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NAS CECIL FIELD, FL  
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SECOND SEMI-ANNUAL FIRST YEAR GROUNDWATER MONITORING REPORT FOR  
BUILDING 815 WASH RACK AREA NAS CECIL FIELD FL  
7/23/2001  
TETRA TECH NUS INC

**2<sup>nd</sup> Semi-Annual  
1<sup>st</sup> Year (May, 2001)  
Groundwater Monitoring Report  
for  
Building 815 Wash Rack Area**

**Naval Air Station Cecil Field**  
Jacksonville, Florida



**Southern Division  
Naval Facilities Engineering Command  
Contract Number N62467-94-D-0888  
Contract Task Order 0108**

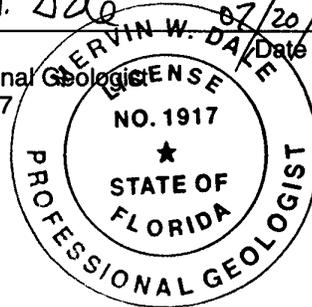
July 2001



### CERTIFICATION OF TECHNICAL DATA CONFORMITY

The Groundwater Monitoring Report was prepared using sound hydrogeologic principles and judgment. This report 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 conclusions and recommendations described in this report. This report was developed for Building 815 Wash Rack Area, at the former NAS Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.

*Mervin W. Dale*  
Mervin W. Dale  
Florida Professional Geologist  
P.G. No. 0001917





**TETRA TECH NUS, INC.**

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Document Tracking Number 01JAX0099

July 23, 2001

Project Number N0394

Commander, Southern Division  
Naval Facilities Engineering Command  
ATTN: Mr. Nick Ugolini (Mail Code 1843)  
2155 Eagle Drive  
North Charleston, South Carolina 29406

Reference: Clean Contract No. N62467-94-D-0888  
Contract Task Order No. 0108

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

Dear Mr. Ugolini:

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 source well.

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

**FIELD OPERATIONS**

Figure 1 shows the location of the site. On May 1, 2001, water level measurements were obtained from nine monitoring wells prior to sample collection. The depth to water ranged from 5.92 to 6.85 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 May 1, 2001 from the five monitoring wells in the modified MOP program. Those wells included CEF-815-1S (source), CEF-815-3S (source), NG-12S (source), NG-14S (perimeter), and NG-26S (perimeter).

The analytical results from the May 1, 2001 sampling event indicated that MOP action levels were exceeded in the samples from monitoring wells CEF-815-1S and NG-26S. In accordance with the MOP

order, TtNUS personnel re-sampled those two wells on May 22, 2001 for the applicable compounds of concern (COCs) that exceeded action levels.

Following collection efforts on both occasions, the groundwater samples were shipped on ice and under chain of custody to Accutest Laboratories in Orlando, Florida, for analysis. The samples for the first event 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). During the second sampling event, groundwater from well CEF-815 was analyzed for naphthalene only and groundwater from well NG-26S was analyzed for TRPH only.

## RESULTS

Figure 2 illustrates the groundwater elevations as measured on May 1, 2001. The groundwater contours on that figure indicate flow 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 each of the five-groundwater samples. Of the three contaminated wells, only the sample from CEF-815-1S exceeded the action level [200 micrograms per liter ( $\mu\text{g/L}$ )]. The re-sampling confirmed the original sample concentration of 250  $\mu\text{g/L}$ . The naphthalene concentration reported for well CEF-815-3S (25.4  $\mu\text{g/L}$ ) exceeded the Groundwater Cleanup Target Level (GCTL) of 20  $\mu\text{g/L}$ . The naphthalene concentration for the sample from source well NG-12S (8.2  $\mu\text{g/L}$ ) is below the GCTL. Likewise, the naphthalene concentrations for the samples from the perimeter wells (NG-14S and NG-26S) were reported below the GCTL.

TRPH was detected in the five monitoring wells, and the GCTL [5 milligrams per liter ( $\text{mg/L}$ )] was exceeded in the samples from contaminated well CEF-815-1S and perimeter well NG-26S. The concentration reported for the sample from CEF-815-1S (16.8  $\text{mg/L}$ ) was below the action level of 50  $\text{mg/L}$  and the first year milestone objective set for that monitoring well of 28  $\text{mg/L}$ . The reported concentrations for the other source well and perimeter wells were below the GCTL (Table 2).

## CONCLUSIONS AND RECOMMENDATIONS

Groundwater flow, which was reported to be southeasterly in the last report, was observed during this event to be flowing in approximately the same direction.

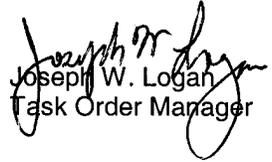
Figure 3 depicts naphthalene and TRPH concentrations that were detected in the groundwater samples. The contours for those plumes are based on their respective GCTLs. Table 2 indicates that the action level for naphthalene was exceeded in monitoring well CEF-815-1S.

When compared to the Site Assessment Report (TtNUS, 2000) Figure 3-1 (Attachment D), the TRPH plume appears to have decreased in size and shifted to the southwest. Previously, the plume extended eastward beyond monitoring well NG-12S, but it is now delineated by that well. The plume also appears to have shifted to the west past the perimeter monitoring well NG-26S. This sidegradient movement may be due to seasonal drought conditions. The naphthalene plume appears to be static since the last monitoring event in November 2000. Since there is limited historical analytical data for the site (Table 3) and it appears the COCs are delineated downgradient by the well NG-14S, TtNUS recommends continued monitoring.

Mr. Nick Ugolini  
SOUTHNAVFACENGCOM  
July 23, 2001 - Page 3

The next semi-annual sampling event is scheduled for November 2001. If you have any questions with regard to this submittal, or if we can be of assistance in any way, please contact Joe Logan at (412) 921-7231.

Sincerely,

  
Joseph W. Logan  
Task Order Manager

  
Debbie Wroblewski  
Program Manager

JL/er

Attachments (10)

cc: D. Vaughn-Wright, USEPA  
D. Wroblewski, TtNUS (cover letter only)  
M. Perry, TtNUS (unbound)  
Project File

Mr. Nick Ugolini  
SOUTHNAVFACENCOM  
July 23, 2001 – Page 4

bcc: M. Dale, TtNUS  
P. Calligan, TtNUS  
J. Logan, TtNUS  
R. Simcik, TtNUS (Bookcase File)  
J. Johnson, TtNUS (Information Repository)

## 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	
			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
CEF-815-2S	14.00	75.60	4.93	70.67	5.92	69.68
CEF-815-3S	12.90	75.64	5.70	69.94	6.53	69.11
CEF-815-4S	14.00	75.75	6.11	69.64	6.85	68.90
NG-02S	14.00	76.39	NM	NM	6.79	69.60
NG-12S	13.40	75.69	5.46	70.23	6.39	69.30
NG-13S	14.00	76.04	5.44	70.60	6.46	69.58
NG-14S	14.00	75.71	NM	NM	6.69	69.02
NG-26S	14.25	75.84	5.36	70.48	6.26	69.58

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	NADSC <sup>1</sup> /GCTL <sup>2</sup>
	CEF-815-1S	CEF-815-1S	NG-12S	CEF-815-3S	NG-14S	NG-26S	NG-26S			
Date Sampled	5/1/2001	5/22/2001	5/1/2001	5/1/2001	5/1/2001	5/1/2001	5/22/2001			
<b>Polynuclear Aromatic Hydrocarbons (µg/L)</b>										
Naphthalene	<b>250</b>	<b>248</b>	8.2	<b>25.4</b>	1.0J	7.6	NS	200/20	145	200/20
<b>Total Recoverable Petroleum Hydrocarbons (mg/L)</b>										
TRPH	<b>16.8</b>	NS	3.12	2.07	0.806	<b>7.10</b>	<b>6.04</b>	50/5	28	50/5

Notes:

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

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

<sup>2</sup>GCTL=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-2S-01 8-Oct-99 15
<b>Volatile Organic Compounds (µg/L)</b>						
cis-1,2-dichloroethene	70	1 U	NS	NS	NS	1 U
trans-1,2-dichloroethene	100	1 U	NS	NS	NS	1 U
Trichloroethene	3	1 U	NS	NS	NS	1 U
Vinyl Chloride	1	1 U	NS	NS	NS	1 U
Xylenes - Total	20	0.94 J	NS	NS	NS	3 U
<b>Polynuclear Aromatic Hydrocarbons (µg/L)</b>						
1-Methylnaphthalene	20	12	14.8	NA	NA	1.4
2-Methylnaphthalene	20	17	18	NA	NA	1.8
Acenaphthene	20	13	4.4 U	NA	NA	3.2
Acenaphthylene	210	3.8	4.4 U	NA	NA	1.1
Fluorene	280	4.9	2.2 U	NA	NA	1.1
Naphthalene	20	<b>177</b>	<b>192</b>	<b>250</b>	<b>248</b>	<b>55</b>
Phenanthrene	210	15.2	2.2 U	NA	NA	4.1
<b>Total Recoverable Petroleum Hydrocarbons (mg/L)</b>						
TRPH (C8-C40)	5	<b>34</b>	<b>21</b>	<b>16.8</b>	NS	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
<b><u>Volatile Organic Compounds (µg/L)</u></b>						
cis-1,2-dichloroethene	70	1 UJ	NS	NS	NS	NS
trans-1,2-dichloroethene	100	1 UJ	NS	NS	NS	NS
Trichloroethene	3	1 UJ	NS	NS	NS	NS
Vinyl Chloride	1	1 UJ	NS	NS	NS	NS
Xylenes - Total	20	3 UJ	NS	NS	NS	NS
<b><u>Polynuclear Aromatic Hydrocarbons (µg/L)</u></b>						
1-Methylnaphthalene	20	1 UJ	2.2 U	2 U	2.2 U	NA
2-Methylnaphthalene	20	1 UJ	2.2 U	2 U	2.2 U	NA
Acenaphthene	20	1 UJ	4.4 U	4 U	4.4 U	NA
Acenaphthylene	210	2 J	4.4 U	4 U	4.4 U	NA
Fluorene	280	1 UJ	2.2 U	2 U	2.2 U	NA
Naphthalene	20	12.5 J	<b>22.9</b>	<b>21.9</b>	<b>25.6</b>	<b>25</b>
Phenanthrene	210	1.3 J	2.2 U	2 U	2.2 U	NA
<b><u>Total Recoverable Petroleum Hydrocarbons (mg/L)</u></b>						
TRPH (C8-C40)	5	3.82	4.57	2.9	NS	2.07
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 Sample Number Sample Date Well Depth, Feet	FDEP GCTL  FAC 62-777	CEF-815-4S		NG-02S
		CEF-815-GW-4S-02 18-Feb-00 14	CEF-815-GW-4S-03 11-May-00 14	CEF-815-GW-NG-02S-02 21-Feb-00 14
<b><u>Volatile Organic Compounds (µg/L)</u></b>				
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
<b><u>Polynuclear Aromatic Hydrocarbons (µg/L)</u></b>				
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
<b><u>Total Recoverable Petroleum Hydrocarbons (mg/L)</u></b>				
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
<b><u>Volatile Organic Compounds (µg/L)</u></b>					
cis-1,2-dichloroethene	70	1 U	NS	NS	NS
trans-1,2-dichloroethene	100	1 U	NS	NS	NS
Trichloroethene	3	1 U	NS	NS	NS
Vinyl Chloride	1	1 U	NS	NS	NS
Xylenes - Total	20	3 U	NS	NS	NS
<b><u>Polynuclear Aromatic Hydrocarbons (µg/L)</u></b>					
1-Methylnaphthalene	20	1 U	2.2 U	NA	NA
2-Methylnaphthalene	20	1 U	2.2 U	NA	NA
Acenaphthene	20	1 U	4.4 U	NA	NA
Acenaphthylene	210	3	4.4 U	NA	NA
Fluorene	280	1 U	2.2 U	NA	NA
Naphthalene	20	4.4	9.2	8.2	8.0
Phenanthrene	210	1 U	2.2 U	NA	NA
<b><u>Total Recoverable Petroleum Hydrocarbons (mg/L)</u></b>					
TRPH (C8-C40)	5	12	4.2	3.12	3.35
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	NG-12I	NG-13S	NG-14S	
Sample Number	GCTL	CEF-815-GW-FLIMW12-01	CEF-815-GW-NG13S-02	CEF-815-GW-FLSMW14-01	CEF-815-GW-FLSMW14-01
Sample Date		8-Oct-99	18-Feb-00	8-Oct-99	1-May-01
Well Depth, Feet	FAC 62-777	38	14	14	14
<b><u>Volatile Organic Compounds (µg/L)</u></b>					
cis-1,2-dichloroethene	70	1 U	1 U	1 U	NS
trans-1,2-dichloroethene	100	1 U	1 U	1 U	NS
Trichloroethene	3	1 U	1 U	1 U	NS
Vinyl Chloride	1	1 U	1 U	1 U	NS
Xylenes - Total	20	3 U	3 U	3 U	NS
<b><u>Polynuclear Aromatic Hydrocarbons (µg/L)</u></b>					
1-Methylnaphthalene	20	1 U	1 U	NS	NA
2-Methylnaphthalene	20	1 U	1 U	NS	NA
Acenaphthene	20	1 U	1 U	NS	NA
Acenaphthylene	210	1 U	1 U	NS	NA
Fluorene	280	1 U	1 U	NS	NA
Naphthalene	20	1 U	1 U	NS	8.2
Phenanthrene	210	1 U	1 U	NS	NA
<b><u>Total Recoverable Petroleum Hydrocarbons (mg/L)</u></b>					
TRPH (C8-C40)	5	0.5 U	0.41	NS	3.12

See notes at end of table.

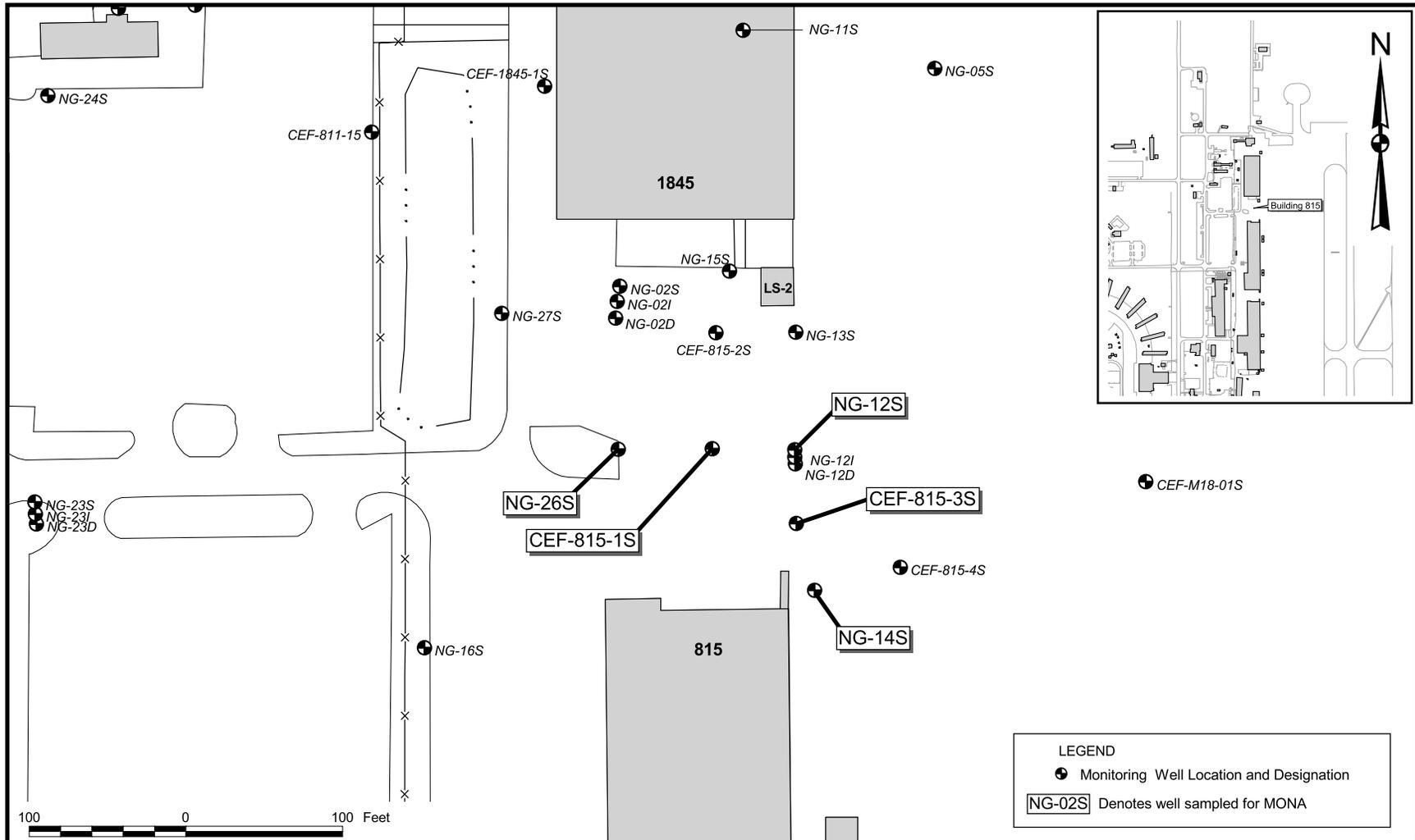
**Table 3**  
**Historical Analytical Data**

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

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

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



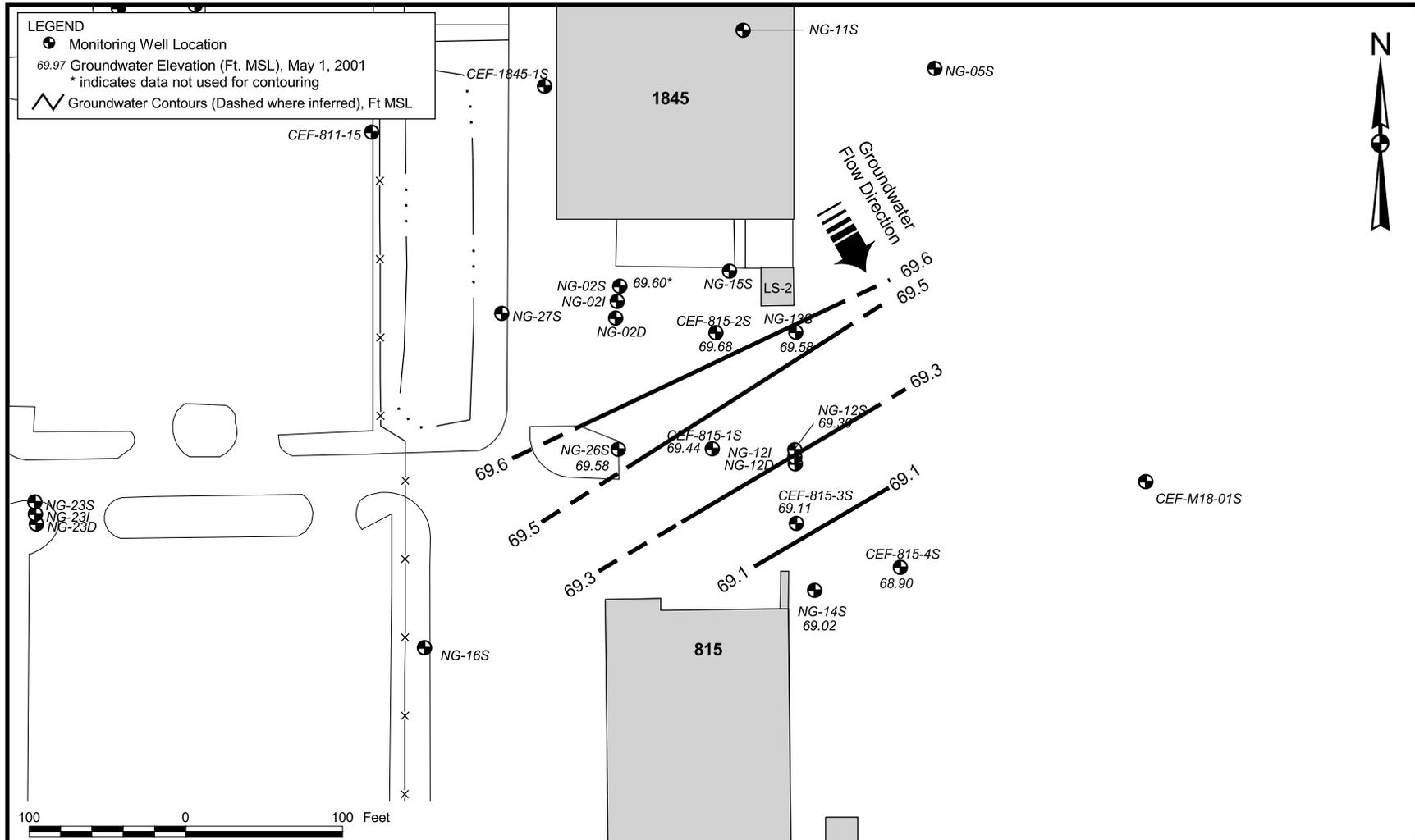
**LEGEND**  
 ● Monitoring Well Location and Designation  
 [NG-02S] Denotes well sampled for MONA

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 0394	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE 1	REV 0

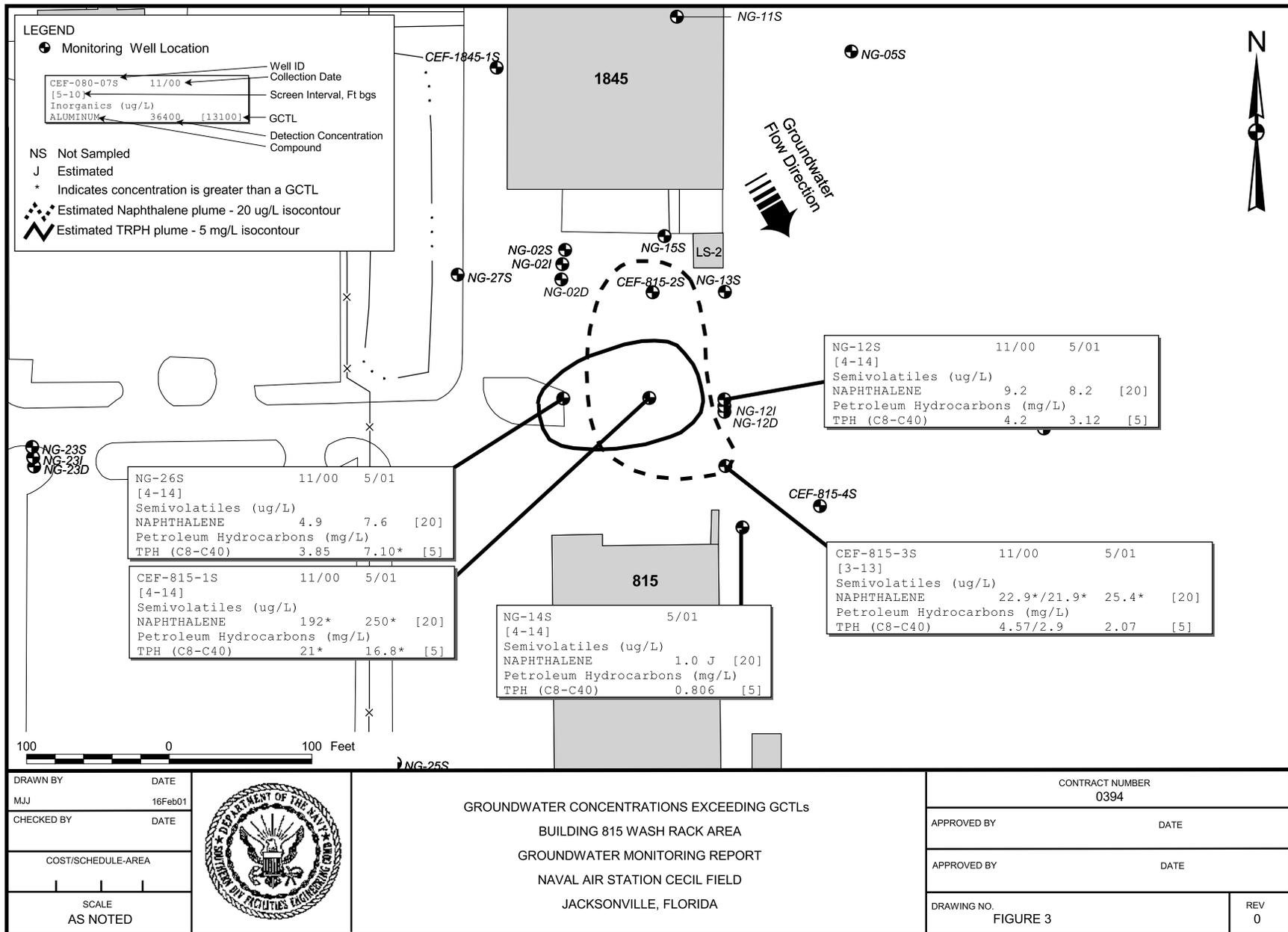


DRAWN BY	DATE
MJJ	16Feb01
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE	
AS NOTED	



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

CONTRACT NUMBER 0394	
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.

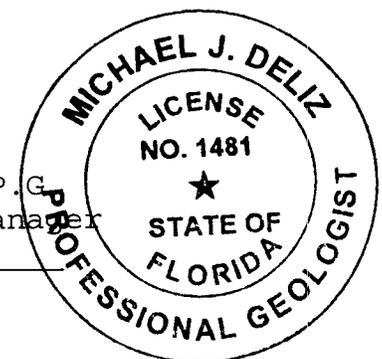
If I can be of any further assistance with this matter,  
please contact me at (850) 921-9991.

Sincerely,



Michael J. Deliz, 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 TB JJC JJC ESN ESN

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



# 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

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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..

### 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,

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).

Mr. Nick Ugolini  
Page Five  
August 31, 2000

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,



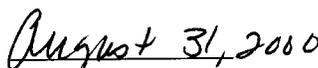
Douglas A. Jones, Chief  
Bureau of Waste Cleanup  
Division of Waste Management

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

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<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

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**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**

## Sample Summary

Tetra Tech, NUS

Job No: F9581

Cecil Field-Bldg 815/NG  
Project No: CF-23

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F9581-1	05/01/01	14:45 MD	05/02/01	AQ	Ground Water	CEF-815-1S-02
F9581-2	05/01/01	13:15 MD	05/02/01	AQ	Ground Water	CEF-815-3S-02
F9581-3	05/01/01	16:05 MD	05/02/01	AQ	Ground Water	CEF-815-26S-02
F9581-4	05/01/01	15:01 MD	05/02/01	AQ	Ground Water	CEF-NF-12S-02
F9581-5	05/01/01	00:00 MD	05/02/01	AQ	Ground Water	CEF-815-DUP1-02
F9581-6	05/01/01	13:00 MD	05/02/01	AQ	Ground Water	CEF-NG-14S-02

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## Report of Analysis

<b>Client Sample ID:</b> CEF-815-1S-02 <b>Lab Sample ID:</b> F9581-1 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> EPA 8310 SW846 3510C <b>Project:</b> Cecil Field-Bldg 815/NG	<b>Date Sampled:</b> 05/01/01 <b>Date Received:</b> 05/02/01 <b>Percent Solids:</b> n/a
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	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007302.D	10	05/08/01	MRE	05/03/01	OP3080	GAA296
Run #2							

**Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	Units Q
91-20-3	Naphthalene	250	20	ug/l

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	136%		33-141%
92-94-4	p-Terphenyl	64%		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

<b>Client Sample ID:</b> CEF-815-1S-02 <b>Lab Sample ID:</b> F9581-1 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> FLORIDA-PRO SW846 3510C <b>Project:</b> Cecil Field-Bldg 815/NG	<b>Date Sampled:</b> 05/01/01 <b>Date Received:</b> 05/02/01 <b>Percent Solids:</b> n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF01785.D	20	05/09/01	SKW	05/07/01	OP3096	GZF84
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	16.8	5.0	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	65%		55-130%	

ND = Not detected

RL = Reporting Limit

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J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> CEF-815-3S-02 <b>Lab Sample ID:</b> F9581-2 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> EPA 8310 SW846 3510C <b>Project:</b> Cecil Field-Bldg 815/NG	<b>Date Sampled:</b> 05/01/01 <b>Date Received:</b> 05/02/01 <b>Percent Solids:</b> n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007333.D	1	05/09/01	MRE	05/03/01	OP3080	GAA297
Run #2							

**Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	Units Q
91-20-3	Naphthalene	25.4	2.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		33-141%
92-94-4	p-Terphenyl	39%		31-122%

ND = Not detected  
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J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> CEF-815-3S-02 <b>Lab Sample ID:</b> F9581-2 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> FLORIDA-PRO SW846 3510C <b>Project:</b> Cecil Field-Bldg 815/NG	<b>Date Sampled:</b> 05/01/01 <b>Date Received:</b> 05/02/01 <b>Percent Solids:</b> n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15024.D	1	05/10/01	NJ	05/09/01	OP3117	GOP583
Run #2	ZF01795.D	2	05/09/01	SKW	05/07/01	OP3096	GZF84

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40) <sup>a</sup>	2.07 <sup>b</sup>	0.50	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	22% <sup>c</sup>	30%	55-130%

- (a) Surrogates outside of control limits, all values should be considered estimated.  
 (b) Result is from Run# 2  
 (c) Confirmed by re-extraction and reanalysis.

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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

## Report of Analysis

<b>Client Sample ID:</b> CEF-815-26S-02 <b>Lab Sample ID:</b> F9581-3 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> EPA 8310 SW846 3510C <b>Project:</b> Cecil Field-Bldg 815/NG	<b>Date Sampled:</b> 05/01/01 <b>Date Received:</b> 05/02/01 <b>Percent Solids:</b> n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007336.D	1	05/09/01	MRE	05/03/01	OP3080	GAA297
Run #2							

**Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	Units	Q
91-20-3	Naphthalene	7.6	2.2	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	122%		33-141%	
92-94-4	p-Terphenyl	71%		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

<b>Client Sample ID:</b> CEF-815-26S-02 <b>Lab Sample ID:</b> F9581-3 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> FLORIDA-PRO SW846 3510C <b>Project:</b> Cecil Field-Bldg 815/NG	<b>Date Sampled:</b> 05/01/01 <b>Date Received:</b> 05/02/01 <b>Percent Solids:</b> n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF01796.D	10	05/09/01	SKW	05/07/01	OP3096	GZF84
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	7.10	2.5	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	85%		55-130%	

**ND = Not detected**  
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**J = Indicates an estimated value**  
**B = Indicates analyte found in associated method blank**  
**N = Indicates presumptive evidence of a compound**

## Report of Analysis

<b>Client Sample ID:</b> CEF-NF-12S-02 <b>Lab Sample ID:</b> F9581-4 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> EPA 8310 SW846 3510C <b>Project:</b> Cecil Field-Bldg 815/NG	<b>Date Sampled:</b> 05/01/01 <b>Date Received:</b> 05/02/01 <b>Percent Solids:</b> n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007342.D	1	05/10/01	MRE	05/07/01	OP3097	GAA298
Run #2							

**Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	Units	Q
91-20-3	Naphthalene	8.2	2.0	ug/l	
<b>CAS No.</b>	<b>Surrogate Recoveries</b>	<b>Run# 1</b>	<b>Run# 2</b>	<b>Limits</b>	
84-15-1	o-Terphenyl	97%		33-141%	
92-94-4	p-Terphenyl	67%		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

<b>Client Sample ID:</b> CEF-NF-12S-02 <b>Lab Sample ID:</b> F9581-4 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> FLORIDA-PRO SW846 3510C <b>Project:</b> Cecil Field-Bldg 815/NG	<b>Date Sampled:</b> 05/01/01 <b>Date Received:</b> 05/02/01 <b>Percent Solids:</b> n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF01799.D	4	05/09/01	SKW	05/07/01	OP3096	GZF84
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	3.12	1.0	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	77%		55-130%	

**ND = Not detected**  
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**B = Indicates analyte found in associated method blank**  
**N = Indicates presumptive evidence of a compound**

## Report of Analysis

<b>Client Sample ID:</b> CEF-815-DUP1-02 <b>Lab Sample ID:</b> F9581-5 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> EPA 8310 SW846 3510C <b>Project:</b> Cecil Field-Bldg 815/NG	<b>Date Sampled:</b> 05/01/01 <b>Date Received:</b> 05/02/01 <b>Percent Solids:</b> n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007343.D	1	05/10/01	MRE	05/07/01	OP3097	GAA298
Run #2							

**Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	Units	Q
91-20-3	Naphthalene	8.0	2.2	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	94%		33-141%	
92-94-4	p-Terphenyl	63%		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

<b>Client Sample ID:</b> CEF-815-DUP1-02 <b>Lab Sample ID:</b> F9581-5 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> FLORIDA-PRO SW846 3510C <b>Project:</b> Cecil Field-Bldg 815/NG	<b>Date Sampled:</b> 05/01/01 <b>Date Received:</b> 05/02/01 <b>Percent Solids:</b> n/a
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Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	ZF01800.D	4	05/09/01	SKW	05/07/01	OP3096	GZF84

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	3.35	1.0	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	78%		55-130%	

**ND = Not detected**  
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**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

<b>Client Sample ID:</b> CEF-NG-14S-02 <b>Lab Sample ID:</b> F9581-6 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> EPA 8310 SW846 3510C <b>Project:</b> Cecil Field-Bldg 815/NG	<b>Date Sampled:</b> 05/01/01 <b>Date Received:</b> 05/02/01 <b>Percent Solids:</b> n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007384.D	1	05/11/01	MRE	05/07/01	OP3097	GAA299
Run #2							

**Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	Units	Q
91-20-3	Naphthalene	1.0	2.0	ug/l	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	91%		33-141%	
92-94-4	p-Terphenyl	68%		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-14S-02		
Lab Sample ID: F9581-6	Date Sampled: 05/01/01	
Matrix: AQ - Ground Water	Date Received: 05/02/01	
Method: FLORIDA-PRO SW846 3510C	Percent Solids: n/a	
Project: Cecil Field-Bldg 815/NG		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZF01792.D	1	05/09/01	SKW	05/07/01	OP3096	GZF84
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.806	0.25	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	87%		55-130%	

ND = Not detected  
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 N = Indicates presumptive evidence of a compound

## Sample Summary

Tetra Tech, NUS

Job No: F9763

Cecil Field-Bldg 815/NG  
Project No: Bldg 815 CF-19

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
F9763-1	05/22/01	12:15 RM	05/23/01	AQ	Ground Water	CEF-NG-GW-26S-02A
F9763-2	05/22/01	13:10 RM	05/23/01	AQ	Ground Water	CEF-815-GW-1S-02A

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## Report of Analysis

<b>Client Sample ID:</b> CEF-NG-GW-26S-02A	<b>Date Sampled:</b> 05/22/01
<b>Lab Sample ID:</b> F9763-1	<b>Date Received:</b> 05/23/01
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> FLORIDA-PRO SW846 3510C	
<b>Project:</b> Cecil Field-Bldg 815/NG	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15317.D	5	05/31/01	SKW	05/25/01	OP3203	GOP593
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	6.04	1.2	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	88%		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

## Report of Analysis

<b>Client Sample ID:</b> CEF-815-GW-1S-02A	<b>Date Sampled:</b> 05/22/01
<b>Lab Sample ID:</b> F9763-2	<b>Date Received:</b> 05/23/01
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> EPA 8310 SW846 3510C	
<b>Project:</b> Cecil Field-Bldg 815/NG	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE003441.D	10	06/01/01	MRE	05/25/01	OP3202	GEE162
Run #2							

### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
91-20-3	Naphthalene	248	20	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	104%		33-141%	
92-94-4	p-Terphenyl	71%		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



TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER

815-050101A1

PAGE 1 OF 3

CRILL FIELD

PROJECT NO: N0394		SITE NAME: BLDG-815		PROJECT MANAGER AND PHONE NUMBER: JOK LOGAN 412 721 7231			LABORATORY NAME AND CONTACT: ACCUTEST H. Behjadi		
SAMPLERS (SIGNATURE): <i>[Signature]</i>				FIELD OPERATIONS LEADER AND PHONE NUMBER: MARVIN DALE 904 281 1941 x.14			ADDRESS: 4405 VINELAND RD. C-15		
				CARRIER/WAYBILL NUMBER: FedEx 824925584857			CITY, STATE: ORLANDO, FL 32811		
STANDARD TAT <input checked="" type="checkbox"/> 28 DAYS				CONTAINER TYPE: PLASTIC (P) or GLASS (G)			PRESERVATIVE USED: NONE H <sub>2</sub> SO <sub>4</sub>		
RUSH TAT <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				TYPE OF ANALYSIS: NARITHALENE SN 846 8310 TRPH FL-PRO					
DATE YEAR	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS				COMMENTS
		<del>CEF-815-15-02</del> mo							Cool to 4°C
05/01	1300	CEF-NG-149-02	GW	G	12	G	G		
		<del>CEF-815-35-02</del> mo							WORK Release CF-23
									CEF-NG-149-02
									MCMED TWO EXTRA SETS
1. RELINQUISHED BY: <i>[Signature]</i>			DATE: 05/01/01	TIME: 1730	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: 0394 FHD OSA 220									

DISTRIBUTION:

WHITE (ACCOMPANIES SAMPLE)

YELLOW (FIELD COPY)

PINK (FILE COPY)

3/99

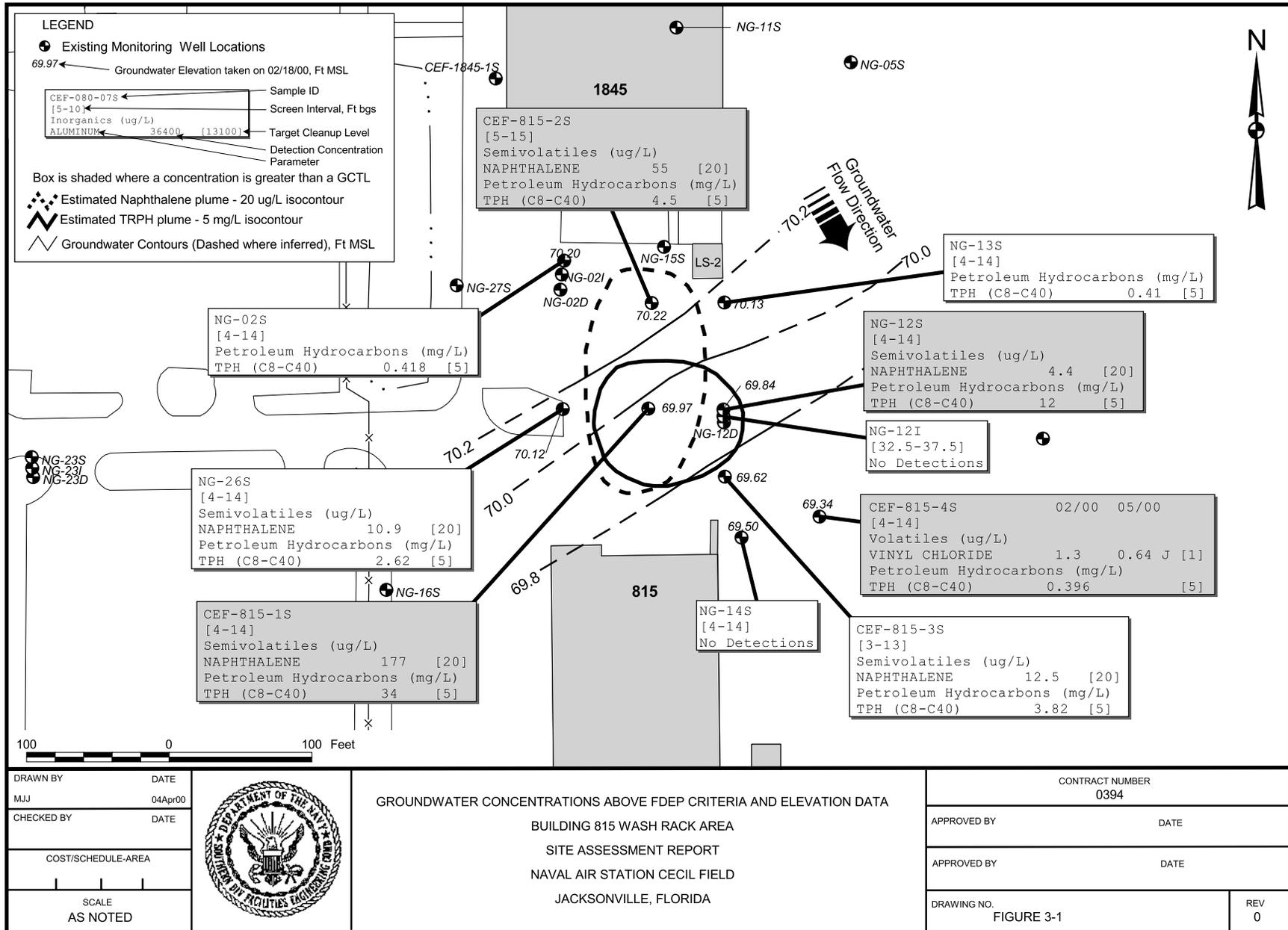
FORM NO. TINUS-001





**ATTACHMENT D**

**SAR, FIGURE 3-1**



DRAWN BY	DATE
MJJ	04Apr00
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE	
AS NOTED	



**GROUNDWATER CONCENTRATIONS ABOVE FDEP CRITERIA AND ELEVATION DATA**  
 BUILDING 815 WASH RACK AREA  
 SITE ASSESSMENT REPORT  
 NAVAL AIR STATION CECIL FIELD  
 JACKSONVILLE, FLORIDA

CONTRACT NUMBER	
0394	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	REV
FIGURE 3-1	0