 5	<14 µg/L
<u>1,3,5- Trimethylbenzene</u>		<u>1-Methyl naphthalene</u>	
End of year 1	15 µg/L	End of year 1	33 µg/L
End of year 2	14 µg/L	End of year 2	32 µg/L
End of year 3	13 µg/L	End of year 3	31 µg/L
End of year 4	12 µg/L	End of year 4	30 µg/L
End of year 5	<10 µg/L	End of year 5	<28 µg/L
<u>1,2,4- Trimethylbenzene</u>		<u>2-Methyl naphthalene</u>	
End of year 1	50 µg/L	End of year 1	33 µg/L
End of year 2	40 µg/L	End of year 2	32 µg/L
End of year 3	30 µg/L	End of year 3	31 µg/L
End of year 4	20 µg/L	End of year 4	30 µg/L
End of year 5	<10 µg/L	End of year 5	<28 µg/L

If concentrations of contaminants of concern in any of the designated wells increase above the action levels listed below, the well or wells must be resampled no later than 30 days after the initial positive results are known. If the results of the resampling confirm the initial sampling results, then the monitoring report referenced in paragraph 62-770.690(8)(d), F.A.C., must be signed and sealed by an appropriate registered professional pursuant to rule 62-770.490, F.A.C., and must include a proposal as described in paragraph 62-770.690(8)(e), F.A.C.

Contaminated wells:

CEF-CS1A: 100 $\mu\text{g/L}$ Benzene; 100 $\mu\text{g/L}$ 1,3,5-Trimethylbenzene; 100 $\mu\text{g/L}$ 1,3,5-Trimethylbenzene ; 140 $\mu\text{g/L}$ Naphthalene; 280 $\mu\text{g/L}$ 1-Methylnaphthalene; 280 $\mu\text{g/L}$ 2-Methylnaphthalene.

CEF-CS8: 5 $\mu\text{g/L}$ Benzo(a)anthracene; 5 $\mu\text{g/L}$ Benzo(b)fluoranthene.

Perimeter well[s] (temporary point[s] of compliance):

CEF-CS3 abd CEF-CS10: 1 $\mu\text{g/L}$ Benzene; 10 pg/L 1,3,5-Trimethylbenzene; 10 $\mu\text{g/L}$ 1,3,5-Trimethylbenzene ; 14 pg/L Naphthalene; 28 $\mu\text{g/L}$ 1-Methylnaphthalene; 28 $\mu\text{g/L}$ 2-Methylnaphthalene.

If the applicable No Further Action criteria of rule 62-770.680, F.A.C., are met for two consecutive sampling events, a Site Rehabilitation Completion Report with a No Further Action Proposal, that summarizes the monitoring program and contains documentation to support the opinion that the cleanup objectives have been achieved, must be submitted as required in subsection 62-770.690(10), F.A.C. If the applicable No Further Action criteria of rule 62-770.680, F.A.C., are not met following five years of monitoring, then the monitoring report must include a proposal as described in subsection 62-770.690(8)(f), F.A.C.

Legal Issues

The Department's Order shall become final unless a timely petition for an administrative hearing is filed under sections 120.569 and 120.57, Florida Statutes (F.S.), within 21 days of receipt of this Order. The procedures for petitioning for an administrative hearing are set forth below.

Persons affected by this Order have the following options:

- (A) If you choose to accept the Department's decision regarding the Supplemental Site Assessment Letter Report and Natural Attenuation Monitoring Plan you do not have to do anything. This Order is final and effective as of the date on the top of the first page of this Order.
- (B) If you choose to challenge the decision, you may do the following:

- (1) File a request for an extension of time to file a petition for an administrative hearing with the Department's Agency Clerk in the Office of General Counsel within 21 days of receipt of this Order; such a request should be made if you wish to meet with the Department in an attempt to informally resolve any disputes without first filing a petition for an administrative hearing; or
- (2) File a petition for an administrative hearing with the Department's Agency Clerk in the Office of General Counsel within 21 days of receipt of this Order.

Please be advised that mediation of this decision pursuant to section 120.573, F.S., is not available.

How to Request an Extension of Time to File a Petition for an Administrative Hearing

For good cause shown, pursuant to subsection 62-110.106(4), F.A.C., the Department may grant a request for an extension of time to file a petition for an administrative hearing. Such a request must be filed (received) by the Department's Agency Clerk in the Office of General Counsel at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000, within 21 days of receipt of this Order. Petitioner, if different from Southern Division Naval Facilities Engineering Command, shall mail a copy of the request to Southern Division Naval Facilities Engineering Command at the time of filing. Timely filing a request for an extension of time tolls the time period within which a petition for an administrative hearing must be made.

How to File a Petition for an Administrative Hearing

A person whose substantial interests are affected by this Order may petition for an administrative hearing under sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) by the Department's Agency Clerk in the Office of General Counsel at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000, within 21 days of receipt of this Order. Petitioner, if different from Southern Division Naval Facilities Engineering Command, shall mail a copy of the petition to Southern Division Naval Facilities Engineering Command at the time of filing. Failure to file a petition within this time period shall waive the right of anyone who may request an administrative hearing under sections 120.569 and 120.57, F.S.

Pursuant to subsection 120.569(2), F.S. and rule 28-106.201, F.A.C., a petition for an administrative hearing shall contain the following information:

- (a) The name, address, and telephone number of each petitioner; the name, address, and telephone number of the petitioner's representative, if any; the facility owner's name and address, if different from the petitioner; the FDEP facility number, and the name and address of the facility;
- (b) A statement of when and how each petitioner received notice of the Department's action or proposed action;
- (c) An explanation of how each petitioner's substantial interests are or will be affected by the Department's action or proposed action;
- (d) A statement of the disputed issues of material fact, or a statement that there are no disputed facts;
- (e) A statement of the ultimate facts alleged, including a statement of the specific facts the petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the Department to take with respect to the Department's action or proposed action.

This Order is final and effective as of the date on the top of the first page of this Order. Timely filing a petition for an administrative hearing postpones the date this Order takes effect until the Department issues either a final order pursuant to an administrative hearing or an Order Responding to Supplemental Information provided to the Department pursuant to meetings with the Department.

Judicial Review

Any party to this Order has the right to seek judicial review of it under section 120.68, F.S., by filing a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the Department's Agency Clerk in the Office of General Counsel at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within 30 days after this Order is filed with the Department's clerk (see below).

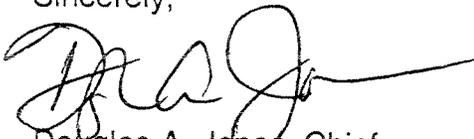
Questions

Any questions regarding the Department's review of your Supplemental Site Assessment Letter Report and Natural Attenuation Monitoring Plan should be directed

Mr. Gabe Magwood
October 21, 2005
Page Six

to David P. Grabka at (850) 245-8997. Questions regarding legal issues should be referred to the Department's Office of General Counsel at (850) 245-2242. Contact with any of the above does not constitute a petition for administrative hearing or request for an extension of time to file a petition for administrative hearing.

Sincerely,



Douglas A. Jones, Chief
Bureau of Waste Cleanup
Division of Waste Management

DAJ/dpg

cc: David P. Grabka, FDEP – BWC
File

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to
§120.52 Florida Statutes, with the
designated Department Clerk, receipt
of which is hereby acknowledged.



Clerk
(or Deputy Clerk)



Date

ATTACHMENT B
FIELD LOG SHEETS



Project Site Name: Ocala Crash Site - CTO 209
Project No.: 112GN4093

Sample ID No.: MW-CEF-CS8

Sample Location: CEF-CS8

Sampled By: KW, SM

C.O.C. No.:

Type of Sample:

- Domestic Well Data
- Monitoring Well Data
- Other Well Type:
- QA Sample Type:

- Low Concentration
- High Concentration

SAMPLING DATA:

Date: 7/8/06	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1145	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	
Method: Bailor								

PURGE DATA:

Date: 7/8/06	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Teflon Bailor	5L	4.44	0.096	23.07	1240	2.90	318.1	
Monitor Reading (ppm): 0	10	3.91	0.074	22.94	2138	3.03	362.1	
Well Casing Diameter & Material	15	3.91	0.073	22.96	2138	3.56	369.8	
Type: 2 in PVC	20	3.90	0.072	22.77	2333	3.33	375.9	
Total Well Depth (TD): 32.8	23	3.91	0.068	22.86	2288	3.53	380.7	
Static Water Level (WL): 25.23								
One Casing Volume(gal/L):								
Start Purge (hrs): 1130								
End Purge (hrs): 1145								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 23.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
8024B 8260B			
8310-PAHs	HCl		

OBSERVATIONS / NOTES:

32.8 - 25.23 = 7.57 x 0.16 = 1.216 = 458L x 5 volumes = 22.9L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
--------	-------------------

Signature(s):

Scott R. McShane



Project Site Name: Ocala Crash Site - CTO 209
 Project No.: 112GN4093

Domestic Well Data
 Monitoring Well Data
 Other Well Type: _____
 QA Sample Type: _____

Sample ID No.: MW-CEF-CS10
 Sample Location: CEF-CS10
 Sampled By: KW, SM
 C.O.C. No.: _____
 Type of Sample:
 Low Concentration
 High Concentration

SAMPLING DATA:

Date: <u>2/8/07</u>	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: <u>1215</u>	<u>Brn/Gray</u>	<u>3.99</u>	<u>0.083</u>	<u>22.96</u>	<u>5610</u>	<u>4.87</u>	<u>0.01</u>	<u>463.6</u>
Method: <u>Bailer</u>								

PURGE DATA:

Date: <u>2/8/07</u>	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: <u>Teflon Bailer</u>	<u>5.0</u>	<u>4.12</u>	<u>0.105</u>	<u>23.25</u>	<u>2227</u>	<u>5.10</u>	<u>0.05</u>	<u>494.8</u>
Monitor Reading (ppm):	<u>10.0</u>	<u>4.10</u>	<u>0.092</u>	<u>23.19</u>	<u>Err 4</u>	<u>5.48</u>	<u>0.04</u>	<u>501.1</u>
Well Casing Diameter & Material Type: <u>2" PVC</u>	<u>15.0</u>	<u>3.99</u>	<u>0.085</u>	<u>23.04</u>	<u>4527</u>	<u>4.92</u>	<u>0.04</u>	<u>503.4</u>
Total Well Depth (TD): <u>32.82</u>	<u>20.0</u>	<u>3.96</u>	<u>0.052</u>	<u>22.86</u>	<u>5610</u>	<u>4.89</u>	<u>0.03</u>	<u>491.0</u>
Static Water Level (WL): <u>25.61</u>								
One Casing Volume(gal/L): <u>4.36 l</u>								
Start Purge (hrs): <u>1200</u>								
End Purge (hrs): <u>1215</u>								
Total Purge Time (min): <u>15</u>								
Total Vol. Purged (gal/L): <u>22.0</u>								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
<u>8021B 8260B</u>	<u>Hcl</u>		<input checked="" type="checkbox"/>
<u>8310-PAHs</u>			<input checked="" type="checkbox"/>

OBSERVATIONS / NOTES:

$32.82 - 25.61 = 7.21 \times 0.16 = 1.156 = 4.36 \text{ l} \times 5 = 21.8$

Circle if Applicable:

MS/MSD	Duplicate ID No.:
--------	-------------------

Signature(s): _____



GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Ocala Crash Site - CTO 209
 Project No.: 112GN4093

Sample ID No.: MW-CEF-CS3
 Sample Location: CEF-CS3
 Sampled By: KW SM

- Domestic Well Data
- Monitoring Well Data
- Other Well Type: _____
- QA Sample Type: _____

C.O.C. No.: _____
 Type of Sample:
 Low Concentration
 High Concentration

SAMPLING DATA:

Date: <u>2/8/07</u>	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other <u>ORP</u>
Time: <u>1245</u>								
Method: <u>Bailer</u>	<u>GRAY</u>	<u>3.93</u>	<u>0.062</u>	<u>22.98</u>	<u>673</u>	<u>4.27</u>	<u>0.03</u>	<u>409.3</u>

PURGE DATA:

Date: <u>2/8/07</u>	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: <u>Teflon Bailer</u>	<u>5.0</u>	<u>4.07</u>	<u>0.061</u>	<u>23.37</u>	<u>5610</u>	<u>4.69</u>	<u>0.03</u>	<u>401.6</u>
Monitor Reading (ppm):	<u>10.0</u>	<u>3.97</u>	<u>0.061</u>	<u>22.99</u>	<u>1219</u>	<u>4.32</u>	<u>0.03</u>	<u>414.9</u>
Well Casing Diameter & Material	<u>15.0</u>	<u>4.11</u>	<u>0.060</u>	<u>23.09</u>	<u>1099</u>	<u>4.59</u>	<u>0.03</u>	<u>407.3</u>
Type: <u>2" PVC</u>	<u>20.0</u>	<u>4.01</u>	<u>0.061</u>	<u>22.99</u>	<u>1211</u>	<u>4.83</u>	<u>0.03</u>	<u>415.3</u>
Total Well Depth (TD): <u>34.12</u>	<u>25.0</u>	<u>3.99</u>	<u>0.062</u>	<u>22.90</u>	<u>764</u>	<u>4.73</u>	<u>0.03</u>	<u>411.7</u>
Static Water Level (WL): <u>24.56</u>	<u>30.0</u>	<u>3.93</u>	<u>0.062</u>	<u>22.98</u>	<u>673</u>	<u>4.27</u>	<u>0.03</u>	<u>409.3</u>
One Casing Volume(gal/L): <u>5.79 l</u>								
Start Purge (hrs): <u>1230</u>								
End Purge (hrs): <u>1245</u>								
Total Purge Time (min): <u>15</u>								
Total Vol. Purged (gal/L): <u>30.0</u>								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
<u>8024B 8260B</u>	<u>4CL</u>		
<u>8310-PAHs</u>			

OBSERVATIONS / NOTES:

34.12 - 24.56 = 9.56 x 0.16 = 1.526 = 5.79 l x 5 = 28.9 l

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	



Project Site Name: Ocala Crash Site - CTO 209

Project No.: 112GN4093

Sample ID No.: MW-CEF-CS1A

Sample Location: CEF-CS1A

Sampled By: Kw, SM

C.O.C. No.:

Type of Sample:

- Domestic Well Data
 Monitoring Well Data
 Other Well Type:
 QA Sample Type:

- Low Concentration
 High Concentration

SAMPLING DATA:

Date:	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
2/8/07	Chalky	6.15	0.336	22.91	210	1.51	0.17	ORP
Time: 1315								
Method: Bailer								

PURGE DATA:

Date:	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
2/8/07	5.0	5.89	0.347	23.66	247.0	2.64	0.17	81.8
Method: Teflon Bailer	10.0	6.16	0.359	23.33	185.0	2.41	0.18	8.8
Monitor Reading (ppm):	15.0	6.18	0.355	23.20	220.0	2.26	0.18	-1.2
Well Casing Diameter & Material Type: 2" PVC	20.0	6.12	0.348	23.24	194.0	1.90	0.17	-5.2
Total Well Depth (TD): 33.75	25.0	6.14	0.337	22.99	188	1.78	0.17	-9.7
Static Water Level (WL): 24.76	28.0	6.15	0.336	22.91	210	1.51	0.17	-15.1
One Casing Volume (gal/L): 5.44 L								
Start Purge (hrs): 1300								
End Purge (hrs): 1315								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 28.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
8021B 82608	HCl		
8310-PAHs			

OBSERVATIONS / NOTES:

$$33.75 - 24.76 = 8.99 \times 0.16 = 1.436 = 5.44 \text{ L} \times 5 = 27.2$$

Circle if Applicable:

MS/MSD

Duplicate ID No.:

MW-CEF-D401-02082007

Signature(s):

ATTACHMENT C
LABORATORY ANALYTICAL REPORT

HOLDTIME

SDG F47115

SORT	UNITS	NSAMPLE	LAB ID	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	SMP EXTR	EXTR ANL	SMP ANL
OV	%	MW-CEF-CS10-02082007	F47115-2	NM	2/8/2007	2/15/2007	2/15/2007	7	0	7
OV	%	MW-CEF-CS3-02082007	F47115-3	NM	2/8/2007	2/19/2007	2/19/2007	11	0	11
OV	%	MW-CEF-CS8-02082007	F47115-1	NM	2/8/2007	2/15/2007	2/15/2007	7	0	7
OV	%	MW-CEF-DU01-02082007	F47115-5	NM	2/8/2007	2/19/2007	2/19/2007	11	0	11
OV	%	MW-CEF-1A-02082007	F47115-4	NM	2/8/2007	2/20/2007	2/20/2007	12	0	12
OV	UG/L	MW-CEF-DU01-02082007	F47115-5	NM	2/8/2007	2/19/2007	2/19/2007	11	0	11
OV	UG/L	MW-CEF-1A-02082007	F47115-4	NM	2/8/2007	2/20/2007	2/20/2007	12	0	12
OV	UG/L	MW-CEF-CS10-02082007	F47115-2	NM	2/8/2007	2/15/2007	2/15/2007	7	0	7
OV	UG/L	MW-CEF-CS3-02082007	F47115-3	NM	2/8/2007	2/19/2007	2/19/2007	11	0	11
OV	UG/L	MW-CEF-CS8-02082007	F47115-1	NM	2/8/2007	2/15/2007	2/15/2007	7	0	7
PAH	%	MW-CEF-CS10-02082007	F47115-2	NM	2/8/2007	2/15/2007	2/16/2007	7	1	8
PAH	%	MW-CEF-CS3-02082007	F47115-3	NM	2/8/2007	2/15/2007	2/16/2007	7	1	8
PAH	%	MW-CEF-CS8-02082007	F47115-1	NM	2/8/2007	2/15/2007	2/16/2007	7	1	8
PAH	%	MW-CEF-DU01-02082007	F47115-5	NM	2/8/2007	2/15/2007	2/16/2007	7	1	8
PAH	%	MW-CEF-1A-02082007	F47115-4	NM	2/8/2007	2/15/2007	2/16/2007	7	1	8

SORT	UNITS	NSAMPLE	LAB ID	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	SMP EXTR	EXTR ANL	SMP ANL
PAH	UG/L	MW-CEF-DU01-02082007	F47115-5	NM	2/8/2007	2/15/2007	2/16/2007	7	1	8
PAH	UG/L	MW-CEF-1A-02082007	F47115-4	NM	2/8/2007	2/15/2007	2/16/2007	7	1	8
PAH	UG/L	MW-CEF-CS10-02082007	F47115-2	NM	2/8/2007	2/15/2007	2/16/2007	7	1	8
PAH	UG/L	MW-CEF-CS3-02082007	F47115-3	NM	2/8/2007	2/15/2007	2/16/2007	7	1	8
PAH	UG/L	MW-CEF-CS8-02082007	F47115-1	NM	2/8/2007	2/15/2007	2/16/2007	7	1	8

PROJ_NO: 4093

SDG: F47115 MEDIA: WATER DATA FRACTION: OV

nsample MW-CEF-1A-02082007
 samp_date 2/8/2007
 lab_id F47115-4
 qc_type NM
 units UG/L
 Pct_Solids
 DUP_OF:

nsample MW-CEF-CS10-02082007
 samp_date 2/8/2007
 lab_id F47115-2
 qc_type NM
 units UG/L
 Pct_Solids
 DUP_OF:

nsample MW-CEF-CS3-02082007
 samp_date 2/8/2007
 lab_id F47115-3
 qc_type NM
 units UG/L
 Pct_Solids
 DUP_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,2,4-TRIMETHYLBENZENE	49.2			
1,3,5-TRIMETHYLBENZENE	3.7			
BENZENE	2			

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,2,4-TRIMETHYLBENZENE	1	U	U	
1,3,5-TRIMETHYLBENZENE	1	U	U	
BENZENE	0.5	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,2,4-TRIMETHYLBENZENE	1	U	U	
1,3,5-TRIMETHYLBENZENE	1	U	U	
BENZENE	0.5	U	U	

PROJ_NO: 4093

SDG: F47115 MEDIA: WATER DATA FRACTION: OV

nsample MW-CEF-CS8-02082007
samp_date 2/8/2007
lab_id F47115-1
qc_type NM
units UG/L
Pct_Solids
DUP_OF:

nsample MW-CEF-DU01-02082007
samp_date 2/8/2007
lab_id F47115-5
qc_type NM
units UG/L
Pct_Solids
DUP_OF: MW-CEF-1A-02082007

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,2,4-TRIMETHYLBENZENE	1	U	U	
1,3,5-TRIMETHYLBENZENE	1	U	U	
BENZENE	0.5	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,2,4-TRIMETHYLBENZENE	49.3			
1,3,5-TRIMETHYLBENZENE	3.5			
BENZENE	1.9			

PROJ_NO: 4093

SDG: F47115 MEDIA: WATER DATA FRACTION: PAH

nsample MW-CEF-1A-02082007
 samp_date 2/8/2007
 lab_id F47115-4
 qc_type NM
 units UG/L
 Pct_Solids
 DUP_OF:

nsample MW-CEF-CS10-02082007
 samp_date 2/8/2007
 lab_id F47115-2
 qc_type NM
 units UG/L
 Pct_Solids
 DUP_OF:

nsample MW-CEF-CS3-02082007
 samp_date 2/8/2007
 lab_id F47115-3
 qc_type NM
 units UG/L
 Pct_Solids
 DUP_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	32.8			
2-METHYLNAPHTHALENE	32.2			
BENZO(A)PYRENE	0.095	U	U	
NAPHTHALENE	20.1			

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.48	U	U	
2-METHYLNAPHTHALENE	0.48	U	U	
BENZO(A)PYRENE	0.095	U	U	
NAPHTHALENE	0.95	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.48	U	U	
2-METHYLNAPHTHALENE	0.48	U	U	
BENZO(A)PYRENE	0.095	U	U	
NAPHTHALENE	0.95	U	U	

PROJ_NO: 4093

SDG: F47115 MEDIA: WATER DATA FRACTION: PAH

nsample MW-CEF-CS8-02082007
 samp_date 2/8/2007
 lab_id F47115-1
 qc_type NM
 units UG/L
 Pct_Solids
 DUP_OF:

nsample MW-CEF-DU01-02082007
 samp_date 2/8/2007
 lab_id F47115-5
 qc_type NM
 units UG/L
 Pct_Solids
 DUP_OF: MW-CEF-1A-02082007

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.49	U	U	
2-METHYLNAPHTHALENE	0.49	U	U	
BENZO(A)PYRENE	0.097	U	U	
NAPHTHALENE	0.97	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	34.2			
2-METHYLNAPHTHALENE	33.8			
BENZO(A)PYRENE	0.096	U	U	
NAPHTHALENE	21			

Accutest Laboratories

Report of Analysis

3.1
3

Client Sample ID:	MW-CEF-CS8-02082007	Date Sampled:	02/08/07
Lab Sample ID:	F47115-1	Date Received:	02/10/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Ocala F-18 Crash site CTO209		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0018024.D	1	02/15/07	CS	n/a	n/a	VM747
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.50 U	1.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1.0 U	2.0	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	1.0 U	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		87-116%
17060-07-0	1,2-Dichloroethane-D4	122%		76-127%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	100%		84-120%

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

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

Accutest Laboratories

Report of Analysis

32
3

Client Sample ID:	MW-CEF-CS10-02082007	Date Sampled:	02/08/07
Lab Sample ID:	F47115-2	Date Received:	02/10/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Ocala F-18 Crash site CTO209		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0018025.D	1	02/15/07	CS	n/a	n/a	VM747
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.50 U	1.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1.0 U	2.0	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	1.0 U	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		87-116%
17060-07-0	1,2-Dichloroethane-D4	122%		76-127%
2037-26-5	Toluene-D8	100%		86-112%
460-00-4	4-Bromofluorobenzene	97%		84-120%

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

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

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	MW-CEF-CS3-02082007	Date Sampled:	02/08/07
Lab Sample ID:	F47115-3	Date Received:	02/10/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Ocala F-18 Crash site CTO209		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0018105.D	1	02/19/07	CS	n/a	n/a	VM751
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.50 U	1.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1.0 U	2.0	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	1.0 U	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	117% ^a		87-116%
17060-07-0	1,2-Dichloroethane-D4	112%		76-127%
2037-26-5	Toluene-D8	102%		86-112%
460-00-4	4-Bromofluorobenzene	103%		84-120%

(a) Outside control limits; however, sample is ND.

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

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

Accutest Laboratories

Report of Analysis

3.4
3

Client Sample ID:	MW-CEF-1A-02082007	Date Sampled:	02/08/07
Lab Sample ID:	F47115-4	Date Received:	02/10/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Ocala F-18 Crash site CTO209		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0018123.D	1	02/20/07	CS	n/a	n/a	VM752
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.0	1.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	49.2	2.0	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	3.7	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		87-116%
17060-07-0	1,2-Dichloroethane-D4	97%		76-127%
2037-26-5	Toluene-D8	100%		86-112%
460-00-4	4-Bromofluorobenzene	98%		84-120%

U = Not detected MDL - Method Detection Limit I = Result >= MDL but < RL J = Estimated value
 RL = Reporting Limit = PQL V = Indicates analyte found in associated method blank
 L = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Page 1 of 1

3.5
3

Client Sample ID:	MW-CEF-DU01-02082007	Date Sampled:	02/08/07
Lab Sample ID:	F47115-5	Date Received:	02/10/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Ocala F-18 Crash site CTO209		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0018107.D	1	02/19/07	CS	n/a	n/a	VM751
Run #2							

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

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1.9	1.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	49.3	2.0	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	3.5	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%		87-116%
17060-07-0	1,2-Dichloroethane-D4	109%		76-127%
2037-26-5	Toluene-D8	103%		86-112%
460-00-4	4-Bromofluorobenzene	99%		84-120%

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

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

Accutest Laboratories

Report of Analysis

3.1
3

Client Sample ID:	MW-CEF-CS8-02082007	Date Sampled:	02/08/07
Lab Sample ID:	F47115-1	Date Received:	02/10/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8310 SW846 3510C		
Project:	Ocala F-18 Crash site CTO209		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA033422.D	1	02/16/07	MRE	02/15/07	OP19525	GAA1459
Run #2							

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

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
50-32-8	Benzo(a)pyrene	0.097 U	0.19	0.097	ug/l	
91-20-3	Naphthalene	0.97 U	1.9	0.97	ug/l	
90-12-0	1-Methylnaphthalene	0.49 U	1.9	0.49	ug/l	
91-57-6	2-Methylnaphthalene	0.49 U	1.9	0.49	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		43-121%
92-94-4	p-Terphenyl	81%		30-122%

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

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

Accutest Laboratories

Report of Analysis

3.2
3

Client Sample ID:	MW-CEF-CS10-02082007	Date Sampled:	02/08/07
Lab Sample ID:	F47115-2	Date Received:	02/10/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8310 SW846 3510C		
Project:	Ocala F-18 Crash site CTO209		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA033423.D	1	02/16/07	MRE	02/15/07	OP19525	GAA1459
Run #2							

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

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
50-32-8	Benzo(a)pyrene	0.095 U	0.19	0.095	ug/l	
91-20-3	Naphthalene	0.95 U	1.9	0.95	ug/l	
90-12-0	1-Methylnaphthalene	0.48 U	1.9	0.48	ug/l	
91-57-6	2-Methylnaphthalene	0.48 U	1.9	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	78%		43-121%
92-94-4	p-Terphenyl	74%		30-122%

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

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

Accutest Laboratories

Report of Analysis

3.3
3

Client Sample ID:	MW-CEF-CS3-02082007	Date Sampled:	02/08/07
Lab Sample ID:	F47115-3	Date Received:	02/10/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8310 SW846 3510C		
Project:	Ocala F-18 Crash site CTO209		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA033424.D	1	02/16/07	MRE	02/15/07	OP19525	GAA1459
Run #2							

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

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
50-32-8	Benzo(a)pyrene	0.095 U	0.19	0.095	ug/l	
91-20-3	Naphthalene	0.95 U	1.9	0.95	ug/l	
90-12-0	1-Methylnaphthalene	0.48 U	1.9	0.48	ug/l	
91-57-6	2-Methylnaphthalene	0.48 U	1.9	0.48	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	76%		43-121%		
92-94-4	p-Terphenyl	77%		30-122%		

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

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

Accutest Laboratories

Report of Analysis

3.4
3

Client Sample ID:	MW-CEF-1A-02082007	Date Sampled:	02/08/07
Lab Sample ID:	F47115-4	Date Received:	02/10/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8310 SW846 3510C		
Project:	Ocala F-18 Crash site CTO209		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA033425.D	1	02/16/07	MRE	02/15/07	OP19525	GAA1459
Run #2							

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

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
50-32-8	Benzo(a)pyrene	0.095 U	0.19	0.095	ug/l	
91-20-3	Naphthalene	20.1	1.9	0.95	ug/l	
90-12-0	1-Methylnaphthalene	32.8	1.9	0.48	ug/l	
91-57-6	2-Methylnaphthalene	32.2	1.9	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	101%		43-121%
92-94-4	p-Terphenyl	81%		30-122%

(a) All hits confirmed by spectral match using a diode array detector.

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

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

Accutest Laboratories

Report of Analysis

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Client Sample ID:	MW-CEF-DU01-02082007	Date Sampled:	02/08/07
Lab Sample ID:	F47115-5	Date Received:	02/10/07
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8310 SW846 3510C		
Project:	Ocala F-18 Crash site CTO209		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA033426.D	1	02/16/07	MRE	02/15/07	OP19525	GAA1459
Run #2							

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

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
50-32-8	Benzo(a)pyrene	0.096 U	0.19	0.096	ug/l	
91-20-3	Naphthalene	21.0	1.9	0.96	ug/l	
90-12-0	1-Methylnaphthalene	34.2	1.9	0.48	ug/l	
91-57-6	2-Methylnaphthalene	33.8	1.9	0.48	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	108%		43-121%		
92-94-4	p-Terphenyl	86%		30-122%		

(a) All hits confirmed by spectral match using a diode array detector.

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

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