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NAS CECIL FIELD, FL
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FIRST SEMI-ANNUAL SECOND YEAR GROUNDWATER MONITORING LETTER REPORT
FOR BUILDING 815 WASH RACK AREA NAS CECIL FIELD FL
4/1/2002
TETRA TECH NUS INC



TETRA TECH NUS, INC.

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Document Tracking No. 02JAX0044

April 1, 2002

Project Number N4093

Mr. David Grabka
Remedial Project Manager
Technical Review/Federal Facilities
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Reference: Clean Contract No. N62467-94-D-0888
Contract Task Order No. 0209

Subject: Groundwater Monitoring Report, 1st Semi-Annual, 2nd Year (December 2001)
Building 815 Wash Rack Area
Naval Air Station Cecil Field
Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this Groundwater Monitoring Letter Report for the referenced Contract Task Order (CTO). This report was prepared by TtNUS for the U.S. Navy Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) under the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract Number N62467-94-D-0888. The objective of this task is to monitor groundwater associated with the site semi-annually. The guidance document for this report is Chapter 62-770, Florida Administrative Code (FAC). The sampling program was accomplished in general accordance with the Natural Attenuation Monitoring Only Plan (MOP) Approval Order that was issued by the Florida Department of Environmental Protection (FDEP) on August 31, 2000 (Attachment A), and as modified by the Base Closure Team (BCT) in January 2001 (Attachment B). The modification consisted of adding well NG-14S as a perimeter well and re-designating well CEF-815-3S as a contaminated well.

This report summarizes the fieldwork and analytical results for the subject site, which was conducted in December 2001. The work was performed in general accordance with the Base-wide Generic Work Plan Volumes I and II (TtNUS, 1998).

FIELD OPERATIONS

Figure 1 shows the location of the site. On December 17, 2001, water level measurements were obtained from nine monitoring wells prior to sample collection. This data is presented in Table 1. The depth to water ranged from 5.14 to 6.24 feet (ft) below top of casing (btoc). The depth-to-water measurements, along with top-of-casing elevations, were used to calculate groundwater elevations.

Groundwater samples were collected on December 17, 2001 from the five monitoring wells in accordance with the modified MOP program. Those wells included CEF-815-1S (contaminated), CEF-815-3S (contaminated), NG-12S (contaminated), NG-14S (perimeter), and NG-26S (perimeter).

Following collection efforts, the groundwater samples were shipped on ice and under chain-of-custody to Accutest Laboratories in Orlando, Florida for analysis. The samples were analyzed using the United States Environmental Protection Agency (USEPA) Method SW846 8310 for naphthalene and Florida – Petroleum Range Organics (FL-PRO) for total recoverable petroleum hydrocarbons (TRPH).

RESULTS

Figure 2 illustrates the groundwater elevations as measured on December 17, 2001. The groundwater contours on Figure 2 show the flow is to the southeast. Table 1 provides the water table elevation data for the event.

The analytical results for this event are summarized in Table 2. The laboratory data (Attachment C) indicates that naphthalene was detected in the three wells designated as contaminated, CEF 815-1S, NG-12S, and CEF-815-3S. The analytical results from the December 17, 2001 sampling event indicated that MOP action levels were not exceeded in the groundwater samples collected from monitoring wells CEF-815-1S and CEF-815-3S. Of the three contaminated wells sampled, groundwater from CEF-815-1S and CEF-815-3S exceeded the Groundwater Cleanup Target Level (GCTL) [20 micrograms per liter ($\mu\text{g/L}$)]. The naphthalene concentration of the sample collected from NG-12S (7.1 $\mu\text{g/L}$) is below the GCTL. The naphthalene concentrations for the samples from the perimeter wells (NG-14S and NG-26S) were reported to be below laboratory detection limits.

TRPH was detected in the five monitoring wells, but no action level was exceeded. The groundwater sample collected from CEF-815-1S (15.5 mg/L) was the only sample that exceeded the GCTL [5 milligrams per liter (mg/L)]. The concentration reported for the sample collected from CEF-815-1S is below the first and second year milestone objectives (Table 2). The reported concentrations for the other contaminated wells and perimeter wells were below the GCTL (Table 2) and a copy of the analytical report is presented in Attachment C.

CONCLUSIONS AND RECOMMENDATIONS

Groundwater flow was recorded to be southeasterly in the July 2001 report and was determined to be approximately the same during this sample period.

Figure 3 depicts naphthalene and TRPH concentrations that were detected in the groundwater samples. The contours for those plumes are based on their respective GCTLs.

All wells sampled for naphthalene are now below the first year milestone objective of 145 $\mu\text{g/L}$. The historical data in Table 3 appears to confirm that the naphthalene plume has decreased since the May 2001 sampling event. The plume appears to be delineated by the perimeter wells and contaminated well NG-12S (Figure 3).

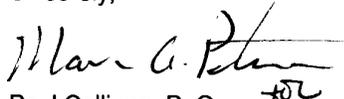
The TRPH plume appears to have decreased in size from the May 2001, event when it impacted two monitoring wells (NG-26S and CEF-815-1S), to only impacting one monitoring well (CEF-815-1S) during this event. Therefore, the TRPH plume (Figure 3) appears to be delineated by the perimeter wells and two of the contaminated wells. This decline centrally locates the TRPH plume in the contaminated well area surrounding CEF-815-1S.

Since the concentrations have not decreased below their respective GCTLs and milestone objectives for the second year, TtNUS recommends continued monitoring. It should be noted that the first year target milestone objectives have been achieved.

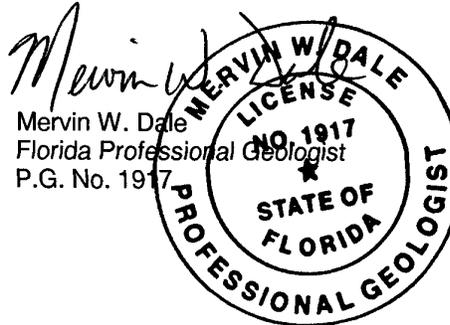
Mr. David Grabka
FDEP
April 1, 2002 - Page 3

The next semi-annual sampling event is scheduled for May 2002. If you have any questions with regard to this submittal, or if we can be of assistance in any way, please contact Paul Calligan at (813) 806-0202.

Sincerely,



Paul Calligan, P. G.
Task Order Manager



PC/drs

Attachments (8)

cc: Wayne Hansel, SOUTHNAVFACENGCOM
D. Wroblewski, TtNUS (cover letter only)
M. Perry, TtNUS (unbound)
Project File

TABLES

**Table 1
Water Table Elevation Data**

**Groundwater Monitoring Report
Building 815 Wash Rack Area
Former Naval Air Station Cecil Field
Jacksonville, Florida**

Monitoring Well Identification	Well Depth (feet, BTOC)	Top of Casing Elevation (feet, msl)	November 6, 2000		May 1, 2001		December 17, 2001	
			Depth to Water (feet, BTOC)	Water-Level Elevation (feet, msl)	Depth to Water (feet, BTOC)	Water-Level Elevation (feet, msl)	Depth to Water (feet, BTOC)	Water-Level Elevation (feet, msl)
CEF-815-1S	13.10	75.56	5.20	70.36	6.12	69.44	5.40	70.16
CEF-815-2S	14.00	75.60	4.93	70.67	5.92	69.68	5.14	70.46
CEF-815-3S	12.90	75.64	5.70	69.94	6.53	69.11	5.82	69.82
CEF-815-4S	14.00	75.75	6.11	69.64	6.85	68.90	6.24	69.51
NG-02S	14.00	76.39	NM	NM	6.79	69.60	5.81	70.58
NG-12S	13.40	75.69	5.46	70.23	6.39	69.30	5.63	70.06
NG-13S	14.00	76.04	5.44	70.60	6.46	69.58	5.66	70.38
NG-14S	14.00	75.71	NM	NM	6.69	69.02	6.03	69.68
NG-26S	14.25	75.84	5.36	70.48	6.26	69.58	5.57	70.27

Notes: msl - mean sea level.

BTOC = below top of casing.

NM = not measured.

**Table 2
Summary of Detections**

**Groundwater Monitoring Report
Building 815 Wash Rack Area
Former Naval Air Station Cecil Field
Jacksonville, Florida**

Compound of Concern	Contaminated Wells			Perimeter Monitoring Wells		Action Levels for Contaminated Wells/Perimeter Wells	Milestone Objectives for CEF-815-1S and NG-12S after the First Year	Milestone Objectives for CEF-815-1S and NG-12S after the Second Year	NADSC ¹ /GCTL ²
	CEF-815-1S	NG-12S	CEF-815-3S	NG-14S	NG-26S				
Date Sampled	12/17/2001	12/17/2001	12/17/2001	12/17/2001	12/17/2001				
<u>Polynuclear Aromatic Hydrocarbons (µg/L)</u>									
Naphthalene	129	7.1	28.1	<2.0	<2.0	200/20	145	113	200/20
<u>Total Recoverable Petroleum Hydrocarbons (mg/L)</u>									
TRPH	15.5	2.18	1.38	0.547	1.36	50/5	28	22	50/5

Notes:

Values exceeding milestones, NADSC or GCTL, are in bold.

¹NADSC=Natural Attenuation Default Source Concentrations as promulgated in Chapter 62-770.690.

²GCTL=Groundwater Cleanup Target Levels based on Chapter 62-770, Florida Administrative Code.

NS = not sampled

µg/L - micrograms per liter

mg/L - milligrams per liter

**Table 3
Historical Analytical Data**

**Groundwater Monitoring Report
Building 815 Wash Rack Area
Former Naval Air Station Cecil Field
Jacksonville, Florida
Page 1 of 6**

Monitoring Well ID Sample Number Sample Date Well Depth, Feet	FDEP GCTL FAC 62-777	CEF-815-1S					CEF-815-2S
		CEF-815-GW-1S-01 8-Oct-99 14	CEF-815-1S-01 6-Nov-00 14	CEF-815-1S-02 1-May-01 14	CEF-815-1S-02A 22-May-01 14	CEF-815-GW-1S-03 17-Dec-01 14	CEF-815-GW-2S-01 8-Oct-99 15
Volatile Organic Compounds (µg/L)							
cis-1,2-dichloroethene	70	1 U	NS	NS	NS	NS	1 U
trans-1,2-dichloroethene	100	1 U	NS	NS	NS	NS	1 U
Trichloroethene	3	1 U	NS	NS	NS	NS	1 U
Vinyl Chloride	1	1 U	NS	NS	NS	NS	1 U
Xylenes - Total	20	0.94 J	NS	NS	NS	NS	3 U
Polynuclear Aromatic Hydrocarbons (µg/L)							
1-Methylnaphthalene	20	12	14.8	NA	NA	NA	1.4
2-Methylnaphthalene	20	17	18	NA	NA	NA	1.8
Acenaphthene	20	13	4.4 U	NA	NA	NA	3.2
Acenaphthylene	210	3.8	4.4 U	NA	NA	NA	1.1
Fluorene	280	4.9	2.2 U	NA	NA	NA	1.1
Naphthalene	20	177	192	250	248	129	55
Phenanthrene	210	15.2	2.2 U	NA	NA	NA	4.1
Total Recoverable Petroleum Hydrocarbons (mg/L)							
TRPH (C8-C40)	5	34	21	16.8	NS	15.5	4.5

See notes at end of table.

**Table 3
Historical Analytical Data**

**Groundwater Monitoring Report
Building 815 Wash Rack Area
Former Naval Air Station Cecil Field
Jacksonville, Florida
Page 2 of 6**

Monitoring Well ID Sample Number Sample Date Well Depth, Feet	FDEP GCTL FAC 62-777	CEF-815-3S					
		CEF-815-GW-3S-01 7-Oct-99 13	CEF-815-3S-01 6-Nov-00 13	CEF-815-DUP1-01 6-Nov-00 13	CEF-815-3S-01A 11-Dec-00 13	CEF-815-3S-02 1-May-01 13	CEF-815-GW-3S-03 17-Dec-01 13
<u>Volatiles Organic Compounds (µg/L)</u>							
cis-1,2-dichloroethene	70	1 UJ	NS	NS	NS	NS	NS
trans-1,2-dichloroethene	100	1 UJ	NS	NS	NS	NS	NS
Trichloroethene	3	1 UJ	NS	NS	NS	NS	NS
Vinyl Chloride	1	1 UJ	NS	NS	NS	NS	NS
Xylenes - Total	20	3 UJ	NS	NS	NS	NS	NS
<u>Polynuclear Aromatic Hydrocarbons (µg/L)</u>							
1-Methylnaphthalene	20	1 UJ	2.2 U	2 U	2.2 U	NA	NA
2-Methylnaphthalene	20	1 UJ	2.2 U	2 U	2.2 U	NA	NA
Acenaphthene	20	1 UJ	4.4 U	4 U	4.4 U	NA	NA
Acenaphthylene	210	2 J	4.4 U	4 U	4.4 U	NA	NA
Fluorene	280	1 UJ	2.2 U	2 U	2.2 U	NA	NA
Naphthalene	20	12.5 J	22.9	21.9	25.6	25	28.1
Phenanthrene	210	1.3 J	2.2 U	2 U	2.2 U	NA	NA
<u>Total Recoverable Petroleum Hydrocarbons (mg/L)</u>							
TRPH (C8-C40)	5	3.82	4.57	2.9	NS	2.07	1.38

See notes at end of table.

**Table 3
Historical Analytical Data**

**Groundwater Monitoring Report
Building 815 Wash Rack Area
Former Naval Air Station Cecil Field
Jacksonville, Florida
Page 3 of 6**

Monitoring Well ID	FDEP GCTL FAC 62-777	CEF-815-4S		NG-02S
		CEF-815-GW-4S-02	CEF-815-GW-4S-03	CEF-815-GW-NG-02S-02
Sample Number				
Sample Date		18-Feb-00	11-May-00	21-Feb-00
Well Depth, Feet		14	14	14
<u>Volatile Organic Compounds (µg/L)</u>				
cis-1,2-dichloroethene	70	6.9	6.3	1 U
trans-1,2-dichloroethene	100	3	1.8	1 U
Trichloroethene	3	2.3	1.7	1 U
Vinyl Chloride	1	1.3	0.64 J	1 U
Xylenes - Total	20	3 U	3 U	3 U
<u>Polynuclear Aromatic Hydrocarbons (µg/L)</u>				
1-Methylnaphthalene	20	1 U	NS	2.2 U
2-Methylnaphthalene	20	1 U	NS	2.2 U
Acenaphthene	20	1 U	NS	2.2 U
Acenaphthylene	210	1 U	NS	2.2 U
Fluorene	280	1 U	NS	2.2 U
Naphthalene	20	1 U	NS	2.2 U
Phenanthrene	210	1 U	NS	2.2 U
<u>Total Recoverable Petroleum Hydrocarbons (mg/L)</u>				
TRPH (C8-C40)	5	0.396	NS	0.418

See notes at end of table.

**Table 3
Historical Analytical Data**

**Groundwater Monitoring Report
Building 815 Wash Rack Area
Former Naval Air Station Cecil Field
Jacksonville, Florida
Page 4 of 6**

Monitoring Well ID Sample Number Sample Date Well Depth, Feet	FDEP GCTL FAC 62-777	NG-12S				
		CEF-815-GW-FLSMW12-01 8-Oct-99 14	CEF-815-12S-01 6-Nov-00 14	CEF-815-12S-02 1-May-01 14	CEF-815-DUP1-02 1-May-01 14	CEF-NG-GW-12S-03 17-Dec-01 14
Volatile Organic Compounds (µg/L)						
cis-1,2-dichloroethene	70	1 U	NS	NS	NS	NS
trans-1,2-dichloroethene	100	1 U	NS	NS	NS	NS
Trichloroethene	3	1 U	NS	NS	NS	NS
Vinyl Chloride	1	1 U	NS	NS	NS	NS
Xylenes - Total	20	3 U	NS	NS	NS	NS
Polynuclear Aromatic Hydrocarbons (µg/L)						
1-Methylnaphthalene	20	1 U	2.2 U	NA	NA	NA
2-Methylnaphthalene	20	1 U	2.2 U	NA	NA	NA
Acenaphthene	20	1 U	4.4 U	NA	NA	NA
Acenaphthylene	210	3	4.4 U	NA	NA	NA
Fluorene	280	1 U	2.2 U	NA	NA	NA
Naphthalene	20	4.4	9.2	8.2	8.0	7.1
Phenanthrene	210	1 U	2.2 U	NA	NA	NA
Total Recoverable Petroleum Hydrocarbons (mg/L)						
TRPH (C8-C40)	5	12	4.2	3.12	3.35	2.18

See notes at end of table.

**Table 3
Historical Analytical Data**

**Groundwater Monitoring Report
Building 815 Wash Rack Area
Former Naval Air Station Cecil Field
Jacksonville, Florida
Page 5 of 6**

Monitoring Well ID	FDEP GCTL FAC 62-777	NG-12I	NG-13S	NG-14S		
Sample Number		CEF-815-GW-FLIMW12-01	CEF-815-GW-NG13S-02	CEF-815-GW-FLSMW14-01	CEF-815-GW-FLSMW14-01	CEF-NG-GW-14S-03
Sample Date		8-Oct-99	18-Feb-00	8-Oct-99	1-May-01	17-Dec-01
Well Depth, Feet		38	14	14	14	14
<u>Volatile Organic Compounds (µg/L)</u>						
cis-1,2-dichloroethene	70	1 U	1 U	1 U	NS	NS
trans-1,2-dichloroethene	100	1 U	1 U	1 U	NS	NS
Trichloroethene	3	1 U	1 U	1 U	NS	NS
Vinyl Chloride	1	1 U	1 U	1 U	NS	NS
Xylenes - Total	20	3 U	3 U	3 U	NS	NS
<u>Polynuclear Aromatic Hydrocarbons (µg/L)</u>						
1-Methylnaphthalene	20	1 U	1 U	NS	NA	NA
2-Methylnaphthalene	20	1 U	1 U	NS	NA	NA
Acenaphthene	20	1 U	1 U	NS	NA	NA
Acenaphthylene	210	1 U	1 U	NS	NA	NA
Fluorene	280	1 U	1 U	NS	NA	NA
Naphthalene	20	1 U	1 U	NS	8.2	<2.0
Phenanthrene	210	1 U	1 U	NS	NA	NA
<u>Total Recoverable Petroleum Hydrocarbons (mg/L)</u>						
TRPH (C8-C40)	5	0.5 U	0.41	NS	3.12	0.547

See notes at end of table.

**Table 3
Historical Analytical Data**

**Groundwater Monitoring Report
Building 815 Wash Rack Area
Former Naval Air Station Cecil Field
Jacksonville, Florida
Page 6 of 6**

Monitoring Well ID	FDEP GCTL FAC 62-777	NG-26S				
		CEF-815-GW-NG-26S-02	CEF-NG-26S-01	CEF-NG-26S-02	CEF-NG-26S-02A	CEF-NG-GW-26S-03
Sample Number						
Sample Date		21-Feb-00	6-Nov-00	1-May-01	22-May-01	17-Dec-01
Well Depth, Feet		14	14	14	14	14
Volatile Organic Compounds (µg/L)						
cis-1,2-dichloroethene	70	1 U	NS	NS	NS	NS
trans-1,2-dichloroethene	100	1 U	NS	NS	NS	NS
Trichloroethene	3	1 U	NS	NS	NS	NS
Vinyl Chloride	1	1 U	NS	NS	NS	NS
Xylenes - Total	20	3 U	NS	NS	NS	NS
Polynuclear Aromatic Hydrocarbons (µg/L)						
1-Methylnaphthalene	20	2.2 U	2.2 U	NA	NS	NA
2-Methylnaphthalene	20	2.2 U	2.2 U	NA	NS	NA
Acenaphthene	20	2.2 U	4.4 U	NA	NS	NA
Acenaphthylene	210	2.2 U	4.4 U	NA	NS	NA
Fluorene	280	2.2 U	2.2 U	NA	NS	NA
Naphthalene	20	10.9	4.9	7.6	NS	<2.0
Phenanthrene	210	2.2 U	2.2 U	NA	NS	NA
Total Recoverable Petroleum Hydrocarbons (mg/L)						
TRPH (C8-C40)	5	2.62	3.85	7.10	6.04	1.36

Notes:

GCTL - Groundwater Cleanup Target Level

Shaded values are greater than GCTL

ug/L - micrograms per liter

mg/L - milligrams per liter

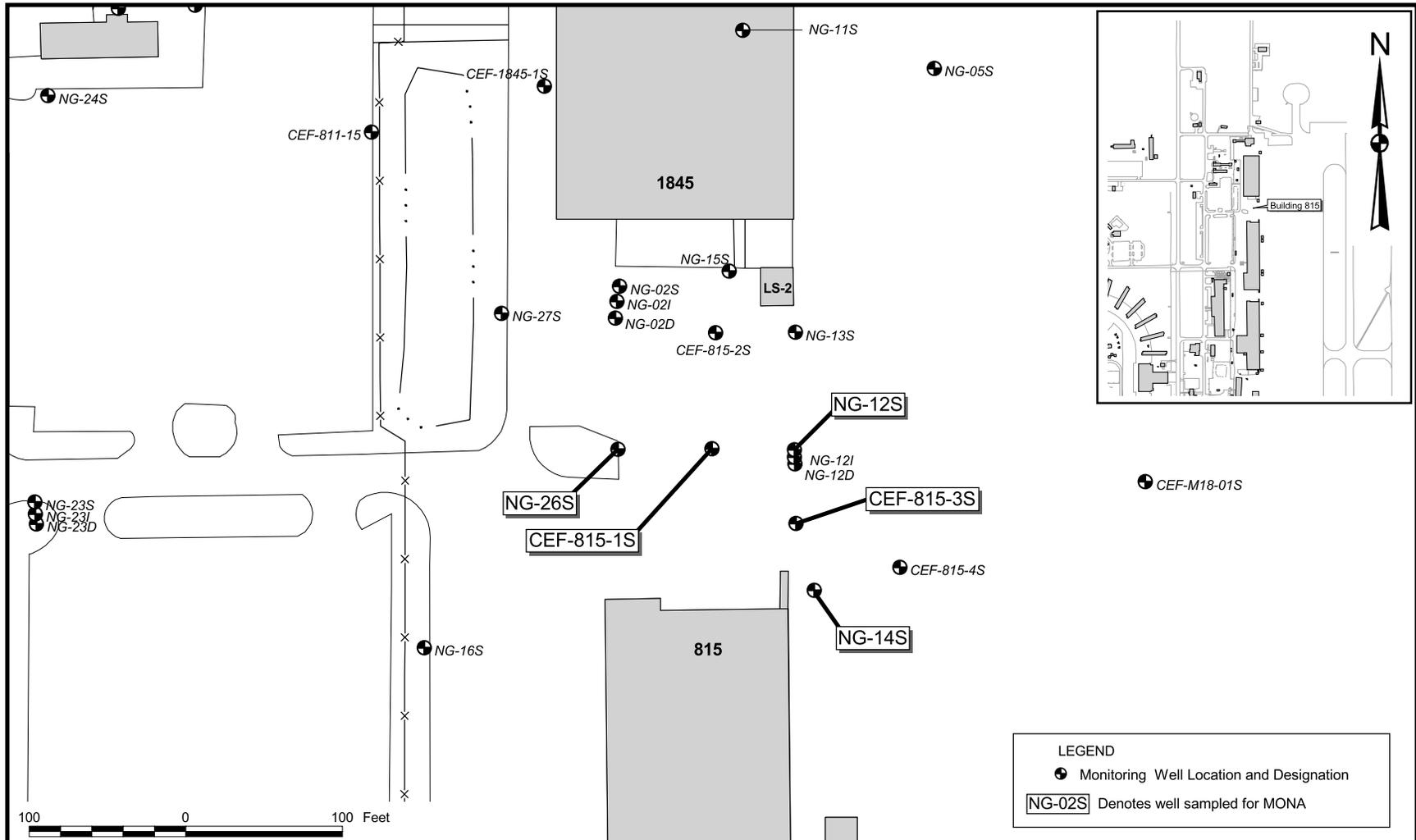
NA - not analyzed

NS - not sampled

U - undetected at reporting limit shown

J - laboratory estimated value

FIGURES



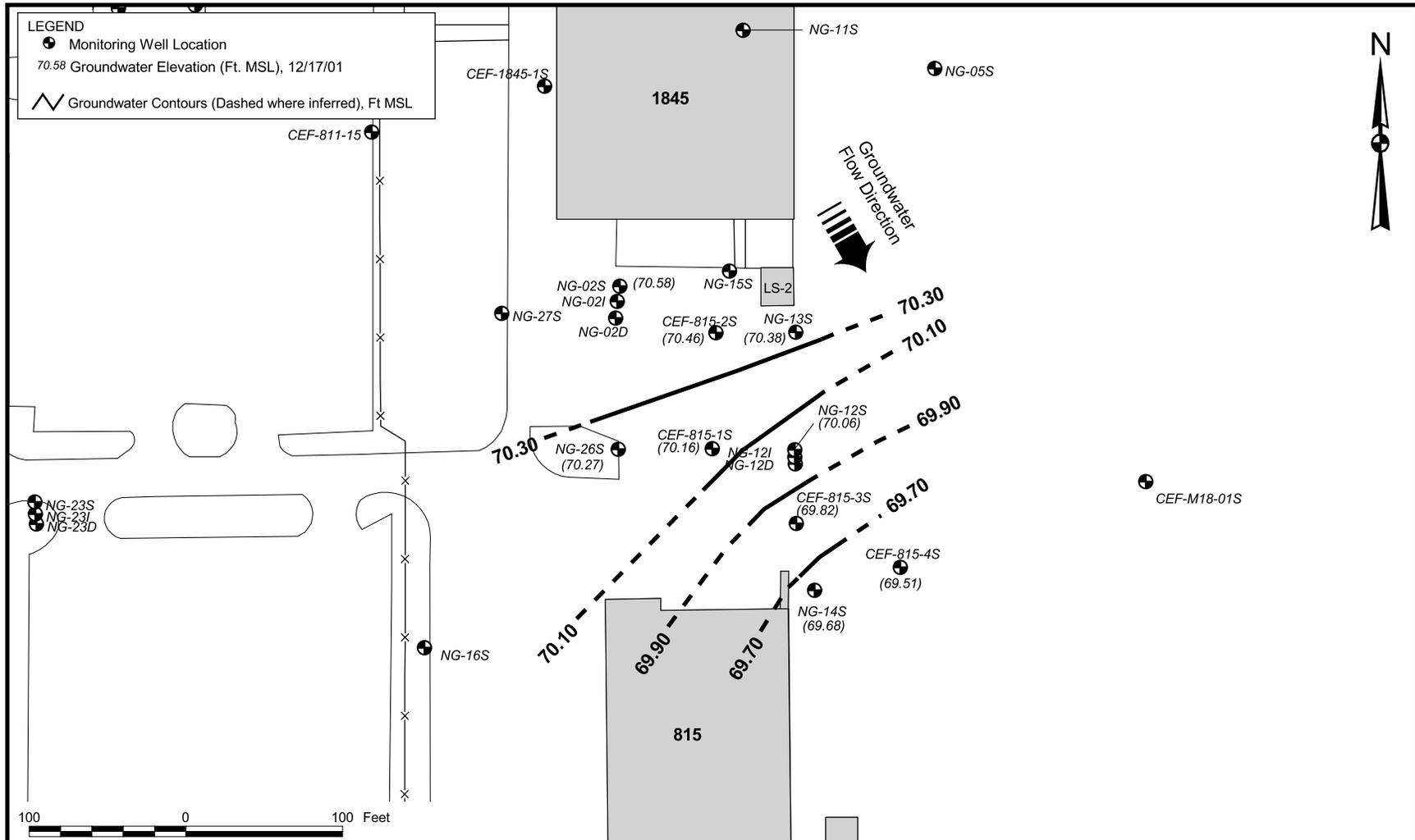
LEGEND
 ● Monitoring Well Location and Designation
 NG-02S Denotes well sampled for MONA

DRAWN BY	DATE
MJJ	20Dec99
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	



SITE PLAN
 BUILDING 815 WASH RACK AREA
 GROUNDWATER MONITORING REPORT
 NAVAL AIR STATION CECIL FIELD
 JACKSONVILLE, FLORIDA

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

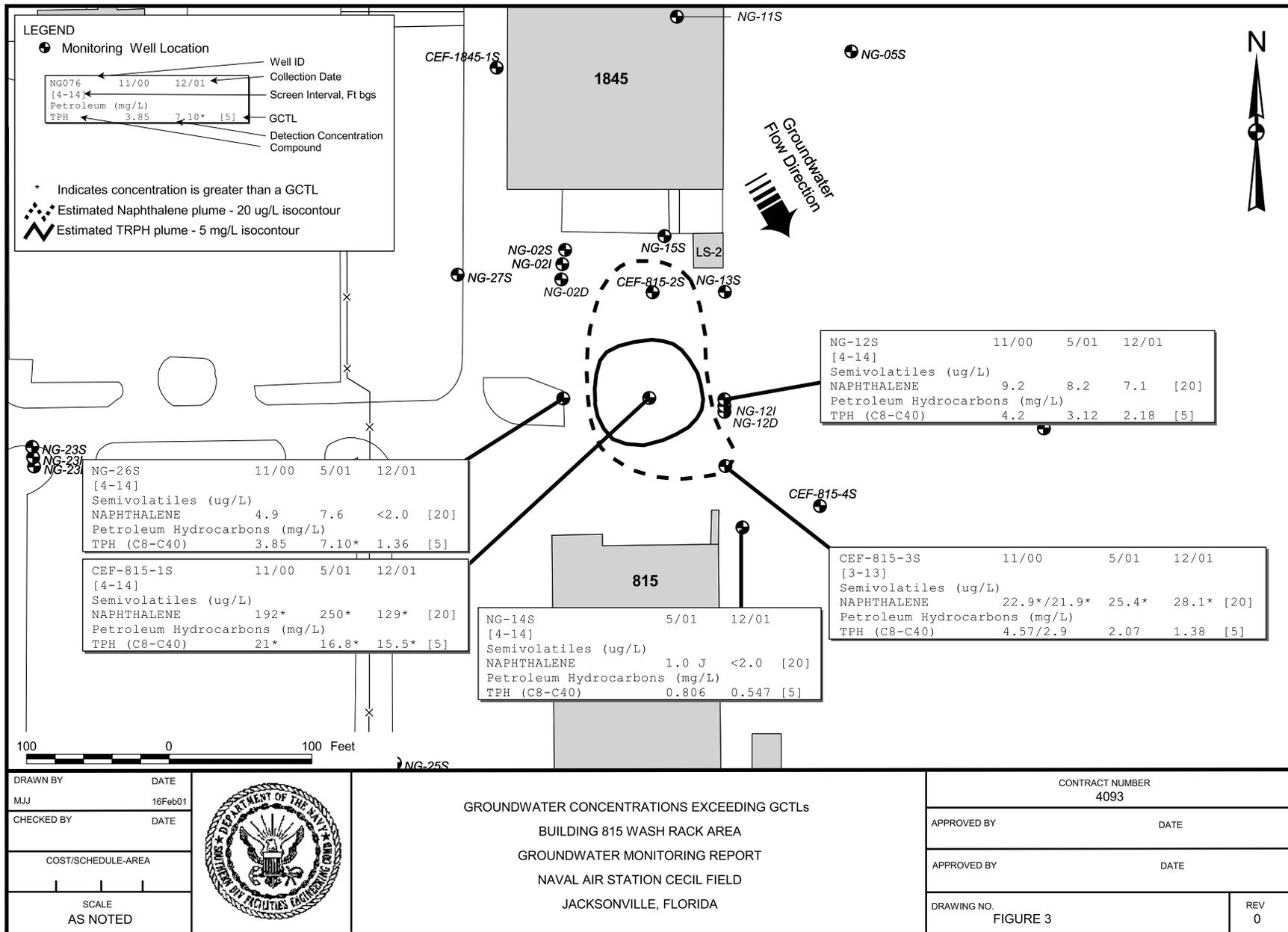


DRAWN BY	DATE
MJJ	16Feb01
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	



GROUNDWATER FLOW MAP
BUILDING 815 WASH RACK AREA
GROUNDWATER MONITORING REPORT
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

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



ATTACHMENT A
FDEP MONA APPROVAL ORDER



Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

August 31, 2000

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Commanding Officer
Mr. Nick Ugolini, Code 1843
SOUTHNAVFACENGCOM
Post Office Box 190010
North Charleston, SC 29419-9010

RE: Site Assessment Report and Monitoring Only Proposal for
Building 815 Wash Rack Area, Naval Air Station Cecil Field,
Florida.

Dear Mr. Ugolini:

I have reviewed the Site Assessment Report and Monitoring
Only Proposal for Natural Attenuation dated August 2000 (received
August 11, 2000), submitted for this site. Based upon my review
and comments, the enclosed Monitoring Only Plan for Natural
Attenuation was signed by Mr. Doug A. Jones, Chief, Bureau of
Waste Cleanup.

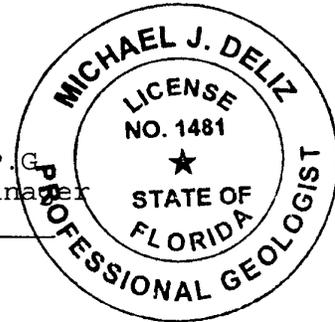
If I can be of any further assistance with this matter,
please contact me at (850) 921-9991.

Sincerely,

Michael J. Deliz

Michael J. Deliz, P.G.
Remedial Project Manager
31-446-00

Date



CC: Debbie Vaughn-Wright, USEPA
John Flowe, City of Jacksonville
Scott Glass, SOUTHNAVFACENGCOM
Mark Speranza, TtNUS Pittsburgh

TJB B JJC JE ESN ESN

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

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Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

August 31, 2000

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Commanding Officer
Mr. Nick Ugolini, Code 1843
SOUTHNAVFACENGCOM
Post Office Box 190010
North Charleston, South Carolina 29419-9010

Subject: Natural Attenuation Monitoring Plan Approval Order
Building 815 Wash Rack Area
Naval Air Station Cecil Field, Florida

Dear Mr. Ugolini:

The Bureau of Waste Cleanup has completed the review of the Site Assessment Report Addendum and Natural Attenuation Monitoring Plan dated August 2000 (received August 11, 2000) submitted for this site. Pursuant to Rule 62-770.690, Florida Administrative Code (F.A.C.), the Department of Environmental Protection approves the Natural Attenuation Monitoring Plan. Pursuant to Rule 62-770.690(7), F.A.C., you are required to complete the monitoring program outlined below. The first sampling event should be performed within 60 days of receipt of this Natural Attenuation Monitoring Plan Approval Order (Order). Water-level measurements should be made immediately prior to each sampling event. The analytical results (laboratory report), chain of custody, cumulative summary table of the analytical results, site map(s) illustrating the most recent analytical results, and the water-level elevation information (cumulative summary table and most recent flow interpretation map), should be submitted to the Department within 60 days of sample collection.

<u>Monitoring Wells</u>	<u>Contaminants of Concern</u>	<u>Frequency</u>	<u>Duration</u>
CEF-815-1S, CEF-815-3S, NG-12S, and NG 26S	Naphthalene and TRPH	Semi-annual	Five Years

If concentrations of chemicals 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

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

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Mr. Nick Ugolini
Page Two
August 31, 2000

initial positive results are known. If the results of the resampling confirm the initial sampling results, then a proposal must be submitted, as described in Rule 62-770.690(7)(f), F.A.C.

Contaminated wells:

CEF-815-1S and NG-12S: 200 µg/l Napthalene and 50 mg/ TRPH

Perimeter wells:

CEF-815-3S and NG 26S: 20 µg/l Napthalene and 50 mg/ TRPH

The approved Remedial Action by Natural Attenuation monitoring period is 5 years. "Milestone" objectives should be established if monitoring is projected to take greater than one year. The following are the "milestone" objectives that will be used for annual evaluation of remediation progress by natural attenuation. An explanation of the progress relative to these milestone objectives, and the need for corrective action (if applicable), should be provided in the annual evaluation:

<u>Napthalene</u>	<u>CEF-815-1S</u>	<u>NG-12S</u>
End of year 1	145 µg/l	145 µg/l
End of year 2	113 µg/l	113 µg/l
End of year 3	81 µg/l	81 µg/l
End of year 4	49 µg/l	49 µg/l
End of year 5	<20 µg/l	<20 µg/l

<u>TRPH</u>	<u>CEF-815-1S</u>	<u>NG-12S</u>
End of year 1	28 mg/l	28 mg/l
End of year 2	22 mg/l	22 mg/l
End of year 3	16 mg/l	16 mg/l
End of year 4	10 mg/l	10 mg/l
End of year 5	<5 mg/l	<5 mg/l

If the applicable No Further Action criteria in Rule 62-770.680, F.A.C., are met at the end of the monitoring period, a Site Rehabilitation Completion Report, summarizing the monitoring program and containing documentation supporting the opinion that the cleanup objectives have been achieved, should be submitted as required in Rule 62-770.690(8), F.A.C. If the applicable No Further Action criteria in Rule 62-770.680, F.A.C., are not met following five years of monitoring, then a report summarizing the monitoring program should be submitted, including a proposal as described in Rule 62-770.690(7)(g), F.A.C..

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Legal Issues

The Department's Order shall become final unless a timely petition for an administrative proceeding (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 a hearing are set forth below.

Persons affected by this Order have the following options:

If you choose to accept the above decision by the Department about the Site Assessment Report Addendum 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.

If you disagree with the decision, you may do one of the following:

1. File a petition for administrative hearing with the Department's Office of General Counsel within 21 days of receipt of this Order; or
2. File a request for an extension of time to file a petition for hearing with the Department's 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 hearing.

Please be advised that mediation of this decision pursuant to Section 120.573, Florida Statutes (F.S.), is not available.

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

For good cause shown, pursuant to Rule 62-110.106(4), F.A.C., the Department may grant a request for an extension of time to file a petition for hearing. Such a request must be filed (received) in the Department's 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 Commanding Officer, SOUTHNAVENGCOM, shall mail a copy of the request to Commanding Officer, SOUTHNAVENGCOM at the time of filing. Timely filing a request for an extension of time tolls the time period within which a petition for administrative hearing must be made.

How to File a Petition for 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) in the Department's Office of General Counsel at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000,

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within 21 days of receipt of this Order. Petitioner, if different from Commanding Officer, SOUTHNAVENGCOM, shall mail a copy of the petition to Commanding Officer, SOUTHNAVENGCOM 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 Section 120.54(5)(b)4.a., F.S. (1998, Supp.), and Rule 28-106.201, F.A.C., a petition for 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 site 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 how and when 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 material facts disputed by the petitioner, 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 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 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 clerk of the Department in the Office of General Counsel, 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 clerk of the Department (see below).

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Questions

Any questions regarding the Department's review of your Site Assessment Report Addendum and Natural Attenuation Monitoring Plan should be directed to Michael J. Deliz, P.G. at (850) 921-9991. Questions regarding legal issues should be referred to the Department's Office of General Counsel at (850) 488-9314. 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,



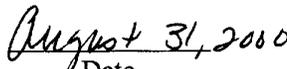
Douglas A. Jones, Chief
Bureau of Waste Cleanup
Division of Waste Management

DAJ/mjd

cc: Scott Glass, SOUTHNAVFACENGCOM
Mark Speranza, TtNUS, Pittsburgh

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


Date

ATTACHMENT B

BCT MEETING MINUTES NO. 1347

NASCF Partnering Team Meeting Attendance Record

16-Jan-01 BCT

<u>16-Jan-01</u>	BCT	Davidson	12:53
		Glass	12:53
		Grabka	12:53
		Ross	12:53
		Speranza	12:53
		Stephanie	12:55
		Vaughn-Wright	12:53
	BRE	Jonnet	12:55
		Miller	12:55
		Simcik	12:55

Minute No. 1347
17-Jan-01
Topic: Evaluation
Program TANKS
Site: Pet. Update
Presenter BRE
Logan
Actions/Decisions:

NFF

95% complete. 131,000 tons of contaminated soil have been sent off-site. 60,000 tons of clean soil have been placed back in the excavation.

A groundwater investigation will be conducted this summer using DPTs.

Day Tank 1 Soils

RAP set two step cleanup in 1997 prior to current regulations. TRPH at 380 mg/kg. If above that concentration then BTEX was evaluated.

RAP criteria met industrial standards of today but not leachability.

The three soil sample locations met RAP criteria but are above the current TRPH industrial criteria and leachability. These locations are at 5 to 7 feet bls.

Building 9 - system started on 1/9/01

Building 46 - system to start on 1/18/01

103rd Street Digs

Two sites will need excavation. Institutional controls will be reconsidered for five other sites.

Wesconnet Blvd - waiting for DOT Right of Way Permit to continue the investigation.

ATSDR is concerned about historical leaks mentioned in the work plan and that the pipe was repaired. However there is no known information on environmental work.

Navy is unaware of any other leaks.

Building 428 Well Replacement

Wells accidentally destroyed. Wells were re-installed the week of Jan. 15, 2001. First round of sampling is pending.

Tanks 860 A/B/D SAR addendum

Source removal left some contaminated soil in place. A MONA will be implemented in several weeks.

Building G82 SAR

Several feet of soil was left in place. Two SPLP soil samples exceeded groundwater criteria. Institutional control will maintain industrial use and maintain good condition of concrete slab.

Groundwater will have a MONA.

Building 815 Sampling - Napthalene was detected in downgradient well at concentration greater than GCTL. Therefore another POC well will be required. Existing Well 14S will be selected. Next semiannual sampling event will be in May.

ATTACHMENT C
GROUNDWATER ANALYTICAL REPORTS



Tetra Tech NUS, Inc.

Internal Correspondence

TO: Mr. Paul Calligan **DATE:** January 29, 2002
FROM: Michael T. Akers **CC:** File
SUBJECT: Organic Data Validation – PAHs and TPH
CTO209 – NAS Cecil Field
SDG F11821
SAMPLES: 6/Aqueous
CEF-815-DU01-GW-03 CEF-815-GW-1S-03 CEF-815-GW-3S-03
CEF-NG-GW-12S-03 CEF-NG-GW-14S-03 CEF-NG-GW-26S-03

OVERVIEW

The sample set for CTO209 SDG F11821; Naval Air Station Cecil Field, Jacksonville, Florida consists of Six (6) aqueous environmental samples. The environmental samples were analyzed for Polycyclic Aromatic Hydrocarbons (PAHs) and Total Petroleum Hydrocarbons (TPH). A set of duplicate samples was also received and analyzed: CEF-815-DU01-GW-03 and CEF-815-GW-1S-03

The samples were collected by Tetra Tech NUS on December 17, 2001 and analyzed by Accutest Laboratories. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW-846 Method 8310 (PAHs) and FL-PRO TPH analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

- * • Data Completeness
- * • Holding Times
- * • Laboratory method/field quality control blank results
- * • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter.

Polycyclic Aromatic Hydrocarbons Fraction

All quality control criteria were met for this fraction.

TPH Fraction

All quality control criteria were met for this fraction.

Field Duplicate Analysis

Analyte	CEF-815-DU01-GW-03(ug/L)	CEF-815-GW-1S-03(ug/L)	RPD
Naphthalene	93	129	32
TPH	16300	15500	5.0

No data was qualified based on field duplicate data.

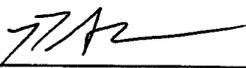
Executive Summary

Laboratory performance: No other factors affected data quality.

Other factors affecting data quality: No other factors affected data quality.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1996), and the NFESC guidelines "Navy Installation Restoration Chemical Data Quality Manual" (September, 1999). The text of the report has been formulated to address only those problems affecting data quality.

"I attest that the data referenced herein was validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."



Michael T. Akers

Project Chemist
Tetra Tech NUS, Inc.

CTO209-NAS CECIL FIELD

WATER DATA

Accutest, NJ

SDG: F11821

SAMPLE NUMBER:	CEF-815-DU01-GW-03	CEF-815-GW-1S-03	CEF-815-GW-3S-03	CEF-NG-GW-12S-03
SAMPLE DATE:	12/17/01	12/17/01	12/17/01	12/17/01
LABORATORY ID:	F11821-2	F11821-4	F11821-5	F11821-3
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	UG/L	UG/L	UG/L	UG/L
FIELD DUPLICATE OF:	CEF-815-GW-1S-03			

	RESULT	QUAL	CODE									
POLYNUCLEAR AROMATIC HYDROCARBONS												
NAPHTHALENE	93 *			129 *			28.1 *			7.1 *		

CTO209-NAS CECIL FIELD

WATER DATA

Accutest, NJ

SDG: F11821

SAMPLE NUMBER:	CEF-NG-GW-14S-03	CEF-NG-GW-26S-03		
SAMPLE DATE:	12/17/01	12/17/01	//	//
LABORATORY ID:	F11821-1	F11821-6		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.0 %	0.0 %	100.0 %	100.0 %
UNITS:	UG/L	UG/L		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
POLYNUCLEAR AROMATIC HYDROCARBONS												
NAPHTHALENE	2.	U		2.	U							

CTO209-NAS CECIL FIELD

WATER DATA

Accutest, NJ

SDG: F11821

SAMPLE NUMBER:	CEF-815-DU01-GW-03	CEF-815-GW-1S-03	CEF-815-GW-3S-03	CEF-NG-GW-12S-03
SAMPLE DATE:	12/17/01	12/17/01	12/17/01	12/17/01
LABORATORY ID:	F11821-2	F11821-4	F11821-5	F11821-3
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	0.0 %	0.0 %	0.0 %	0.0 %
UNITS:	MG/L	MG/L	MG/L	MG/L
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
TOTAL PETROLEUM HYDROCARBONS	16.3	.		15.5	.		1.38	.		2.18	.	

CTO209-NAS CECIL FIELD

WATER DATA

Accutest, NJ

SDG: F11821

SAMPLE NUMBER:	CEF-NG-GW-14S-03	CEF-NG-GW-26S-03		
SAMPLE DATE:	12/17/01	12/17/01	//	//
LABORATORY ID:	F11821-1	F11821-6		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	0.0 %	0.0 %	100.0 %	100.0 %
UNITS:	MG/L	MG/L		
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE									
TOTAL PETROLEUM HYDROCARBONS	0.547.			1.36 *								

F11821

HOLDING TIME

01/16/02

Units	Nsample	Lab Id	Qc Type	Sdg	Sort	Samp Date	Extr Date	Anal Date	SAMP_DATE TO EXTR_DATE	EXTR_DATE TO ANAL_DATE	SAMP_DATE TO ANAL_DATE
UG/L	CEF-815-DU01-GW-03	F11821-2	NORMAL	F11821	PAH	12/17/01	12/22/01	12/26/01	5 ✓	4 ✓	9
UG/L	CEF-815-GW-1S-03	F11821-4	NORMAL	F11821	PAH	12/17/01	12/22/01	12/26/01	5	4	9
UG/L	CEF-815-GW-3S-03	F11821-5	NORMAL	F11821	PAH	12/17/01	12/22/01	12/26/01	5	4	9
UG/L	CEF-NG-GW-12S-03	F11821-3	NORMAL	F11821	PAH	12/17/01	12/22/01	12/26/01	5	4	9
UG/L	CEF-NG-GW-14S-03	F11821-1	NORMAL	F11821	PAH	12/17/01	12/22/01	12/26/01	5	4	9
UG/L	CEF-NG-GW-26S-03	F11821-6	NORMAL	F11821	PAH	12/17/01	12/22/01	12/26/01	5	4	9
MG/L	CEF-815-DU01-GW-03	F11821-2	NORMAL	F11821	TPH	12/17/01	12/22/01	12/27/01	5 ✓	5 ✓	10
MG/L	CEF-815-GW-1S-03	F11821-4	NORMAL	F11821	TPH	12/17/01	12/22/01	12/27/01	5	5	10
MG/L	CEF-815-GW-3S-03	F11821-5	NORMAL	F11821	TPH	12/17/01	12/22/01	12/27/01	5	5	10
MG/L	CEF-NG-GW-12S-03	F11821-3	NORMAL	F11821	TPH	12/17/01	12/22/01	12/26/01	5	4 ✓	9
MG/L	CEF-NG-GW-14S-03	F11821-1	NORMAL	F11821	TPH	12/17/01	12/22/01	12/26/01	5	4	9
MG/L	CEF-NG-GW-26S-03	F11821-6	NORMAL	F11821	TPH	12/17/01	12/22/01	12/27/01	5	5	10

Report of Analysis

Client Sample ID: CEF-NG-GW-14S-03	Date Sampled: 12/17/01
Lab Sample ID: F11821-1	Date Received: 12/18/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: EPA 8310 SW846 3510C	
Project: NAS Cecil Field-N4093	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA009814.D	1	12/26/01	MRE	12/22/01	OP4432	GAA436
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
91-20-3	Naphthalene	ND	2.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	56%		33-141%	
92-94-4	p-Terphenyl	69%		31-122%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: CEF-NG-GW-14S-03	Date Sampled: 12/17/01
Lab Sample ID: F11821-1	Date Received: 12/18/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: FLORIDA-PRO SW846 3510C	
Project: NAS Cecil Field-N4093	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP19002.D	1	12/26/01	ME	12/22/01	OP4433	GOP708
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.547	0.28	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	96%		55-130%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

000009

Report of Analysis

Client Sample ID: CEF-815-DU01-GW-03	Date Sampled: 12/17/01
Lab Sample ID: F11821-2	Date Received: 12/18/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: EPA 8310 SW846 3510C	
Project: NAS Cecil Field-N4093	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA009830.D	4	12/26/01	MRE	12/22/01	OP4432	GAA436
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
91-20-3	Naphthalene	93.0	8.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		33-141%
92-94-4	p-Terphenyl	36%		31-122%

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

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: CEF-815-DU01-GW-03	
Lab Sample ID: F11821-2	Date Sampled: 12/17/01
Matrix: AQ - Ground Water	Date Received: 12/18/01
Method: FLORIDA-PRO SW846 3510C	Percent Solids: n/a
Project: NAS Cecil Field-N4093	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP19013.D	20	12/27/01	ME	12/22/01	OP4433	GOP709
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	16.3	5.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	86%		55-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

000011

Report of Analysis

Client Sample ID: CEF-NG-GW-12S-03	
Lab Sample ID: F11821-3	Date Sampled: 12/17/01
Matrix: AQ - Ground Water	Date Received: 12/18/01
Method: EPA 8310 SW846 3510C	Percent Solids: n/a
Project: NAS Cecil Field-N4093	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA009829.D	1	12/26/01	MRE	12/22/01	OP4432	GAA436
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
91-20-3	Naphthalene	7.1	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	68%		33-141%
92-94-4	p-Terphenyl	63%		31-122%

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

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: CEF-NG-GW-12S-03	
Lab Sample ID: F11821-3	Date Sampled: 12/17/01
Matrix: AQ - Ground Water	Date Received: 12/18/01
Method: FLORIDA-PRO SW846 3510C	Percent Solids: n/a
Project: NAS Cecil Field-N4093	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP19004.D	1	12/26/01	ME	12/22/01	OP4433	GOP708
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	2.18	0.28	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		55-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

000013

Report of Analysis

Client Sample ID: CEF-815-GW-1S-03	Date Sampled: 12/17/01
Lab Sample ID: F11821-4	Date Received: 12/18/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: EPA 8310 SW846 3510C	
Project: NAS Cecil Field-N4093	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA009831.D	5	12/26/01	MRE	12/22/01	OP4432	GAA436
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
91-20-3	Naphthalene	129	10	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	95%		33-141%	
92-94-4	p-Terphenyl	42%		31-122%	

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

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value.
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: CEF-815-GW-1S-03	
Lab Sample ID: F11821-4	Date Sampled: 12/17/01
Matrix: AQ - Ground Water	Date Received: 12/18/01
Method: FLORIDA-PRO SW846 3510C	Percent Solids: n/a
Project: NAS Cecil Field-N4093	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP19014.D	20	12/27/01	ME	12/22/01	OP4433	GOP709
Run #2							

CAS No.	Compound	Result	RL	Units	Q
---------	----------	--------	----	-------	---

	TPH (C8-C40)	15.5	5.5	mg/l	
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CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
---------	----------------------	--------	--------	--------

84-15-1	o-Terphenyl	86%		55-130%
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ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

000015

Report of Analysis

Client Sample ID: CEF-815-GW-3S-03	Date Sampled: 12/17/01
Lab Sample ID: F11821-5	Date Received: 12/18/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: EPA 8310 SW846 3510C	
Project: NAS Cecil Field-N4093	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA009832.D	2	12/26/01	MRE	12/22/01	OP4432	GAA436
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
91-20-3	Naphthalene	28.1	2.4	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	78%		33-141 %	
92-94-4	p-Terphenyl	66%		31-122 %	

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

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

000016

Report of Analysis

Client Sample ID: CEF-815-GW-3S-03	
Lab Sample ID: F11821-5	Date Sampled: 12/17/01
Matrix: AQ - Ground Water	Date Received: 12/18/01
Method: FLORIDA-PRO SW846 3510C	Percent Solids: n/a
Project: NAS Cecil Field-N4093	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP19006.D	1	12/27/01	ME	12/22/01	OP4433	GOP708
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	1.38	0.28	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	91%		55-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

000017

Report of Analysis

Client Sample ID: CEF-NG-GW-26S-03	Date Sampled: 12/17/01
Lab Sample ID: F11821-6	Date Received: 12/18/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: EPA 8310 SW846 3510C	
Project: NAS Cecil Field-N4093	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA009820.D	1	12/26/01	MRE	12/22/01	OP4432	GAA436
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
91-20-3	Naphthalene	ND	2.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	86%		33-141%	
92-94-4	p-Terphenyl	73%		31-122%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: CEF-NG-GW-26S-03	Date Sampled: 12/17/01
Lab Sample ID: F11821-6	Date Received: 12/18/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: FLORIDA-PRO SW846 3510C	
Project: NAS Cecil Field-N4093	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP19007.D	1	12/27/01	ME	12/22/01	OP4433	GOP708
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	1.36	0.28	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	97%		55-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

000010



PROJECT NO: <u>NW093</u>	SITE NAME: <u>B. 815</u>	PROJECT MANAGER AND PHONE NUMBER <u>Paul Calligan 850-544-2348</u>	LABORATORY NAME AND CONTACT: <u>Accutest h. W. Williams</u>
SAMPLERS (SIGNATURE) 		FIELD OPERATIONS LEADER AND PHONE NUMBER <u>M. Dale 904-281-0400</u>	ADDRESS <u>4405 VINE LAND BLVD SUITE C-15</u>
		CARRIER/WAYBILL NUMBER <u>FED EX 831160727998</u>	CITY, STATE <u>Orlando, FL 32811</u>

STANDARD TAT <input checked="" type="checkbox"/>	CONTAINER TYPE PLASTIC (P) or GLASS (G)
RUSH TAT <input type="checkbox"/>	PRESERVATIVE USED
<input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 72 hr. <input type="checkbox"/> 7 day <input type="checkbox"/> 14 day	<u>None H2SO4</u>

DATE YEAR	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (G)	No. OF CONTAINERS	TYPE OF ANALYSIS		COMMENTS
						<u>8310</u>	<u>TRP H - FL-PRO</u>	
<u>12/17</u>	<u>0000</u>	<u>CE-815-DU01-GW-03</u>	<u>GW</u>	<u>G</u>	<u>5</u>	<u>2</u>	<u>2</u>	<u>cool to 4°C</u>
<u>12/17</u>	<u>1051</u>	<u>CE-NG-GW-125-03</u>	<u>GW</u>	<u>G</u>	<u>5</u>	<u>2</u>	<u>2</u>	<u>work Release</u>
<u>12/17</u>	<u>0919</u>	<u>CE-815-GW-15-03</u>	<u>GW</u>	<u>G</u>	<u>5</u>	<u>2</u>	<u>2</u>	<u>CALL M. DALE</u>
								<u>work Release</u>
								<u>209CT-1</u>

1. RELINQUISHED BY 	DATE <u>12/17/01</u>	TIME <u>1700</u>	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS



PROJECT NO: N4093	SITE NAME: B. 815	PROJECT MANAGER AND PHONE NUMBER Paul Calligan 850-544-2348	LABORATORY NAME AND CONTACT: Accutest L.W. Williams
SAMPLERS (SIGNATURE) 		FIELD OPERATIONS LEADER AND PHONE NUMBER Mary Dale 904-281-0400	ADDRESS 4405 V. Ireland BLVD STE C-5
		CARRIERWAYBILL NUMBER FED EX 8311 6072 8078	CITY, STATE ORLANDO, FL 32811

STANDARD TAT RUSH TAT
 24 hr. 48 hr. 72 hr. 7 day 14 day

CONTAINER TYPE
PLASTIC (P) or GLASS (G)

PRESERVATIVE USED

DATE YEAR	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS		COMMENTS
12/17	0930	LEF-NG-MD01-GW-03	GW	G	1	2	2	COOL TO 4°C
12/17	0930	LEF-NG-GW-145-03	GN	G	1	2	2	Work Release CALL M. DALE
								Work Release 209CF-1

1. RELINQUISHED BY 	DATE 12/17/01	TIME 1700	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS



PROJECT NO: N 4093		SITE NAME: B. 815		PROJECT MANAGER AND PHONE NUMBER Paul Calligan 850-544-2349				LABORATORY NAME AND CONTACT: Accutest - h. Williams				
SAMPLERS (SIGNATURE) 		FIELD OPERATIONS LEADER AND PHONE NUMBER Merv Dale 904-281-0400				ADDRESS 4405 Vineland Blvd STE C-15						
		CARRIER/WAYBILL NUMBER FED Ex 831160728001				CITY, STATE Orlando FL 32811						
STANDARD TAT <input checked="" type="checkbox"/> RUSH TAT <input type="checkbox"/>		CONTAINER TYPE PLASTIC (P) or GLASS (G)		PRESERVATIVE USED		TYPE OF ANALYSIS 8310 Naphthalene TRPH FLRO		G G None H2SO4				
<input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 72 hr. <input type="checkbox"/> 7 day <input type="checkbox"/> 14 day												
DATE YEAR	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS					COMMENTS		
12/17	1100	CEF-815-GW-35-03	GW	G	4	2	2					cool to 4°C
12/17	1315	CEF-NG-GW-265-03	GW	G	4	2	2					Work Release CALL M. DALE
												Work Release 209 CF-1
1. RELINQUISHED BY			DATE	TIME	1. RECEIVED BY			DATE	TIME			
2. RELINQUISHED BY			DATE	TIME	2. RECEIVED BY			DATE	TIME			
3. RELINQUISHED BY			DATE	TIME	3. RECEIVED BY			DATE	TIME			
COMMENTS												

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