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SITE ASSESSMENT REPORT ADDENDUM FOR JET ENGINE TEST CELL AND OIL-WATER
SEPARATOR 334-OWN NAS CECIL FIELD FL
10/4/2001
TETRA TECH NUS INC

**Site Assessment Report Addendum
for
Jet Engine Test Cell and Oil-Water
Separator 334-OW**

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



**Southern Division
Naval Facilities Engineering Command
Contract Number N62467-94-D-0888
Contract Task Order 0168**

October 2001

Revision 0
10/04/01

**SITE ASSESSMENT REPORT ADDENDUM
FOR
JET ENGINE TEST CELL AND OIL-WATER SEPARATOR 334-OW**

**NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA**

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406**

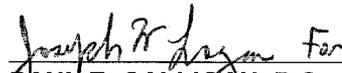
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**CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0168**

OCTOBER 2001

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CERTIFICATION OF TECHNICAL
DATA CONFORMITY

The Contractor, Tetra Tech NUS, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-94-D-0888 are complete and accurate and comply with all requirements of this contract.

DATE: October 4, 2001

NAME AND TITLE OF CERTIFYING OFFICIAL:

Paul E. Calligan, P.G.
Task Order Manager

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ACRONYMS

µg/L	micrograms per liter
BDCM	bromodichloromethane
bgs	below ground surface
BTOC	below top of casing
CAR	Contamination Assessment Report
CH2MHill	CH2MHill Constructors, Inc.
CSR	Confirmatory Sampling Report
CTO	Contract Task Order
DPT	Direct Push Technology
DRO	diesel range organics
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	flame ionization detector
FL-PRO	Florida Petroleum Range Organics
GCTL	Groundwater Cleanup Target Level
HLA	Harding Lawson Associates
JETC	Jet Engine Test Cell
mg/L	milligram per liter
msl	mean sea level
MTBE	methyl tert-butyl ether
NAS	Naval Air Station
OVA	organic vapor analyzer
OWS	Oil-Water Separator
PAH	polycyclic aromatic hydrocarbon
PVC	polyvinyl chloride
RAC	Remedial Action Contractor
RAP	Remedial Action Plan
SA	Site Assessment
SAR	Site Assessment Report
SARA	Site Assessment Report Addendum
SOUTHNAVFACENGCOM	Southern Division, Naval Facilities Engineering Command
SRR	Source Removal Report
TRPH	total recoverable petroleum hydrocarbons
TtNUS	Tetra Tech NUS, Inc.
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

Tetra Tech NUS, Inc. (TtNUS) was authorized by Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) to conduct additional site assessment (SA) activities at the Jet Engine Test Cell (JETC) and Oil-Water Separator (OWS) 334-OW on Naval Air Station (NAS) Cecil Field in Jacksonville, Florida. The additional SA was performed in accordance with Florida Administrative Code (FAC) 62-770. Because additional groundwater contamination was identified at the site during soil removal activities and quarterly groundwater monitoring activities, an additional assessment of the site was required by the Florida Department of Environmental Protection (FDEP). This Site Assessment Report Addendum (SARA) describes the groundwater investigations, conclusions, and recommendations. In accordance with the planning documents for Contract Task Order (CTO 168), FAC Chapter 62-770 is the applicable guidance for this report.

The following description provides a brief summary of the status of the JETC and OWS 334-OW. More detailed information can be found in the documents listed in the Reference section of this report.

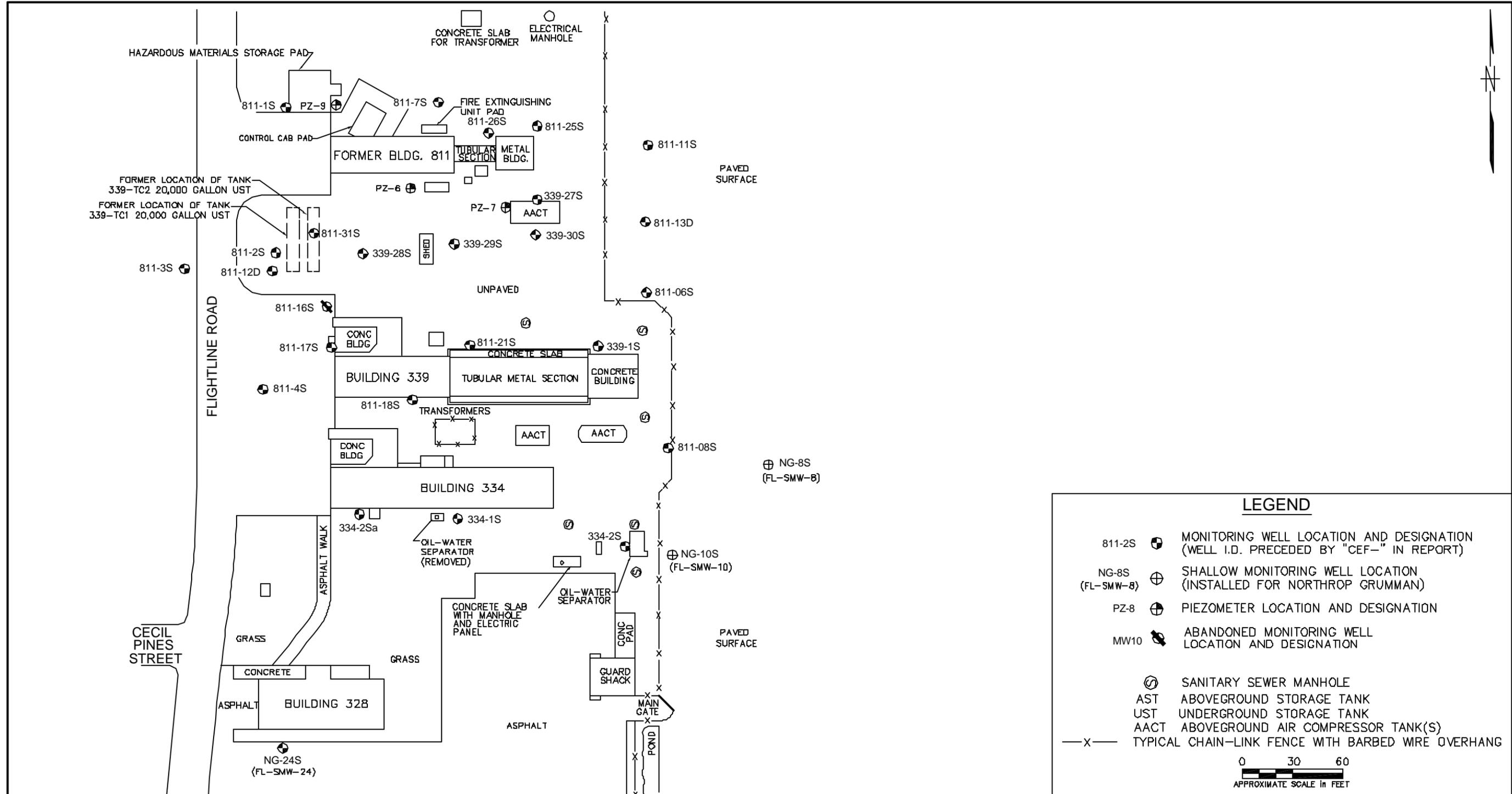
1.1 SITE DESCRIPTION

The JETC facility was used to test jet engines. Figure 1-1 shows the site plan. Jet engines were mounted and operated in three buildings (Buildings 334, 339, and 811). Building 811 was demolished several years ago and only its foundation remains. Each building had a smaller control building associated with it. During the tests, a jet engine was mounted in a test building, connected to a fuel system, and activated. Two 20,000-gallon underground storage tanks (USTs) provided fuel for the tests. OWS 334-OW was located on the southern side of Building 334. The site is generally unpaved.

There have been several investigations on the grounds of the facility. These investigations identified groundwater contamination by benzene, toluene, ethylbenzene, xylenes, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, and total recoverable petroleum hydrocarbons (TRPH). The following documents describe the investigations in the area.

- Confirmatory Sampling Report (CSR) for OWS 334-OW, November 1997 (ABB-ES, 1997).
- FDEP letter dated May 13, 1998 requiring a Site Assessment Report (SAR) at 334-OW.
- CSR for OWS 339-OW, February 1999 (HLA, 1999a).
- Monitoring Only Proposal for Natural Attenuation for JETC, April 5, 1999 (HLA, 1999b).
- SAR for OWS 334-OW, Rev. 0, April 1999 (HLA, 1999c).
- SAR for OWS 334-OW, Rev. 1, September 1999 (HLA, 1999d).

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LEGEND

- 811-2S MONITORING WELL LOCATION AND DESIGNATION (WELL I.D. PRECEDED BY "CEF-" IN REPORT)
- NG-8S (FL-SMW-8) SHALLOW MONITORING WELL LOCATION (INSTALLED FOR NORTHROP GRUMMAN)
- PZ-8 PIEZOMETER LOCATION AND DESIGNATION
- MW10 ABANDONED MONITORING WELL LOCATION AND DESIGNATION
- SANITARY SEWER MANHOLE
- AST ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- AACT ABOVEGROUND AIR COMPRESSOR TANK(S)
- X- TYPICAL CHAIN-LINK FENCE WITH BARBED WIRE OVERHANG

0 30 60
APPROXIMATE SCALE IN FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY LLK 8/28/01	DATE

COST/SCHED-AREA

SCALE

AS NOTED

PRE-SARA SITE PLAN
SITE ASSESSMENT REPORT ADDENDUM
JETC AND OWS 334-OW
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NO.
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- Quarterly Monitoring Reports for the JETC dated January 3, 2000 (HLA, 2000a), March 27, 2000 (HLA, 2000b), June 5, 2000 (HLA, 2000c), September 1, 2000 (TtNUS, 2000a), and December 20, 2000 (TtNUS, 2000b).
- FDEP letter dated August 29, 2000 requiring additional site assessment at JETC and 334-OW.
- Source Removal Report (SRR) for OWS 334-OW, October 2000 (CH2MHill, 2000)
- FDEP letter dated December 21, 2000 with comments on the OWS 334-OW SRR.
- FDEP letter dated December 28, 2000 requiring a SARA at JETC.

The SRR for the removal of the USTs has not yet been submitted.

1.2 SUMMARY OF RECENT ACTIVITIES

The most significant and recent activities at the JETC include several quarterly groundwater monitoring events, soil excavation south of Building 811, the excavation and removal of the USTs, and the excavation of OWS 334-OW.

A quarterly groundwater monitoring plan for monitoring natural attenuation was approved by FDEP on May 10, 1999 following the completion of a Contamination Assessment Report (CAR). Contamination to the groundwater was identified as being limited to shallow depths. Sampling was started in July 1999 and was continued until October 2000. Sampling was discontinued temporarily so that the UST contaminated soil excavation could be completed and because further delineation of the extent of groundwater contamination was needed. The groundwater monitoring program was changed over the course of time, at the direction of the FDEP, because of changes observed in the groundwater quality and groundwater flow direction. Appendix A summarizes the historic results for the JETC wells. In summary, the following trends in groundwater quality were observed:

- Contaminant concentrations increased at one source well, but decreased at a second source well.
- Contaminant concentrations at most of the downgradient wells decreased or remained about the same.
- Contamination at well 811-8S varied between undetected or concentrations above FDEP groundwater cleanup target levels (GCTLs).
- There appeared to be three separate plumes, one located north of Building 339, one located south of building 334, and one located in the vicinity of 811-8S.

In 1998, an excavation was performed along the southern side of Building 811. In 1999, the two 20,000 gallon USTs were excavated. Contaminated soil was excavated, but all of the contaminated soil could not be removed at that time. The balance of the contaminated soil was removed in 2001. This excavation extended up to a buried water line running along the northern side of the control building north of Building 339. Figure 1-2 shows the extents of these excavations.

In September 1999, OWS 334-OW and contaminated soil in its vicinity was excavated and disposed of off-site. Figure 1-2 shows the extent of the excavation. About 320 tons of contaminated soil were excavated along the southern side of Building 334. This activity was described in an SRR dated October 2000 and also described groundwater contamination near the western end of Building 334. This remedial activity is not complete, as described further in Section 1.3.

Based on the above information, the FDEP determined that additional investigation was required to complete the assessment at the JETC. This included investigation and delineation of the contaminated groundwater to the south of the OWS 334-OW and groundwater contamination in the vicinity of well 811-8S. The FDEP decided to consider the JETC, OWS 334-OW, and the area around well 811-8S as separate sites. However, due to the close proximity of the sites and the similar contaminants found at the sites, the FDEP agreed that the three plumes could be investigated and reported as the JETC site.

1.3 SOIL REMOVAL ACTION AT OWS 334-OW

The FDEP provided several comments about the SRR for OWS 334-OW (CH2MHill, 2000) in their letter of December 21, 2000 pertaining to the soil excavation that was performed in September 1999. The figure in the SRR shows the excavation starting roughly at the midpoint along Building 334 at the location of 334-OW and extending west to the western end of the building. The limits of excavation were determined by flame ionization detector (FID) measurements and confirmatory samples, and the building itself. This excavation outline was compared to the soil delineation in the September 1999 SAR Rev. 1 (HLA, 1999d).

In the September 1999 SAR Rev. 1 (HLA, 1999d), the extent of contaminated soil was delineated by FID and laboratory analyses. This delineation showed the contaminated soil starting roughly at the midpoint along Building 334 at the location of 334-OW and extending east to the eastern end of the building. Figure 1-2 shows the outline of the excavation and the outline of the extent of contamination in general agreement with the September 1999 SAR Rev. 1 (HLA, 1999d).

The excavation was performed by first removing the OWS, then making FID measurements of the soil from the walls of the excavation. Where the FID measurements were greater than 50 part per million

(ppm), the soil was excavated and additional soil headspace measurements were made. When the OWS was removed, no high FID readings were detected on the eastern side of the excavation, so the excavation was not advanced in that direction. Confirmatory samples were collected at the edges of the excavation. Further, at the time of the excavation, there was no excavation plan, and the only information that the Remedial Action Contractor (RAC) had was the CSR (ABB-ES, 1997).

Based on the data presented in the SRR (CH2MHill, 2000), the contaminated soil that had been delineated in the September 1999 SAR Rev. 1 (HLA, 1999d) has not been completely removed.

2.0 DESCRIPTION OF FIELD ACTIVITIES

Figure 2-1 shows the site plan, the locations of existing monitoring wells, and the areas that were the focus of the supplemental investigation prior to the initiation of the SARA field investigation. This figure also shows the approximate extent of the plumes as defined by the GCTLs for benzene and 1-methylnaphthalene.

A work plan was developed that described the investigation and was presented to the FDEP for concurrence prior to starting field activities. The investigation consisted of a direct push technology (DPT) groundwater sampling event, monitoring well installation and sampling, and collecting synoptic groundwater level measurements. These activities were conducted in general accordance with the applicable guidance in FAC 62-770 and TtNUS standard operating procedures and quality assurance protocols. These events are described in the sections below.

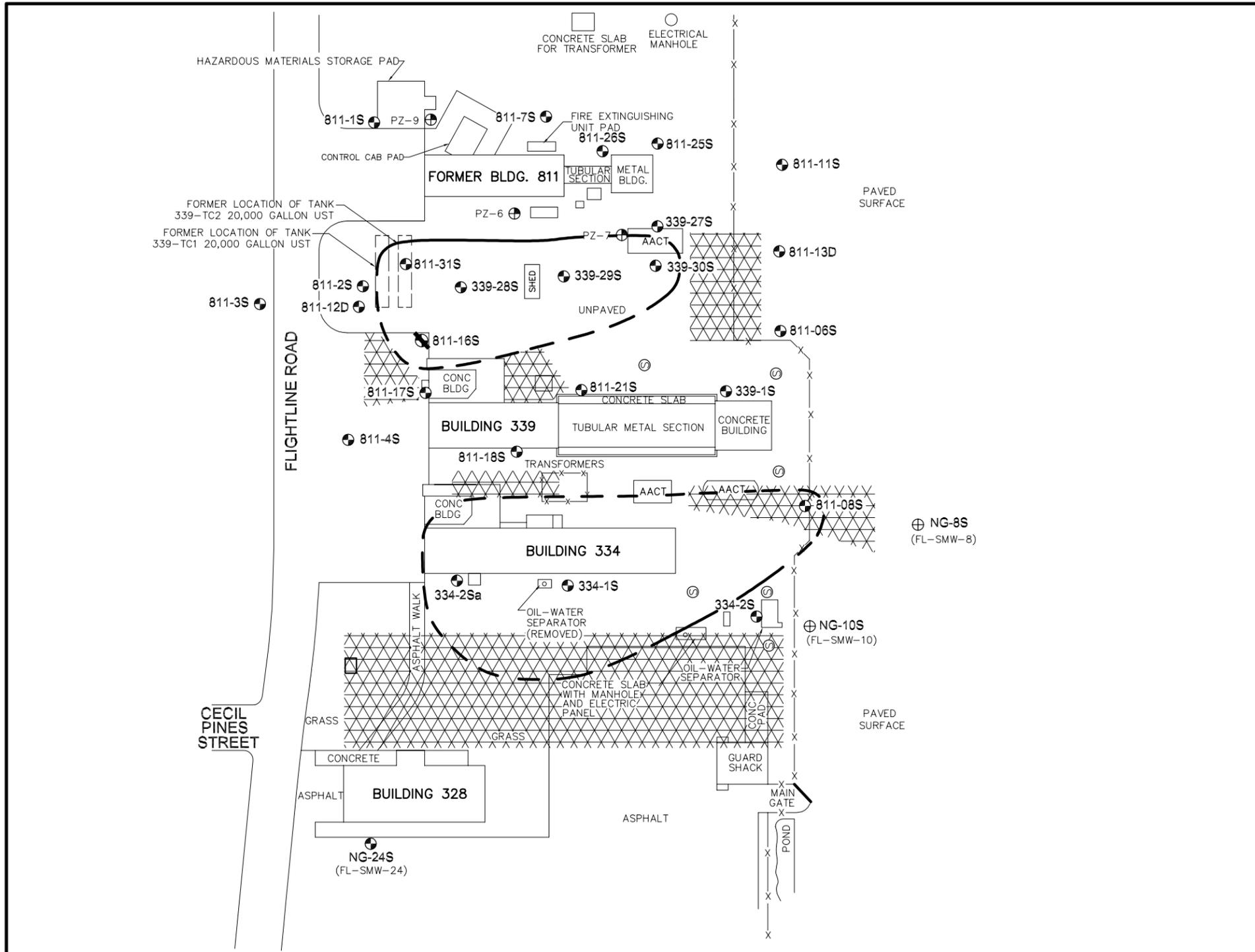
2.1 DPT INVESTIGATION

DPT methods were used to collect groundwater samples at 21 locations around the site. These locations are shown on Figure 2-2. The locations were chosen based on existing groundwater flow contours, as shown in Appendix B. At 20 locations, a four-foot long groundwater sampling screen was advanced to a depth of about 12 feet below ground surface (bgs) to capture discrete water table samples. At one location, the screen was advanced to 30 feet bgs to vertically delineate groundwater contamination at well CEF-334-2Sa. Each groundwater sample was analyzed for benzene, toluene, ethylbenzene, xylenes, naphthalene, methyl tert-butyl ether (MTBE), and diesel range organics (DRO) in the field by a mobile laboratory. Of the 21 locations, 17 were collected according to the sampling plan, and the other four were collected based on the results of the initial sampling round.

Groundwater samples from the DPT borings were logged as CEF-JETC-DPT-GW-NNN, where NNN is the DPT number. In this report, they are shortened to DPT-NNN. The locations shown on Figure 2-2 are listed below with a brief explanation of the intent for each location.

- DPT-001 and DPT-002 were advanced to the east and southeast, respectively, of well CEF-811-08S to investigate the extent of shallow groundwater contamination in that area.
- DPT-003 and DPT-004 were advanced to the east and southeast, respectively, of well CEF-339-30S to confirm the delineation of the northern plume to the east.

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APPROXIMATE OUTLINE OF GROUNDWATER CONTAMINANT PLUME BASED ON BENZENE AND 1-METHYLNAPHTHALENE CONCENTRATIONS PER PREVIOUS SAMPLING EVENTS (DASHED WHERE UNCERTAIN)

GENERAL AREAS OF INVESTIGATION TO DELINEATE GROUNDWATER CONTAMINATION

811-2S MONITORING WELL LOCATION AND DESIGNATION (WELL I.D. PRECEDED BY "CEF-" IN REPORT)

NG-8S SHALLOW MONITORING WELL LOCATION (INSTALLED FOR NORTHROP GRUMMAN)

PZ-8 PIEZOMETER LOCATION AND DESIGNATION

811-16S ABANDONED MONITORING WELL LOCATION AND DESIGNATION

SANITARY SEWER MANHOLE

AST ABOVEGROUND STORAGE TANK

UST UNDERGROUND STORAGE TANK

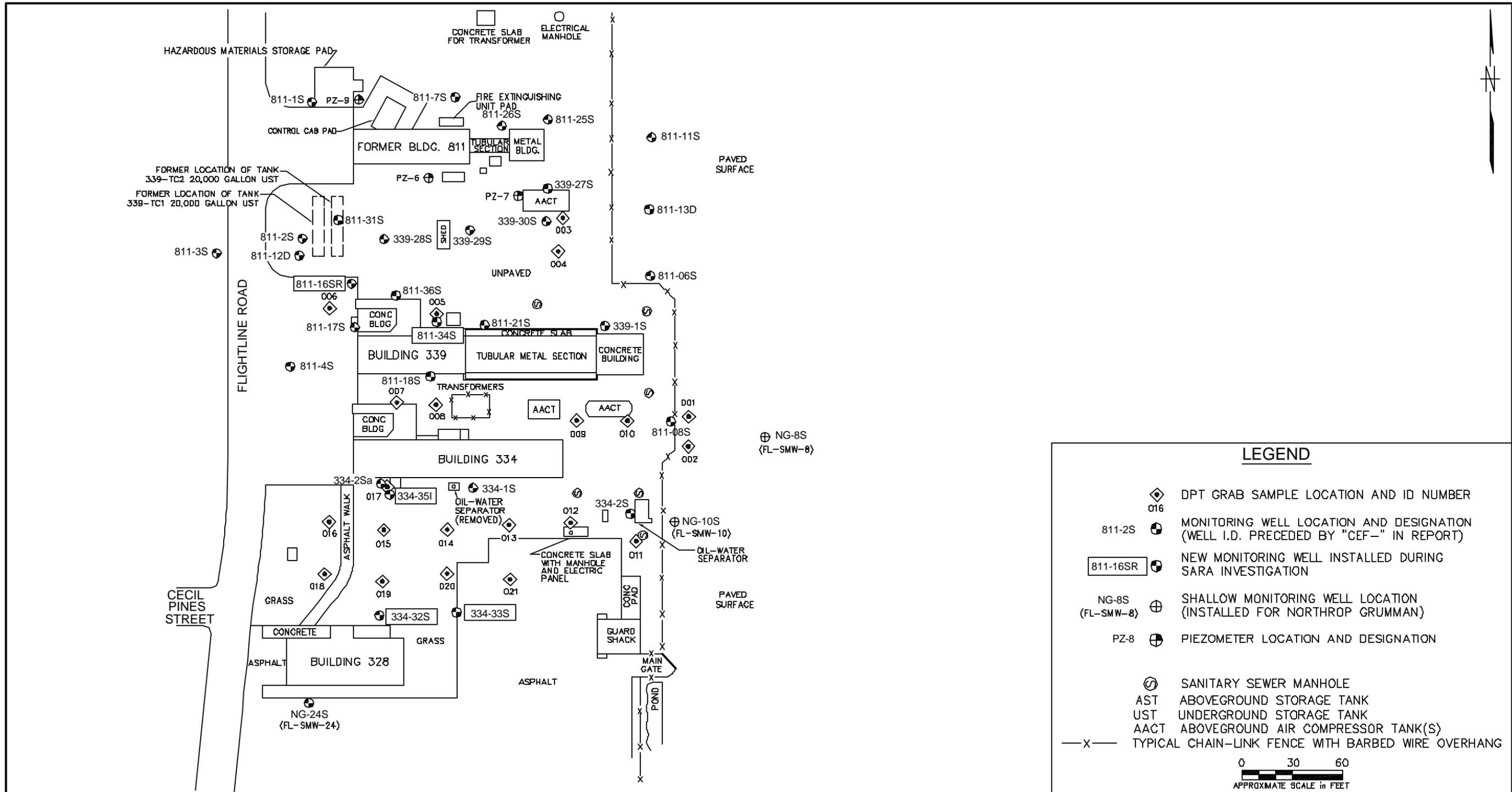
AACT ABOVEGROUND AIR COMPRESSOR TANK(S)

TYPICAL CHAIN-LINK FENCE WITH BARBED WIRE OVERHANG

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							SCALE	AS NOTED		DRAWING NO.	REV.
										FIGURE 2-1	0

AREAS INVESTIGATED DURING
 SUPPLEMENTAL ASSESSMENT
 SITE ASSESSMENT REPORT ADDENDUM
 JETC AND OWS 334-OW
 NAVAL AIR STATION CECIL FIELD
 JACKSONVILLE, FLORIDA



LEGEND

- DPT GRAB SAMPLE LOCATION AND ID NUMBER
- MONITORING WELL LOCATION AND DESIGNATION (WELL I.D. PRECEDED BY "CEF-" IN REPORT)
- NEW MONITORING WELL INSTALLED DURING SARA INVESTIGATION
- SHALLOW MONITORING WELL LOCATION (INSTALLED FOR NORTHROP GRUMMAN)
- PIEZOMETER LOCATION AND DESIGNATION
- SANITARY SEWER MANHOLE
- AST ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- AACT ABOVEGROUND AIR COMPRESSOR TANK(S)
- TYPICAL CHAIN-LINK FENCE WITH BARBED WIRE OVERHANG

0 30 60
APPROXIMATE SCALE in FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY LLK	DATE 8/30/01		CONTRACT NO. N3996	
							CHECKED BY	DATE		APPROVED BY	DATE
							COST/SCHED-AREA			APPROVED BY	DATE
							SCALE AS NOTED			DRAWING NO. FIGURE 2-2	REV. 0

- DPT-005 was advanced on the northern side of Building 339 to delineate to the southern extent of the northern plume.
- DPT-006 was advanced west of the former location of well CEF-811-16S to delineate the western extent of the northern plume.
- DPT-007 and DPT-008 were advanced between Buildings 339 and 334 to confirm the separation between the northern and southern plumes.
- DPT-009 and DPT-010 were advanced to the west of well CEF-811-08S to delineate contamination upgradient of that well and to confirm the separation of the northern and southern plumes.
- DPT-011 through DPT-016 were advanced to the south of CEF-811-08S and CEF-334-2Sa to delineate the extent of contamination on the southern side of the site.
- DPT-017 was the deep DPT that was advanced near CEF-334-2Sa to evaluate the vertical extent of contamination in the southern plume.
- DPT-018 through DPT-021 were advanced to the south of the line described by DPT-011 through DPT-016 based on the results of the groundwater samples at DPT-011 through DPT-016.

The results of the groundwater analyses were reviewed and monitoring well locations were selected with the concurrence of the FDEP on May 31, 2001.

Soil organic vapor analyzer (OVA) data were also collected since many of the proposed DPT sample points were outside the areas of soil remediation performed by the RAC. The OVA-FID data indicated no excessively contaminated soil at any of the DPT sample locations. The sample with the highest OVA-FID concentration was under 20 parts per million (corrected), and one sample was analyzed by the mobile laboratory.

2.2 MONITORING WELL INSTALLATION AND SAMPLING

Based on the results of the DPT groundwater samples, four shallow monitoring wells (CEF-334-32S, CEF-334-33S, CEF-334-34S, and CEF-811-16SR) and one intermediate depth well (CEF-334-35I) were installed both to verify the DPT results and to serve as future long-term monitoring wells. The locations are also shown on Figure 2-2. See Section 3.1 for the rationale on placing the new wells. The shallow monitoring wells were constructed approximately 14 feet deep with 10-foot screens. The intermediate

depth well is 30 feet deep with a 5-foot screen. All new wells were constructed of 2-inch inside diameter, flush-threaded polyvinyl chloride (PVC) with 0.010-inch well slots, and were installed flush with the existing grade. Well construction logs are included in Appendix C.

Also, at the request of the Navy, CH2MHill installed and sampled well CEF-334-36S about 25 feet northwest of CEF-811-34S as part of the recent UST contaminated soil excavation. This well was not sampled as part of the SARA investigation because other monitoring wells provided adequate coverage for the investigation.

After the wells were installed, the following wells were sampled from June 13, 2001 through June 15, 2001:

- CEF-334-32S
- CEF-334-33S
- CEF-811-34S
- CEF-334-35I
- CEF-811-16SR
- CEF-334-1S
- CEF-334-6S
- CEF-339-28S
- CEF-339-29S
- CEF-339-30S
- CEF-811-17S
- CEF-811-18S
- CEF-811-21S
- CEF-334-2Sa
- CEF-811-8S
- CEF-811-31S
- NG-8S (also known as Golder well FL-SMW-8)
- NG-10S (also known as Golder well FL-SMW-10)

All groundwater samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method SW-846 8021B, polycyclic aromatic hydrocarbons (PAHs) by USEPA Method SW-846 8310, and TRPH by Florida Petroleum Range Organics (FL-PRO). In addition, the new wells were analyzed for MTBE by USEPA Method SW-846 8021B, total lead by USEPA Method SW-846 6010B, and 1,2-dibromoethane by USEPA Method 504.1.

Based on the results of the groundwater samples from wells CEF-334-35I and CEF-334-32S, additional sampling was required. A meeting was held with the FDEP on July 26, 2001 to discuss the DPT groundwater results. At that time, TiNUS proposed the installation of a well due south of well CEF-334-32S. FDEP said that the new well was not needed, and the existing well NG-24S (Golder well FL-SMW-24), located on the southwestern side of Building 328 could be sampled instead. Prior to collecting the additional samples, concurrence was obtained from the FDEP during the July meeting. On August 7, 2001, well CEF-334-35I was resampled and analyzed for VOCs. Existing Well NG-24S was sampled and analyzed for VOCs, PAHs, and TRPH.

2.3 SYNOPTIC GROUNDWATER LEVEL MEASUREMENTS

Two rounds of synoptic water level measurements were collected. The first round was collected on May 8, 2001 prior to the DPT activities to confirm the groundwater gradient and to aid in proper placement of the DPT locations. The second round was collected on June 11, 2001 prior to the groundwater sampling activities.

3.0 RESULTS AND DISCUSSION

3.1 DPT RESULTS

At each DPT location, a groundwater sample was collected and analyzed in the field. Table 3-1 summarizes the field analyses. The typical groundwater sample number designation from the DPTs is CEF-JETC-DPT-GW-NNN, where NNN is the DPT number. For brevity, the sample DPT identification numbers are shortened to DPT-NNN. Figure 3-1 shows those sample locations and mobile laboratory analytical results, and Table 3-1 provides the mobile laboratory analytical results.

The field screening data indicate that GCTLs were exceeded at sample points DPT-005, DPT-014 and DPT-015.

The horizontal extent of the groundwater contamination encountered at sample point DPT-005 appears to be approximated by monitoring wells and DPT points around it. Based on drawings of the buildings, the foundation of the center portion of Building 339 appears to be deep enough (approximately 7 to 8 feet bgs) to prevent the northern plume from extending to the south of Building 339. The results of DPT-005 along with the results of DPT-007 and DPT-008 appear to confirm the existence of two separate plumes.

Since sample points DPT-014 and DPT-015 revealed groundwater concentrations above GCTLs, additional sample points DPT-018 through DPT-021 (Figure 3-1) were also installed. Although some VOCs were detected in samples from DPT-020 and DPT-021, none of the results from DPT-018 through DPT-021 exceeded GCTLs.

Note that detection limits were slightly elevated at DPT-004. The data appear to confirm that the extent of the plume around monitoring well CEF-811-30S identified during previous sampling events is appropriate and that the downgradient monitoring wells CEF-334-6S and CEF-339-1S do provide perimeter monitoring for that part of the site.

The results from DPT-001 and DPT-002 coupled with the south-southeast flow direction in that area indicate that an additional monitoring well is not necessary downgradient of CEF-11-8S. The existing Golder well NG-10 will be adequate to monitor the plume downgradient of monitoring well CEF-811-8S.

DPT-017 indicates that contaminant concentrations from the sample for that location are below GCTLs, so the vertical extent of the plume, as defined by GCTLs, is considered above 26 feet bgs.

TABLE 3-1

MOBILE LABORATORY ANALYTICAL RESULTS
 JETC AND OWS 334-OW SITE ASSESSMENT REPORT ADDENDUM
 NAVAL AIR STATION CECIL FIELD
 JACKSONVILLE, FLORIDA
 PAGE 1 OF 4

Sample Number (CEF-JETC-DPT-) Date	GCTL	GW-001 5/9/01	GW-002 5/9/01	GW-003 5/9/01	GW-004 5/9/01	GW-005 5/9/01	GW-006 5/9/01	GW-007 5/9/01	GW-008 5/9/01	GW-009 5/9/01
MTBE	35	<1	<1	<1	<5	<10	<1	<1	<1	<1
Benzene	1	<1	<1	<1	<5	<10	<1	<1	<1	<1
Toluene	40	<1	<1	<1	<5	<10	<1	<1	<1	<1
Ethylbenzene	30	<1	<1	<1	<5	<10	<1	<1	<1	<1
m&p-Xylene	20 (1)	<1	<1	<1	<5	<10	<1	<1	<1	<1
o-Xylene	20 (1)	<1	<1	<1	<5	<10	<1	<1	<1	<1
Naphthalene	20	<1	11.3	<1	<5	120	<1	<1	<1	<1
DRO	5	<0.5	<0.5	<0.5	1.3	0.7	<0.5	<0.5	<0.5	<0.5

TABLE 3-1

**MOBILE LABORATORY ANALYTICAL RESULTS
 JETC AND OWS 334-OW SITE ASSESSMENT REPORT ADDENDUM
 NAVAL AIR STATION CECIL FIELD
 JACKSONVILLE, FLORIDA
 PAGE 2 OF 4**

Sample Number (CEF-JETC-DPT-) Date	GW-010 5/9/01	GW-011 5/9/01	GW-012 5/9/01	SB-012-05 5/9/01	GW-013 5/10/01	GW-014 5/10/01	GW-015 5/10/01	GW-016 5/10/01	GW-017 5/10/01	GW-018 5/10/01
MTBE	<1	<1	<1	<10	<1	<2	<10	<1	<1	<1
Benzene	<1	<1	<1	<10	<1	3.44	19.5	<1	<1	<1
Toluene	<1	<1	<1	<10	<1	<2	119	<1	<1	<1
Ethylbenzene	<1	<1	<1	<10	<1	47.4	138	<1	<1	<1
m&p-Xylene	<1	<1	<1	<10	<1	36.8	324	<1	1.91	<1
o-Xylene	<1	<1	<1	<10	<1	<2	138	<1	<1	<1
Naphthalene	<1	<1	<1	<10	<1	22.1	255	<1	3.74	<1
DRO	<0.5	<0.5	<0.5	<20	<0.5	<0.5	6.9	<0.5	NM	<0.5

TABLE 3-1

**MOBILE LABORATORY ANALYTICAL RESULTS
JETC AND OWS 334-OW SITE ASSESSMENT REPORT ADDENDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 3 OF 4**

Sample Number (CEF-JETC-DPT-) Date	GW-019 5/10/01	GW-020 5/10/01	GW-021 5/10/01
MTBE	<1	<1	<1
Benzene	<1	<1	<1
Toluene	<1	<1	<1
Ethylbenzene	<1	<1	1.73
m&p-Xylene	<1	<1	<1
o-Xylene	<1	<1	<1
Naphthalene	<1	5.81	5.19
DRO	<0.5	<0.5	<0.5

TABLE 3-1

**MOBILE LABORATORY ANALYTICAL RESULTS
JETC SITE ASSESSMENT REPORT ADDENDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 4 OF 4**

NOTES:

Units for groundwater are in micrograms per liter, except DRO which are in mg/L.

Units for soil are in micrograms per kilogram.

GW indicates a groundwater sample.

SB indicates a soil sample. The last two digits indicate the bottom depth of the sampled interval.

1 - GCTL is for total xylenes.

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The groundwater concentrations at the other DPTs were less than GCTLs or below detection limits. Thus, the extents of the plumes in the other parts of the site were confirmed.

Based on the DPT results, the following permanent monitoring wells were installed. As noted previously, the FDEP concurred with these locations prior to installation.

- Shallow wells CEF-334-32S and CEF-334-33S were installed about 80 feet south of CEF-334-2Sa to delineate the southern edge of the plume and were based on the results of DPT-019 and DPT-020.
- Shallow well CEF-811-34S was installed in the vicinity of DPT-005 to verify the DPT results.
- Intermediate well CEF-334-35I was installed near DPT-017 to verify the DPT results and to delineate vertical contamination at CEF-334-2Sa.
- Shallow well CEF-811-16SR was installed at the former location of well CEF-811-16S that had been abandoned prior to the recent UST contaminated soil excavation.

No wells were installed to the west of the southern plume because the DPT results (DPT-016 and DPT-018) showed the absence of contamination and delineated the plume on that side.

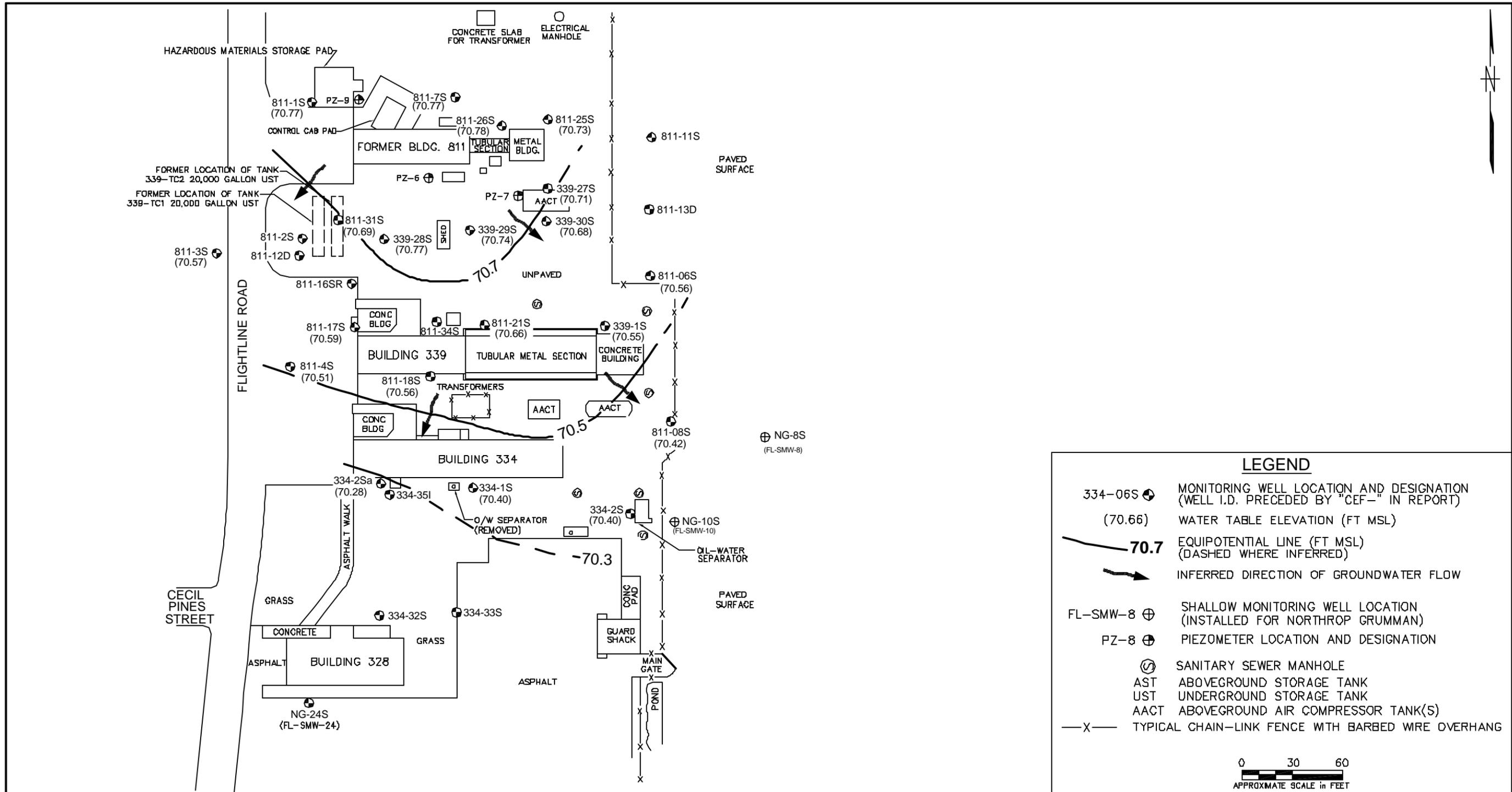
The single soil sample that was collected and analyzed in the field (CEF-JETC-DPT-SB-012-05) had no detectable concentrations, as shown on Table 3-1. The OVA-FID data indicated no excessively contaminated soil at any of the DPT sample locations.

3.2 GROUNDWATER FLOW DIRECTION

The groundwater level elevations for the measurements made on May 8, 2001 and June 11, 2001 are shown on Figures 3-2 and 3-3, respectively. The water level measurements and elevations are also summarized on Table 3-2. In both cases, there is an area of high groundwater table elevation in the vicinity of the former USTs. The groundwater flow direction is generally to the southsoutheast, but for various reasons (including local high water table at the former USTs, manmade structures above and below grade), the direction is more to the south on the western portion of the site, and more to the southeast on the eastern portion of the site.

Note that in the preparation of Figure 3-3, the groundwater elevations at CEF-339-28S, 811-34S, and 811-21S were not consistent with the elevations and contours implied by the other wells. These three

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LEGEND

- 334-06S (70.66) ● MONITORING WELL LOCATION AND DESIGNATION (WELL I.D. PRECEDED BY "CEF-" IN REPORT)
- (70.66) ○ WATER TABLE ELEVATION (FT MSL)
- 70.7 — EQUIPOTENTIAL LINE (FT MSL) (DASHED WHERE INFERRED)
- INFERRED DIRECTION OF GROUNDWATER FLOW
- FL-SMW-8 ⊕ SHALLOW MONITORING WELL LOCATION (INSTALLED FOR NORTHROP GRUMMAN)
- PZ-8 ⊕ PIEZOMETER LOCATION AND DESIGNATION
- SANITARY SEWER MANHOLE
- AST ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- AACT ABOVEGROUND AIR COMPRESSOR TANK(S)
- X— TYPICAL CHAIN-LINK FENCE WITH BARBED WIRE OVERHANG

0 30 60
APPROXIMATE SCALE in FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY LLK	DATE 8/30/01

COST/SCHED-AREA

SCALE

AS NOTED

GROUNDWATER ELEVATION CONTOUR MAP

MAY 8, 2001

SITE ASSESSMENT REPORT ADDENDUM

JETC AND OWS 334-OW

NAVAL AIR STATION CECIL FIELD

JACKSONVILLE, FLORIDA

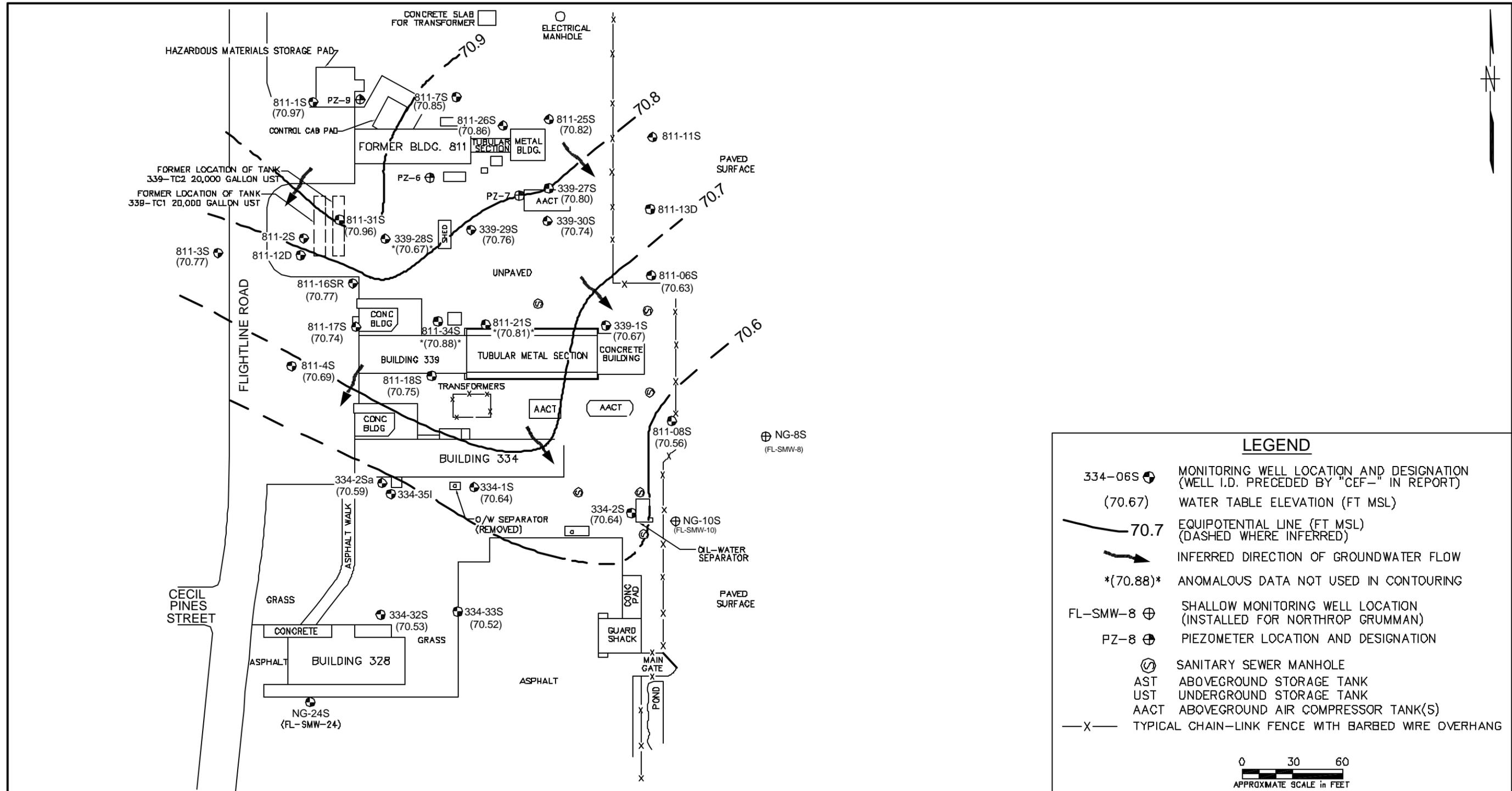
CONTRACT NO.
N3996

APPROVED BY _____ DATE _____

APPROVED BY _____ DATE _____

DRAWING NO.
FIGURE 3-2

REV.
0



LEGEND	
334-06S (70.67)	MONITORING WELL LOCATION AND DESIGNATION (WELL I.D. PRECEDED BY "CEF-" IN REPORT) WATER TABLE ELEVATION (FT MSL)
70.7	EQUIPOTENTIAL LINE (FT MSL) (DASHED WHERE INFERRED)
→	INFERRED DIRECTION OF GROUNDWATER FLOW
(70.88)	ANOMALOUS DATA NOT USED IN CONTOURING
FL-SMW-8	SHALLOW MONITORING WELL LOCATION (INSTALLED FOR NORTHROP GRUMMAN)
PZ-8	PIEZOMETER LOCATION AND DESIGNATION
⊙	SANITARY SEWER MANHOLE
AST	ABOVEGROUND STORAGE TANK
UST	UNDERGROUND STORAGE TANK
AACT	ABOVEGROUND AIR COMPRESSOR TANK(S)
-X-	TYPICAL CHAIN-LINK FENCE WITH BARBED WIRE OVERHANG

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE		GROUNDWATER ELEVATION CONTOUR MAP JUNE 11, 2001 SITE ASSESSMENT REPORT ADDENDUM JETC AND OWS 334-OW NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NO.	
							LLK	8/31/01			N3996	
											APPROVED BY	DATE
											APPROVED BY	DATE
											DRAWING NO.	REV.
											FIGURE 3-3	0

TABLE 3-2

**GROUNDWATER LEVEL MEASUREMENTS
JETC AND OWS 334-OW SITE ASSESSMENT REPORT ADDENDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA**

Monitoring Well Identification	Well Depth (feet, BTOC)	Top-of-Casing Elevation (feet, msl)	May 8, 2001		6/11/01 and 6/13/01	
			Depth to Water (feet, BTOC)	Water-Level Elevation (feet, msl)	Depth to Water (feet, BTOC)	Water-Level Elevation (feet, msl)
CEF-334-1S	13.85	77.58	7.18	70.40	6.94	70.64
CEF-811-31S	14.95	78.29	7.60	70.69	7.33	70.96
CEF-334-2Sa	15	77.65	7.37	70.28	7.06	70.59
CEF-339-1S	12.8	78.06	7.51	70.55	7.39	70.67
CEF-339-27	14.05	78.36	7.65	70.71	7.56	70.80
CEF-339-28S	14	78.19	7.42	70.77	7.52	70.67
CEF-339-29S	14.54	78.29	7.55	70.74	7.53	70.76
CEF-339-30S	14	77.84	7.16	70.68	7.10	70.74
CEF-334-6S	12.85	78.02	7.46	70.56	7.39	70.63
CEF-811-8S	13.7	77.8	7.38	70.42	7.24	70.56
CEF-811-16R	13.3	78.14	NM	NM	7.37	70.77
CEF-811-17S	14.62	77.91	7.32	70.59	7.17	70.74
CEF-811-18S	14.85	78.09	7.53	70.56	7.34	70.75
CEF-811-21S	14.98	77.71	7.05	70.66	6.90	70.81
CEF-811-01S	N/A	78.37	7.60	70.77	7.4	70.97
CEF-811-03S	N/A	78.2	7.63	70.57	7.43	70.77
CEF-811-04S	N/A	77.86	7.35	70.51	7.17	70.69
CEF-811-07S	N/A	77.98	7.21	70.77	7.13	70.85
CEF-811-25S	N/A	78.11	7.38	70.73	7.29	70.82
CEF-811-26S	N/A	78.38	7.60	70.78	7.52	70.86
CEF-811-11S	N/A	78.18	NM	NM	6.52	71.66
NG-8S	N/A	76.98	NM	NM	5.93	71.05
NG-10S	N/A	76.56	NM	NM	5.36	71.20
CEF-334-2S	13	77.26	6.86	70.40	6.62	70.64
CEF-334-32S	13.3	78.39	NM	NM	7.86	70.53
CEF-334-33S	13.3	77.84	NM	NM	7.32	70.52
CEF-811-34S	13.3	77.73	NM	NM	6.85	70.88
CEF-811-35I	34.1	77.79	NM	NM	7.37	70.42

Notes:

msl - mean sea level.

BTOC = below top of casing.

NM = not measured.

water levels were inconsistent with previous groundwater level measurement events and were not used to prepare the contours on Figure 3-3.

Groundwater flow direction at other sites along the flightline (for example Site 16) is typically to the southeast. The southerly component of the groundwater at JETC may be the result of the extensive unpaved areas to the north and west of the JETC, compared to the extensive paving to the south and east of the site.

3.3 MONITORING WELL SAMPLING RESULTS

Table 3-3 summarizes the monitoring well sampling results. Laboratory data reports for the SARA investigation are included in Appendix D. The wells were sampled between June 13, 2001 and June 15, 2001. However, the naphthalene concentration of 30.4 microgram per liter ($\mu\text{g/L}$) in well CEF-334-32S was greater than the GCTL of 20 $\mu\text{g/L}$. The concentrations of 1-methylnaphthalene and 2-methylnaphthalene were 19.4 $\mu\text{g/L}$ and 14.9 $\mu\text{g/L}$, respectively. This result was unexpected compared to the analytical results from DPT-019 which is approximately 20 feet upgradient of this well. At DPT-019, the naphthalene concentration was below the GCTL.

In addition, in the sample from CEF-334-35I, the bromodichloromethane (BDCM) concentration was 2 $\mu\text{g/L}$, and the chloroform concentration was 5.8 $\mu\text{g/L}$. These exceed the GCTLs of 0.6 $\mu\text{g/L}$ and 5.7 $\mu\text{g/L}$ respectively. The presence of the chlorinated compounds is suspect for two reasons. First, they were not detected in other JETC samples, particularly in samples from well CEF-334-2Sa, which is screened directly above CEF-334-35I. Second, these two chlorinated compounds are often detected in chlorinated potable water. Potable water was used during the construction of the wells.

The MTBE, 1,2-dibromoethane (EDB), and total lead results for the new wells were either below their respective GCTLs or not detected. These results support limiting future sampling to only VOCs, PAHs, and TRPH.

Therefore, after discussions with the FDEP, a second round of sampling was performed on August 7, 2001. First, well CEF-334-35I was resampled and analyzed for VOCs. Second, an existing Golder well, designated NG-24S, which is located about 60 feet downgradient of CEF-334-32S, was sampled and analyzed for VOCs, PAHs, and TRPH. The results of this second round of sampling are also included on Table 3-3. Figure 3-4 depicts the positive detections in both sampling events. A summary of the historic results is included in Appendix A.

The monitoring well sampling results as they relate to the three primary areas of investigation are discussed below.

TABLE 3-3

**GROUNDWATER ANALYTICAL RESULTS SUMMARY
JETC SITE ASSESSMENT REPORT ADDENDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 4**

Well Number (CEF-) Sample Date	339-28S 6/14/01	339-29S 6/14/01	811-8S 6/15/01	811-16SR 6/13/01	811-17S 6/13/01	811-18S 6/15/01	334-1S 6/15/01	334-6S 6/15/01	811-21S 6/13/01	339-30S 6/14/01
Volatile Organic Compounds (µg/L)										
Benzene	2.3/2.2	1.0U	1.0U	14.3	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	41/42.2	21.2	1.0U	33.3	4.6	1.0U	2	1.0U	1.0U	0.75
Toluene	0.9/0.91	1.0U	1.0U	0.76	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Total Xylenes	6.2/5.9	4.5	3.0U	4.3	3.0U	3.0U	3.0U	3.0U	3.0U	3.0U
Bromodichloromethane	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Chloroform	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Polynuclear Aromatic Hydrocarbons (µg/L)										
Acenaphthene	17U	20U	4.0U	4.0U	17U	10.3	4.0U	4.0U	4.4U	4.4U
Fluorene	8.6U	10U	2.0U	2.0U	8.6U	2.0U	2.0U	2.0U	2.2U	2.2U
1-Methylnaphthalene	92.8/118	93.5	2.0U	2.0U	28.8	9.6	8.5	2.0U	2.2U	4
2-Methylnaphthalene	102/130	71.7	2.0U	2.0U	19.7	10	5.9	2.0U	2.2U	2.2
Naphthalene	101/132	133	2.0U	2.0U	38.3	22.8	13.6	2.0U	2.2U	2.2U
Phenanthrene	8.6U	10U	2.0U	2.0U	2.2U	2.0U	2.0U	2.0U	2.2U	2.2U
Total Recoverable Petroleum Hydrocarbons (mg/L)										
TRPH	13.6/13.8	8	0.277/0.216	6.16	17.6	2.75	0.908	0.25	0.28U	0.28U

TABLE 3-3

**GROUNDWATER ANALYTICAL RESULTS SUMMARY
JETC SITE ASSESSMENT REPORT ADDENDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 4**

Well Number (CEF-) Sample Date	811-31S 6/14/01	334-2Sa 6/14/01	334-32S 6/15/01	334-33S 6/15/01	811-34S 6/13/01	334-35I 6/14/01	334-35I 8/7/01	NG-8 6/13/01	NG-10 6/13/01	NG-24 8/7/01
Volatile Organic Compounds (µg/L)										
Benzene	1.0U	11.8	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	1.0U	76.3	2.1	1.0U	1.0U	1.6	1.3	1.0U	1.0U	1.0U
Toluene	1.0U	86.4	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U
Total Xylenes	3.0U	296	7.6	3.0U	3.0U	1.6	1.0U	3.0U	3.0U	3.0U
Bromodichloromethane	1.0U	2.0U	1.0U	1.0U	1.0U	2	1.0U	1.0U	1.0U	1.0U
Chloroform	1.0U	2.0U	1.0U	1.0U	1.0U	5.8	1.0U	1.0U	1.0U	1.0U
Polynuclear Aromatic Hydrocarbons (µg/L)										
Acenaphthene	7.9	40U	4.4U	4.0U	21U	4.0U	NM	4.4U	4.0U	4.0U
Fluorene	3.6	20U	2.2U	2.0U	11U	2.0U	NM	2.2U	2.0U	2.0U
1-Methylnaphthalene	2.2U	172	19.5	2.0U	11U	2.0U	NM	2.2U	2.0U	2.0U
2-Methylnaphthalene	2.2U	181	14.9	2.0U	11U	2.0U	NM	2.2U	2.0U	2.0U
Naphthalene	2.2U	378	30.4	2.0U	11U	2.0U	NM	2.2U	2.0U	2.0U
Phenanthrene	4.6	20U	2.2U	2.0U	2.2U	2.0U	NM	2.2U	2.0U	2.0U
Total Recoverable Petroleum Hydrocarbons (mg/L)										
TRPH	0.49	14.6	2.30	0.25U	24.1	0.528	NM	0.25U	0.25U	0.25U

TABLE 3-3

**GROUNDWATER ANALYTICAL RESULTS SUMMARY
JETC SITE ASSESSMENT REPORT ADDENDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 3 OF 4**

Well Number (CEF-) Sample Date	NADSC/GCTL (Source/Perimeter) (see notes 1 & 2)
Volatile Organic Compounds (µg/L)	
Benzene	100/1
Ethylbenzene	300/30
Toluene	400/40
Total Xylenes	200/20
Bromodichloromethane	60/0.6
Chloroform	570/5.7
Polynuclear Aromatic Hydrocarbons (µg/L)	
Acenaphthene	200/20
Fluorene	2800/280
1-Methylnaphthalene	200/20
2-Methylnaphthalene	200/20
Naphthalene	200/20
Phenanthrene	2100/210
Total Recoverable Petroleum Hydrocarbons (mg/L)	
TRPH	50/5

TABLE 3-3

GROUNDWATER ANALYTICAL RESULTS SUMMARY
JETC SITE ASSESSMENT REPORT ADDENDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 4 OF 4

Notes:

¹GCTL = Groundwater Cleanup Target Levels based on Chapter 62-770, Florida Administrative Code.

²NADSC = Natural Attenuation Default Source Concentrations as promulgated in Chapter 62-770.690.

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

Where duplicate samples were collected, the higher result is shown.

An "S" (meaning shallow) was added to the well identifications in the text and table, which are not shown in the laboratory report.

µg/L = micrograms per liter

mg/L = milligrams per liter

U = undetected

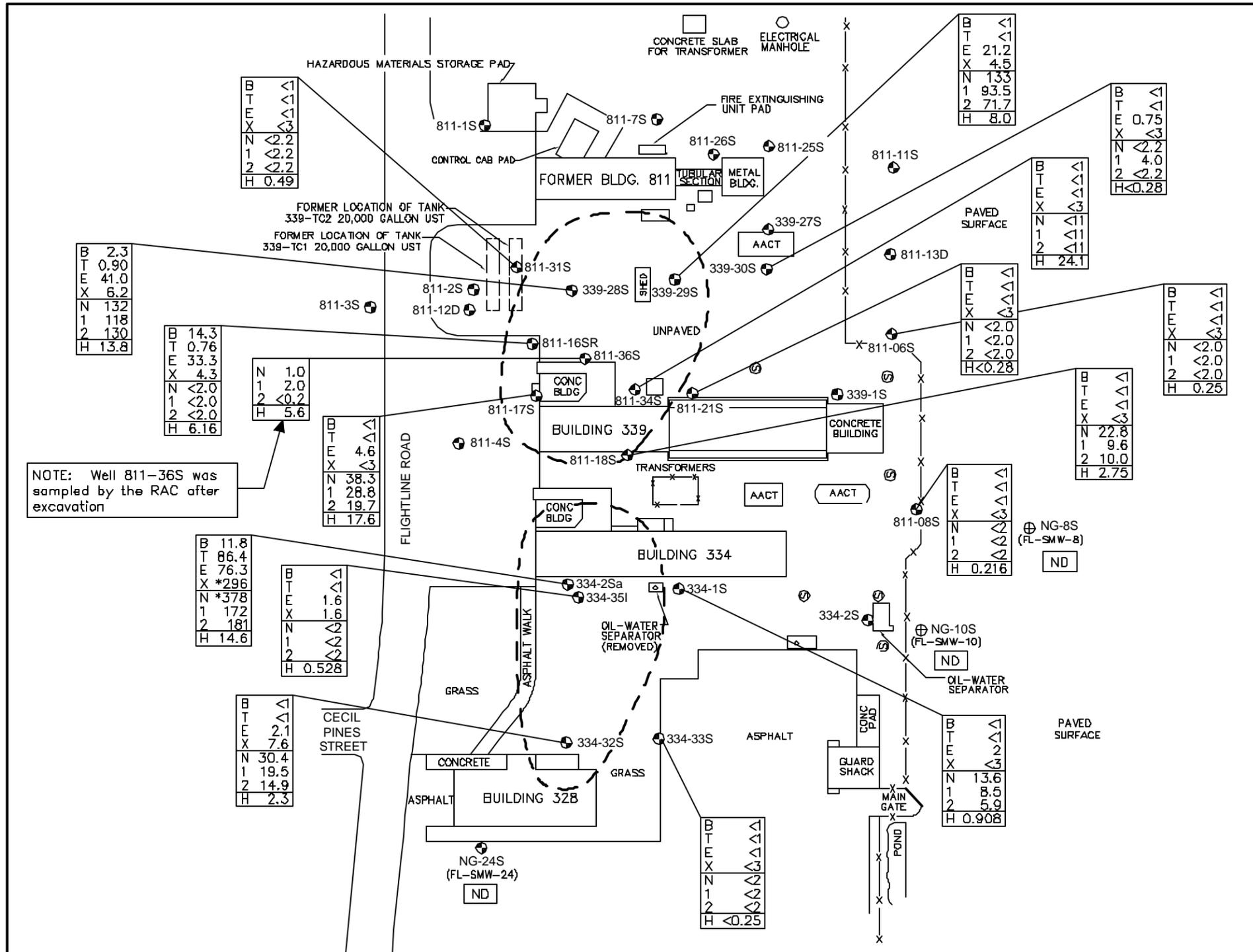
N/A = not applicable

J = estimated

ND = not detected

NM - Not measured

Two values indicate a duplicate



LEGEND

811-2S ● MONITORING WELL LOCATION AND DESIGNATION (WELL I.D. PRECEDED BY "CEF-" IN REPORT)

NG-8S ⊕ SHALLOW MONITORING WELL LOCATION (INSTALLED FOR NORTHROP GRUMMAN)

ABBREV.	CONSTITUENT	UNITS
VOCs	B	BENZENE (µg/L)
	T	TOLUENE (µg/L)
	E	ETHYLBENZENE (µg/L)
	X	XYLENES (µg/L)
PAHs	N	NAPHTHALENE (µg/L)
	1	1-METHYLNAPHTHALENE (µg/L)
	2	2-METHYLNAPHTHALENE (µg/L)
	H	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (mg/L)

BOLD VALUES INDICATE CONCENTRATIONS GREATER THAN FDEP GCTLs

* = CONCENTRATION GREATER THAN NATURAL ATTENUATION DEFAULT SOURCE CRITERIA

ND = NO ANALYZED CONSTITUENTS DETECTED BY LABORATORY

○ APPROXIMATE GROUNDWATER PLUME BASED ON COMBINED GCTLs FOR BTEX AND NAPHTHALENE COMPOUNDS

(µg/L) = MICROGRAMS PER LITER
(mg/L) = MILLIGRAMS PER LITER

FDEP = Florida Department of Environmental Protection
GCTL = Groundwater Cleanup Target Level

PZ-8 ⊕ PIEZOMETER LOCATION AND DESIGNATION

⊙ SANITARY SEWER MANHOLE

AST ABOVEGROUND STORAGE TANK
UST UNDERGROUND STORAGE TANK
AACT ABOVEGROUND AIR COMPRESSOR TANK(S)

—x— TYPICAL CHAIN-LINK FENCE WITH BARBED WIRE OVERHANG

0 30 60
APPROXIMATE SCALE in FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES	DRAWN BY	DATE		MONITORING WELL GROUNDWATER ANALYTICAL RESULTS		CONTRACT NO. N3996	
							LLK	8/31/01		SITE ASSESSMENT REPORT ADDENDUM		APPROVED BY	DATE
										JETC AND OWS 334-OW		APPROVED BY	DATE
										NAVAL AIR STATION CECIL FIELD		DRAWING NO.	REV.
										JACKSONVILLE, FLORIDA		FIGURE 3-4	0

3.3.1 Northern Plume

Contaminants in wells CEF-338-28S, CEF-339-29S, CEF-811-16SR, CEF-811-17S, CEF-811-34S, and CEF-811-18S characterize the contamination in the northern plume. Benzene, ethylbenzene, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, and TRPH were detected at concentrations greater than GCTLs. Benzene, ethylbenzene, naphthalene, and TRPH concentrations were high near the location of the former USTs, but at the outer edges of the plume, only naphthalene, 1-methylnaphthalene, 2-methylnaphthalene and TRPH were detected. The extent of the plume is defined by CEF-339-30S, CEF-811-21S, DPT-007, DPT-008, and DPT-004 where contaminants were either less than GCTLs or below detection limits.

A drawing of the foundation of Building 339 shows that the western portion of the building has a shallow slab foundation that does not extend to the water table. The center portion of the building has a deep foundation that is about 7 to 8 feet bgs, and therefore intercepts the groundwater during high water table conditions. Shallow groundwater contamination may migrate west along this barrier.

3.3.2 Southern Plume

Contaminants in wells CEF-334-2Sa and 334-34S characterize the contamination in the southern plume. Benzene, ethylbenzene, toluene, xylenes, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, and TRPH were detected at concentrations greater than GCTLs in well CEF-334-2Sa. The concentrations of xylenes and naphthalene were also greater than natural attenuation default concentrations. Further downgradient at CEF-334-32S, only naphthalene, 1-methylnaphthalene, 2-methylnaphthalene and TRPH were detected. The extent of the plume is defined by CEF-334-1S, DPT-014, CEF-334-33S, NG-24S, DPT-018, and DPT-016 where contaminants were either less than GCTLs or below detection limits. Well CEF-334-35I defines the vertical extent of the plume since the contaminants of concern were either below GCTLs or not detected.

3.3.3 Well CEF-811-8S Area

The historic sampling results at well CEF-811-8S have not been consistent. During early phases of the investigation of the JETC, contaminants were detected in samples from this well, but were later found not to be present. After a period without sampling, the well was resampled in July 2000 and October 2000. Naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, and TRPH were detected at concentrations greater than GCTLs in July 2000, but no contaminants were detected in October 2000. No contaminants were detected during the SARA sampling at CEF-811-8S and at wells downgradient of it (NG-8S and NG-10S).

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

Based on the results of the most recent data, the following conclusions can be made:

- There are two separate plumes as indicated by the absence of contaminants in the groundwater samples from DPT-007 and DPT-008. A northern plume is centered to the northwest of Building 339 and a southern plume is centered on the southwest side of Building 334.
- The western side of the southern plume was delineated by DPT groundwater results.
- The southern side of the southern plume is delineated by the new well CEF-334-34S and the existing well CEF-NG-24S.
- The contamination observed in well CEF-811-8S is intermittent and does not appear to be part of a larger plume. The occasionally observed contamination may be the result of contaminants periodically released from the smear zone.
- Groundwater contamination greater than GCTLs appears to be limited to the water table.
- Natural attenuation default concentrations were exceeded for xylenes and naphthalene at one well.
- Groundwater in the JETC area flows generally to the southsoutheast.
- Not all of the contaminated soil was removed from the vicinity of the 334-OW.

4.2 RECOMMENDATIONS

Based on the results on the SARA investigation, the following actions are recommended:

- The two plumes should still be handled as one site due to their proximity.
- Excessively contaminated soil reported in the September 1999 SAR Rev. 1 (HLA, 1999d) on the southern side of Building 334 and to the east of the previous excavation should be excavated and disposed of offsite.

- Institutional controls are required at two areas to prevent exposure to contaminated soil that was not accessible to excavation. The first area is to the south of the former USTs beneath the water line, the control building and sidewalk just north of Building 339. The second area is underneath Building 334. The institutional control should consist of the requirement to keep the site for industrial uses only. Other controls should aim to avoid disturbing the soil underneath the following locations: Building 334, the control building north of Building 339, the sidewalk next to the control building for Building 339, and the soil overlying the water line to the north of the control building.
- A Remedial Action Plan (RAP) is recommended to address the remaining contaminated soil and contaminated groundwater at the site.

5.0 PROFESSIONAL REVIEW CERTIFICATION

The SARA was prepared using sound hydrogeologic principles and judgment. This assessment 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 assessment described in this report. This SARA report was developed for the Jet Engine Test Cell site, which includes Oil-Water Separator 334-OW at the former NAS Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.

Paul E. Calligan
Florida Professional Geologist
License No. PG-0001864

Date

REFERENCES

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CH2MHill (CH2MHill Constructors, Inc.), 2000. Source Removal Report, Oil/Water Separator Removal at Building 334, Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for Southern Division Naval Facilities Engineering Command, North Charleston, South Carolina. October.

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HLA, 1999b. Site Assessment Report, Building 334, Oil-Water Separator 334-OW, Rev. 0.0, Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for Southern Division Naval Facilities Engineering Command, North Charleston, South Carolina. April.

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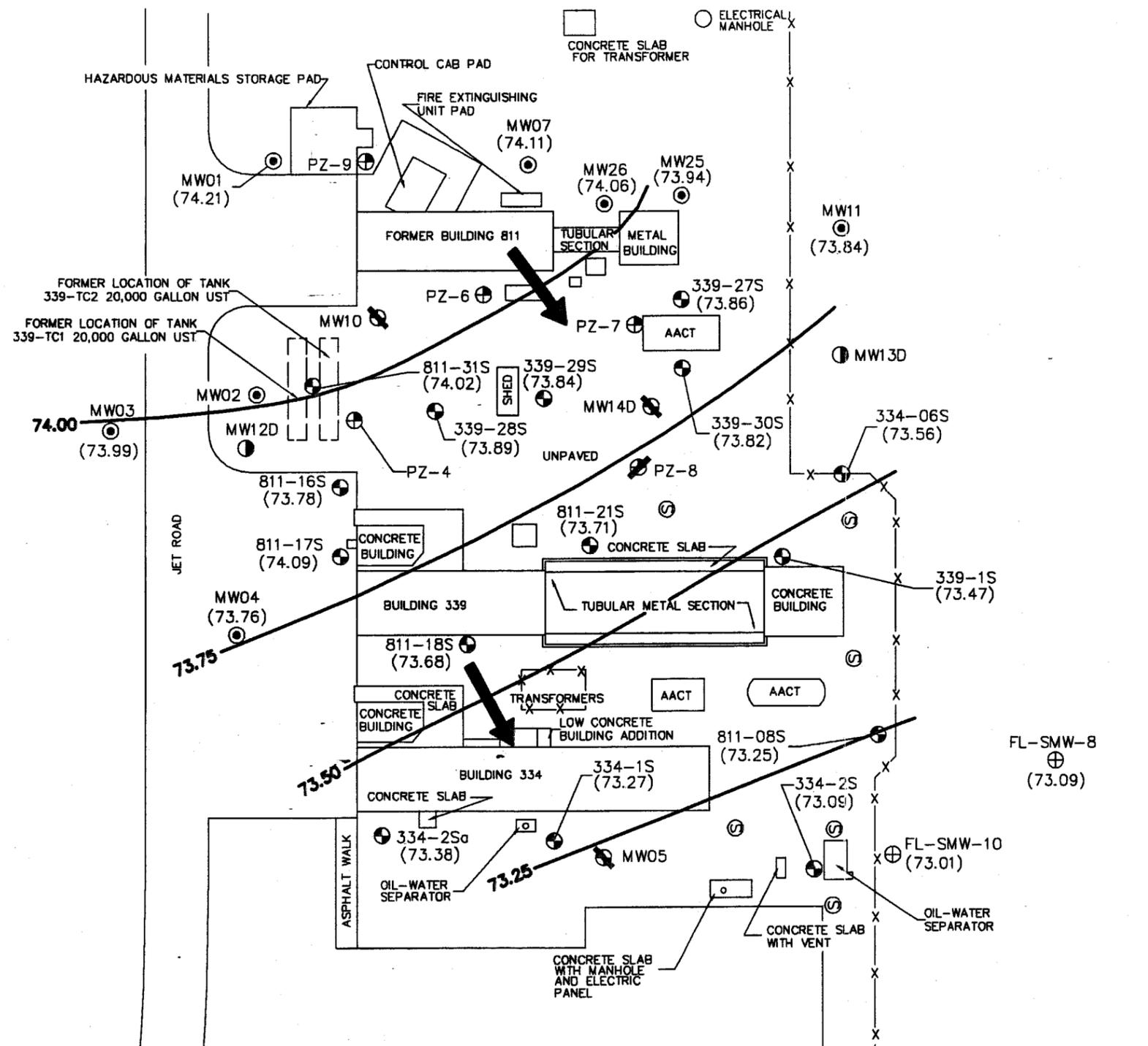
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TtNUS, 2000b. Groundwater Monitoring Report, 2nd Quarter, 2nd Year, Jet Engine Test Cell, Naval Air Station Cecil Field, Jacksonville, Florida. Prepared for Southern Division Naval Facilities Engineering Command, North Charleston, South Carolina. December.

APPENDIX A

HISTORIC GROUNDWATER CONTOURS



LEGEND

- (73.47) WATER TABLE ELEVATION (FT MSL)
- 73.50 --- EQUIPOTENTIAL LINE (FT MSL)
DASHED WHERE INFERRED
- ➔ INFERRED DIRECTION OF GROUNDWATER FLOW
- 334-06S ● SHALLOW MONITORING WELL LOCATION
(WELL I.D. PRECEDED BY "CEF-" IN REPORT)
- FL-SMW-8 ⊕ SHALLOW MONITORING WELL LOCATION
(WELL INSTALLED FOR NORTHROP GRUMMAN)
- PZ-8 ⊕ PIEZOMETER LOCATION AND DESIGNATION
- MW01 ● SHALLOW MONITORING WELL LOCATION AND DESIGNATION
- MW10 ☒ DESTROYED MONITORING WELL
LOCATION AND DESIGNATION
- MW12D ● DEEP MONITORING WELL LOCATION
AND DESIGNATION
- ⊙ SANITARY SEWER MANHOLE
- AST ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- AACT ABOVEGROUND AIR COMPRESSOR TANK(S)
- X— TYPICAL CHAIN-LINK FENCE WITH BARBED WIRE OVERHANG

0 25 50
APPROXIMATE SCALE in FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY CW 11/14/00
 DATE 11/14/00
 CHECKED BY
 DATE
 COST/SCHED-AREA
 SCALE AS NOTED



GROUNDWATER ELEVATIONS
 OCTOBER 16, 2000
 QUARTERLY MONITORING REPORT
 JET ENGINE TEST CELL
 NAVAL AIR STATION CECIL FIELD
 JACKSONVILLE, FLORIDA

CONTRACT NO.	N0394
APPROVED BY	DATE 12/12/00
APPROVED BY	DATE
DRAWING NO.	FIGURE 4
REV.	0

APPENDIX B

HISTORIC GROUNDWATER ANALYTICAL RESULTS

Table 3
Historical Summary of Contaminants Detected in Groundwater Monitoring Wells
SARA Groundwater Sampling Results, June 2001

Jet Engine Test Cell
Naval Air Station Cecil Field
Jacksonville, Florida
Page 1 of 6

Analyte	Source Wells																		Milestone Objectives for MW-28S after	NADSC ¹	
	CEF-339-28S									CEF-339-29S											
	1996	11/98	7/99	11/99	02/00	04/00	07/00	10/00	6/01	1996	11/98	7/99	11/99	02/00	04/00	07/00	10/00	6/01			
Volatile Organic Compounds (µg/L)																					
Benzene	NS	2.1	1.9	4	3.8	5.2	5.3	3.5	2.3	NS	ND	3.4	ND	2.9	1.7	1.5	1.0U	1.0U	2	100	
Ethylbenzene	NS	30	27	56	39	48	40.7	39.4	42.2	NS	1.2	11	3.1	35	48	41	1.0U	21.2	30	300	
MTBE	NR	NR	NR	NR	NR	NR	1.0U	0.54	1.0U	NR	NR	NR	NR	NR	NR	1.0U	1.0U	1.0U	N/A	500	
Toluene	NS	ND	ND	ND	ND	ND	1.0U	1.0U	0.91	NS	ND	2.6	ND	ND	ND	1.0U	1.0U	1.0U	40	400	
Total Xylenes	NS	30.6	12	22	5.9	15.3	5.7	5.1	6.2	NS	ND	14.2	6.1	26	14.3	7.2	3.0U	4.5	28	200	
Bromodichloromethane									1.0U									1.0U	N/A	0.6	
Chloroform									1.0U									1.0U	N/A	5.7	
Polynuclear Aromatic Hydrocarbons (µg/L)																					
Acenaphthene	NS	ND	9.2	15	ND	ND	8.2U	21U	17U	NS	ND	ND	ND	ND	ND	8.4U	4.0U	20U	N/A	200	
Acenaphthylene	NS	ND	ND	ND	ND	ND	8.2U	21U	17U	NS	ND	ND	ND	ND	ND	8.4U	4.0U	20U	N/A	2100	
Anthracene	NS	ND	0.24	0.24	ND	ND	8.2U	2.0U	2.2U	NS	ND	ND	0.65	0.65	ND	8.4U	2.0U	2.0U	N/A	21000	
Benzo(a)anthracene	NR	NR	NR	NR	NR	NR	0.14	0.2U	0.22U	NR	NR	NR	NR	NR	NR	NR	0.2U	0.2U	N/A	400	
Chrysene	NS	ND	ND	ND	ND	ND	4.0U	2.0U	2.2U	NS	ND	ND	ND	ND	ND	17U	2.0U	2.0U	N/A	480	
Fluoranthene	NS	ND	ND	ND	ND	ND	8.2U	2.0U	2.2U	NS	ND	ND	ND	ND	ND	8.4U	2.0U	2.0U	N/A	2800	
Fluorene	NS	ND	3.6	1.9	ND	0.32	8.2U	10U	8.6U	NS	ND	0.56	2.9	ND	0.81	8.4U	2.0U	10U		2800	
Indeno (1,2,3,-cd) pyryne	NS	ND	ND	ND	ND	ND	0.20U	0.2U	0.22U	NS	ND	ND	ND	ND	ND	0.84U	0.2U	0.2U	N/A	20	
1-Methylnaphthalene	NS	36	87	79	58	60	60.6	68.9	118	NS	ND	ND	54	73	89	62	3.7	93.5	N/A	200	
2-Methylnaphthalene	NS	50	59	79	64	66	63.5	72.1	130	NS	ND	ND	40	71	63	50.9	3.8	71.7	N/A	200	
Naphthalene	NS	75	91	86	79	83	72.1	106	132	NS	ND	ND	21	140	160	94.9	4.4	133	60	200	
Phenanthrene	NS	ND	2.5	2.5	ND	ND	8.2U	10U	8.6U	NS	ND	ND	ND	ND	ND	8.4U	2.0U	10U	N/A	2100	
Pyrene	NS	ND	ND	ND	ND	ND	8.2U	2.0U	2.2U	NS	ND	ND	ND	ND	ND	8.4U	2.0U	2.0U	N/A	2100	
Total Recoverable Petroleum Hydrocarbons (mg/L)																					
TRPH	NS	NS	ND	2.1	2.8	1.6	9.22	11.2	13.8	NS	NS	1	7.9	4	3.1	6.53	2.85	8	N/A	50	

See notes at end of table

Table 3 (con't)
Historical Summary of Contaminants Detected in Groundwater Monitoring Wells
SARA Groundwater Sampling Results, June 2001

Jet Engine Test Cell
Naval Air Station Cecil Field
Jacksonville, Florida
Page 2 of 6

Analyte	Monitoring Wells															GCTL ²
	CEF-811-8S			CEF-811-16S/16SR			CEF-811-17S									
	7/00	10/00	6/01	7/00	10/00	6/01	1993	3/99	7/99	11/99	02/00	04/00	07/00	10/00	6/01	
Volatile Organic Compounds (µg/L)																
Benzene	1.0U	1.0U	1.0U	49.4	2.1	14.3	ND	ND	ND	ND	ND	ND	1.0U	1.0U	1.0U	1
Ethylbenzene	1.0U	1.0U	1.0U	94.6	11.4	33.3	ND	ND	ND	ND	1.4	2	1.0U	1.0U	4.6	30
MTBE	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	NR	NR	NR	NR	NR	NR	1.0U	1.0U	1.0U	35
Toluene	1.0U	1.0U	1.0U	1.0U	1.0U	0.76	ND	ND	ND	ND	ND	ND	1.0U	1.0U	1.0U	40
Total Xylenes	3.0U	3.0U	3.0U	23.1	2.2	4.3	18	ND	ND	ND	ND	ND	3.0U	3.0U	3.0U	20
Bromodichloromethane			1.0U			1.0U									1.0U	0.6
Chloroform			1.0U			1.0U									1.0U	5.7
Polynuclear Aromatic Hydrocarbons (µg/L)																
Acenaphthene	40.7	4.0U	4.0U	17U	21U	4.0U	ND	ND	ND	ND	ND	ND	2.2U	4.0U	17U	20
Acenaphthylene	18U	4.0U	4.0U	17U	21U	4.0U	ND	ND	ND	ND	ND	ND	2.2U	4.0U	17U	210
Anthracene	18U	2.0U	2.0U	17U	2.0U	2.0U	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	2100
Benzo(a)anthracene	ND	0.2U	0.2U	ND	0.2U	0.2U	NR	NR	NR	NR	NR	NR	ND	0.2U	0.22U	4
Chrysene	18U	2.0U	2.0U	4.4U	2.0U	2.0U	ND	ND	ND	0.11	ND	ND	4.4U	2.0U	2.2U	5
Fluoranthene	18U	2.0U	2.0U	17U	2.0U	2.0U	ND	ND	ND	0.16	ND	0.5	2.2U	2.0U	2.2U	280
Fluorene	18U	2.0U	2.0U	17U	11U	2.0U	ND	ND	ND	0.36	ND	0.33	2.2U	2.0U	8.6U	280
Indeno (1,2,3,-cd) pyryne	1.8U	0.2U	0.2U	0.22U	0.2U	0.2U	ND	ND	ND	0.06	ND	ND	0.22U	0.2U	0.22U	0.2
1-Methylnaphthalene	98.1	2.0U	2.0U	100	90.5	2.0U	11	16	ND	16	14	17	2.2U	2.0U	28.8	20
2-Methylnaphthalene	102	2.0U	2.0U	105	90.4	2.0U	ND	25	ND	12	10	10	2.2U	2.0U	19.7	20
Naphthalene	261	2.0U	2.0U	160	76.9	2.0U	ND	26	ND	10	8	13	2.2U	2.0U	38.3	20
Phenanthrene	18U	2.0U	2.0U	17U	11U	2.0U	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	210
Pyrene	18U	2.0U	2.0U	17U	2.0U	2.0U	ND	ND	ND	0.15	ND	ND	2.2U	2.0U	2.2U	210
Total Recoverable Petroleum Hydrocarbons (mg/L)																
TRPH	6.48	0.28U	0.216	9.14	19.1	6.16	ND	NS	0.48	ND	4	1.2	3.69	0.533	17.6	5

See notes at end of Table

Table 3 (con't)
Historical Summary of Contaminants Detected in Groundwater Monitoring Wells
SARA Groundwater Sampling Results, June 2001

Jet Engine Test Cell
Naval Air Station Cecil Field
Jacksonville, Florida
Page 3 of 6

Analyte	Monitoring Wells																			GCTL ²
	CEF-811-18S									CEF-811-21S										
	1993	3/99	7/99	11/99	02/00	04/00	07/00	10/00	6/01	1993	1996	11/98	7/99	11/99	02/00	04/00	07/00	10/00	6/01	
<u>Volatile Organic Compounds (µg/L)</u>																				
Benzene	ND	NS	ND	ND	ND	1	1	1.0U	1.0U	ND	ND	1.1	ND	ND	ND	ND	1.0U	1.0U	1.0U	1
Ethylbenzene	2.2	2.2	8	ND	10	21	21.5	1.9	1.0U	ND	ND	ND	ND	ND	ND	ND	1.0U	1.0U	1.0U	30
MTBE	NR	NR	NR	NR	NR	NR	1.0U	1.0U	1.0U	NR	ND	NR	NR	NR	NR	NR	1.0U	1.0U	1.0U	35
Toluene	ND	NS	ND	ND	ND	ND	1.0U	1.0U	1.0U	ND	ND	ND	ND	ND	ND	ND	1.0U	1.0U	1.0U	40
Total Xylenes	ND	NS	1.2	ND	1.7	10.8	3.1	3.0U	3.0U	4.6	ND	ND	ND	ND	ND	ND	3.0U	3.0U	3.0U	20
Bromodichlorormethane									1.0U										1.0U	0.6
Chloroform									1.0U										1.0U	5.7
<u>Polynuclear Aromatic Hydrocarbons (µg/L)</u>																				
Acenaphthene	ND	ND	ND	ND	ND	ND	2.0U	4.0U	10.3	ND	ND	ND	ND	ND	ND	ND	2.2U	4.0U	4.4U	20
Acenaphthylene	ND	ND	ND	ND	ND	ND	2.0U	4.0U	4.0U	ND	ND	ND	ND	ND	ND	ND	2.2U	4.0U	4.4U	210
Anthracene	ND	ND	ND	ND	ND	ND	2.0U	2.0U	2.0U	ND	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	2100
Benzo(a)anthracene	NR	NR	NR	NR	NR	NR	ND	0.2U	0.2U	NR	NR	NR	NR	NR	NR	NR	ND	0.2U	0.22U	4
Chrysene	ND	ND	ND	ND	ND	ND	2.0U	2.0U	2.0U	ND	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	5
Fluoranthene	ND	ND	ND	ND	ND	ND	2.0U	2.0U	2.0U	ND	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	280
Fluorene	ND	ND	1	1.2	3.8	ND	2.0U	2.0U	2.0U	ND	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	280
Indeno (1,2,3-cd) pyryne	ND	ND	ND	ND	ND	ND	ND	0.2U	0.2U	ND	ND	ND	ND	ND	ND	ND	0.22U	0.2U	0.22U	0.2
1-Methylnaphthalene	27	22	6.1	73	51	60	0.20U	3.8	9.6	ND	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	20
2-Methylnaphthalene	20	36	1.2	43	53	67	2.0U	3.9	10	ND	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	20
Naphthalene	38	48	ND	81	110	180	2.0U	9.4	22.8	ND	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	20
Phenanthrene	ND	ND	ND	ND	ND	ND	2.0U	2.0U	2.0U	ND	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	210
Pyrene	ND	ND	ND	ND	ND	ND	2.0U	2.0U	2.0U	ND	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	210
<u>Total Recoverable Petroleum Hydrocarbons (mg/L)</u>																				
TRPH	ND	NS	0.27	0.61	2	1.5	0.463	1.32	2.75	ND	ND	NS	ND	0.88	1.3	ND	0.379	0.25U	0.28U	5

See notes at end of table.

Table 3 (con't)
Historical Summary of Contaminants Detected in Groundwater Monitoring Wells
SARA Groundwater Sampling Results, June 2001

Jet Engine Test Cell
Naval Air Station Cecil Field
Jacksonville, Florida
Page 4 of 6

Analyte	Monitoring Wells															GCTL ²	
	CEF-811-31S			CEF-339-1S		CEF-339-27S		CEF-339-30S									
	7/00	10/00	6/01	7/00	10/00	7/00	10/00	1996	11/98	7/99	11/99	02/00	04/00	7/00	10/00		6/01
<u>Volatile Organic Compounds (µg/L)</u>																	
Benzene	1.1	1.0U	1.0U	1.0U	NS	1.0U	NS	ND	ND	ND	ND	ND	ND	1.0U	1.0U	1.0U	1
Ethylbenzene	1.0U	1.0U	1.0U	1.0U	NS	1.0U	NS	ND	ND	1	2.4	ND	ND	2.9	1.0U	0.75	30
MTBE	1.0U	1.0U	1.0U	1.0U	NS	1.0U	NS	NR	NR	NR	NR	NR	NR	1.0U	1.0U	1.0U	35
Toluene	1.0U	1.0U	1.0U	1.0U	NS	1.0U	NS	ND	ND	ND	ND	ND	ND	1.0U	1.0U	1.0U	40
Total Xylenes	3.0U	3.0U	3.0U	3.0U	NS	3.0U	NS	ND	ND	ND	1	ND	ND	2.2J	3.0U	3.0U	20
Bromodichloromethane			1.0U													1.0U	0.6
Chloroform			1.0U													1.0U	5.7
<u>Polynuclear Aromatic Hydrocarbons (µg/L)</u>																	
Acenaphthene	12.7	4.0U	7.9	2.2U	NS	2.2U	NS	ND	ND	1.4	ND	ND	ND	2.2U	4.0U	4.4U	20
Acenaphthylene	2.0U	4.0U	4.4U	2.2U	NS	2.2U	NS	ND	ND	1.3	ND	ND	ND	2.2U	4.0U	4.4U	210
Anthracene	2.0U	2.0U	2.2U	2.2U	NS	2.2U	NS	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	2100
Benzo(a)anthracene	ND	0.2U	0.22U	ND	NS	ND	NS	NR	NR	NR	NR	NR	NR	ND	0.2U	0.22U	4
Chrysene	2.0U	2.0U	2.2U	2.2U	NS	4.4U	NS	ND	ND	ND	ND	ND	ND	4.4U	2.0U	2.2U	5
Fluoranthene	1.3J	2.0U	2.2U	2.2U	NS	2.2U	NS	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	280
Fluorene	6.0	2.0U	3.6	2.2U	NS	2.2U	NS	ND	ND	0.56	2.2	ND	ND	2.2U	2.0U	2.2U	280
Indeno (1,2,3,-cd) pyryne	0.20U	0.2U	0.22U	0.22U	NS	0.22U	NS	ND	ND	ND	ND	ND	ND	0.22U	0.2U	0.22U	0.2
1-Methylnaphthalene	3.4	2.0U	2.2U	2.6	NS	6.5	NS	56	29	28	130	53	12	32.8	2.0U	4	20
2-Methylnaphthalene	8.1	2.0U	2.2U	2.2U	NS	6.6	NS	39	45	15	60	47	12	32.3	2.0U	2.2	20
Naphthalene	15.5	1.1	2.2U	2.3	NS	2.2U	NS	ND	ND	5.4	15	10	1.8	10.6	2.0U	2.2U	20
Phenanthrene	9.1	1.1	4.6	2.2U	NS	2.2U	NS	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	210
Pyrene	0.83J	2.0U	2.2U	2.2U	NS	2.2U	NS	ND	ND	ND	ND	ND	ND	2.2U	2.0U	2.2U	210
<u>Total Recoverable Petroleum Hydrocarbons (mg/L)</u>																	
TRPH	1.7	0.44	0.49	2.97	NS	0.356	NS	ND	NS	0.54	1.6	1.6	1.1	2.57	0.25U	0.28U	5

See notes at end of Table

Table 3 (con't)
Historical Summary of Contaminants Detected in Groundwater Monitoring Wells
SARA Groundwater Sampling Results, June 2001

Jet Engine Test Cell
Naval Air Station Cecil Field
Jacksonville, Florida
Page 5 of 6

Analyte	Monitoring Wells															GCTL ²			
	CEF-334-1S									CEF-334-2S			CEF-334-2Sa				CEF-334-6S		
	3/97	7/99	11/99	02/00	04/00	07/00	10/00	6/01	5/00	10/00	7/00	10/00	6/01	7/00	10/00		6/01		
<u>Volatile Organic Compounds (µg/L)</u>																			
Benzene	ND	ND	ND	2.4	3.6	3.9	0.72	1.0U	1.0U	NS	11.5	3.5	11.8	1.0U	1.0U	1.0U	1		
Ethylbenzene	1.4	ND	ND	15	17	15.4	4.5	2	1.0U	NS	95.5	23.6	76.3	1.0U	1.0U	1.0U	30		
MTBE	NR	NR	NR	NR	NR	1.0U	1.0U	1.0U	NR	NS	1.0U	1.0U	2.0U	1.0U	1.0U	1.0U	35		
Toluene	ND	ND	ND	ND	1.0U	1.0U	1.0U	1.0U	1.0U	NS	114	20.3	86.4	1.0U	1.0U	1.0U	40		
Total Xylenes	5.1	ND	ND	11.2	11.3	12.4	3.5	3.0U	3.0U	NS	257	87.5	296	3.0U	3.0U	3.0U	20		
Bromodichloromethane								1.0U								1.0U	0.6		
Chloroform								1.0U								1.0U	5.7		
<u>Polynuclear Aromatic Hydrocarbons (µg/L)</u>																			
Acenaphthene	ND	ND	ND	ND	ND	2.2U	4.0U	4.0U	2.0U	NS	16U	21U	40U	2.2U	4.0U	4.0U	20		
Acenaphthylene	ND	ND	ND	ND	ND	2.2U	4.0U	4.0U	2.0U	NS	16U	21U	40U	2.2U	4.0U	4.0U	210		
Anthracene	ND	ND	ND	ND	ND	2.2U	2.0U	2.0U	2.0U	NS	16U	10U	2.0U	2.2U	2.0U	2.0U	2100		
Benzo(a)anthracene	NR	NR	NR	NR	NR	ND	0.2U	0.2U	ND	NS	ND	1.0U	0.2U	ND	0.2U	0.2U	4		
Chrysene	ND	ND	ND	ND	ND	4.4U	2.0U	2.0U	2.0U	NS	16U	10U	2.0U	2.2U	2.0U	2.0U	5		
Fluoranthene	ND	ND	ND	ND	ND	2.2U	2.0U	2.0U	2.0U	NS	16U	10U	2.0U	2.2U	2.0U	2.0U	280		
Fluorene	ND	0.11	0.15	0.34	ND	2.2U	2.0U	2.0U	2.0U	NS	16U	10U	20U	2.2U	2.0U	2.0U	280		
Indeno (1,2,3-cd) pyrene	ND	ND	ND	ND	ND	0.22U	0.2U	0.2U	0.20U	NS	1.6U	1.0U	0.2U	0.22U	0.2U	0.2U	0.2		
1-Methylnaphthalene	4.3	5.9	13	39	26	32.1	2.0U	8.5	2.0U	NS	112	102	172	2.2U	2.0U	2.0U	20		
2-Methylnaphthalene	3.4	1.1	7.3	34	24	25.6	2.0U	5.9	2.0U	NS	138	118	181	2.2U	2.0U	2.0U	20		
Naphthalene	ND	1.5	13	57	51	53.2	1.5	13.6	2.0U	NS	276	147	378	2.2U	2.0U	2.0U	20		
Phenanthrene	ND	ND	ND	ND	ND	2.2U	2.0U	2.0U	2.0U	NS	16U	10U	20U	2.2U	2.0U	2.0U	210		
Pyrene	ND	ND	ND	ND	ND	2.2U	2.0U	2.0U	2.0U	NS	16U	10U	2.0U	2.2U	2.0U	2.0U	210		
<u>Total Recoverable Petroleum Hydrocarbons (mg/L)</u>																			
TRPH	1.1	0.38	ND	8.4	0.66	2.55	0.519	0.908	0.594	NS	19.5	29.3	14.6	0.25U	0.28U	0.277	5		

See notes at end of Table

Table 3 (con't) Historical Summary of Contaminants Detected in Groundwater Monitoring Wells SARA Groundwater Sampling Results, June 2001							
Jet Engine Test Cell Naval Air Station Cecil Field Jacksonville, Florida Page 6 of 6							
Analyte	Monitoring Wells						GCTL ²
	334-32S	334-33S	811-34S	334-35I	SMW-8	SMW-10	
	6/01	6/01	6/01	6/01	6/01	6/01	
Volatile Organic Compounds (µg/L)							
Benzene	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	1
Ethylbenzene	2.1	1.0U	1.0U	1.6	1.0U	1.0U	30
MTBE	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	35
Toluene	1.0U	1.0U	1.0U	1.0U	1.0U	1.0U	40
Total Xylenes	7.6	3.0U	3.0U	1.6	3.0U	3.0U	20
Bromodichloromethane	1.0U	1.0U	1.0U	2	1.0U	1.0U	0.6
Chloroform	1.0U	1.0U	1.0U	5.8	1.0U	1.0U	5.7
Polynuclear Aromatic Hydrocarbons (µg/L)							
Acenaphthene	4.4U	4.0U	21U	4.0U	4.4U	4.0U	20
Acenaphthylene	4.4U	4.0U	21U	4.0U	4.4U	4.0U	210
Anthracene	2.2U	2.0U	2.2U	2.0U	2.2U	2.0U	2100
Benzo(a)anthracene	0.22U	0.2U	0.22U	0.2U	0.22U	0.2U	4
Chrysene	2.2U	2.0U	2.2U	2.0U	2.2U	2.0U	5
Fluoranthene	2.2U	2.0U	2.2U	2.0U	2.2U	2.0U	280
Fluorene	2.2U	2.0U	11U	2.0U	2.2U	2.0U	280
Indeno (1,2,3,-cd) pyrene	0.22U	0.2U	0.22U	0.2U	0.22U	0.2U	0.2
1-Methylnaphthalene	19.5	2.0U	11U	2.0U	2.2U	2.0U	20
2-Methylnaphthalene	14.9	2.0U	11U	2.0U	2.2U	2.0U	20
Naphthalene	30.4	2.0U	11U	2.0U	2.2U	2.0U	20
Phenanthrene	2.2U	2.0U	2.2U	2.0U	2.2U	2.0U	210
Pyrene	2.2U	2.0U	2.2U	2.0U	2.2U	2.0U	210
Total Recoverable Petroleum Hydrocarbons (mg/L)							
TRPH	2.3	0.25U	24.1	0.528	0.25U	0.25U	5
Notes: ¹ NADSC=Natural Attenuation Default Source Concentrations as promulgated in Chapter 62-7; µg/L= micrograms per liter ² GCTL=Groundwater Cleanup Target Levels based on Chapter 62-770, Florida Administrative U= undetected Values exceeding milestones, NADSC or GCTL, are in bold. N/A= not applicable NR=Not Reported J=Estimated NS= Not Sampled ND= Not Detected							

APPENDIX C

WELL CONSTRUCTION LOGS



Tetra Tech NUS, Inc.

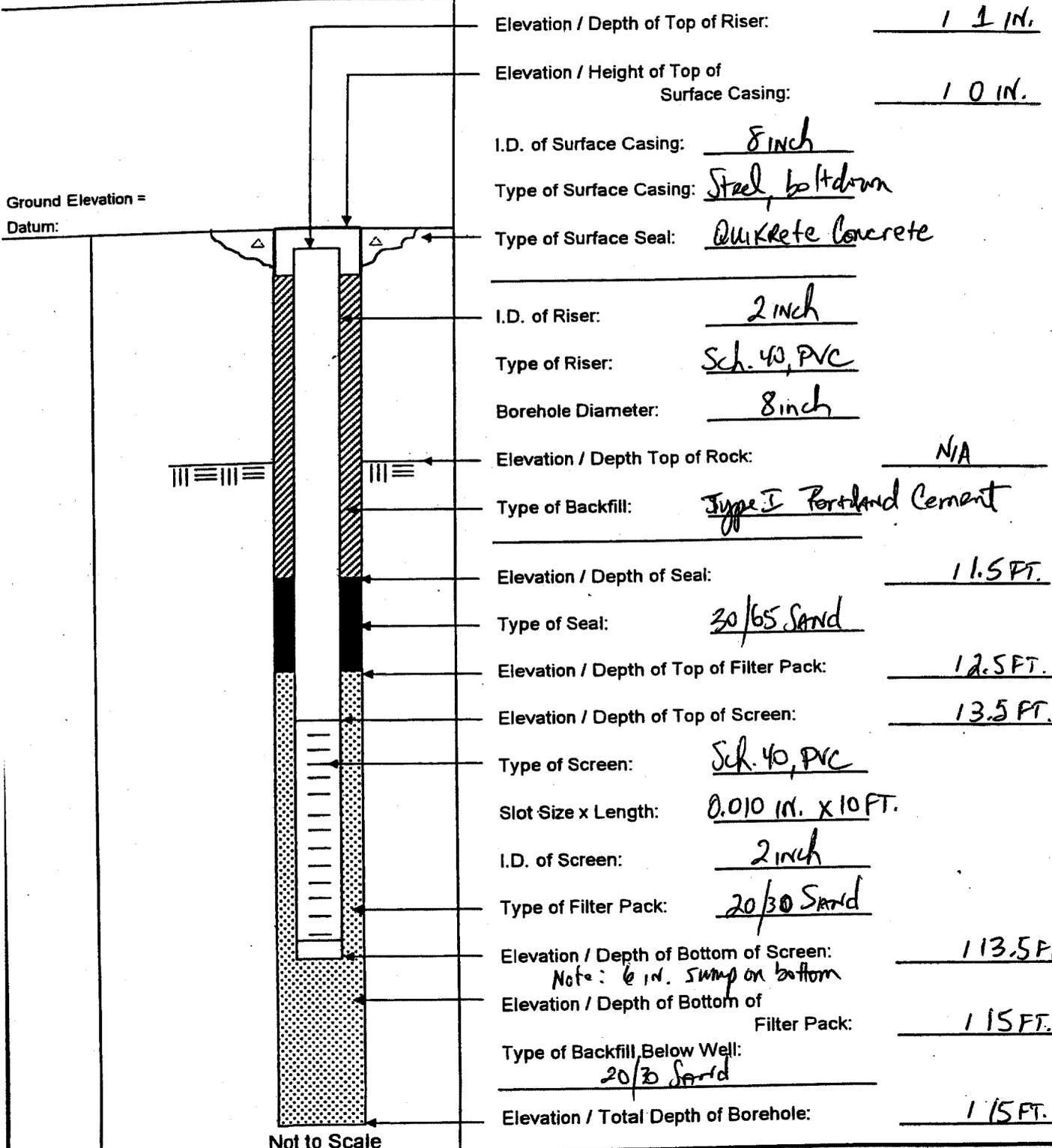
WELL No.: CEF-811-16SR

MONITORING WELL SHEET

PROJECT: NAS CECIL FIELD
 PROJECT No.: ~~0039~~-3996
 SITE: JETC
 GEOLOGIST: M. DALE

DRILLING Co.: Groundwater
 DRILLER: G. WAGNER
 DRILLING METHOD: Hollow Stem
 DEV. METHOD: Submersible

PROTECTION BORING No.: 004
 DATE COMPLETED: 6/1/01
 NORTHING: _____
 EASTING: _____



Ground Elevation = Datum:

Elevation / Depth of Top of Riser: 1.1 IN.

Elevation / Height of Top of Surface Casing: 1.0 IN.

I.D. of Surface Casing: 8 INCH

Type of Surface Casing: Steel, bolt down

Type of Surface Seal: Quikrete Concrete

I.D. of Riser: 2 INCH

Type of Riser: Sch. 40, PVC

Borehole Diameter: 8 INCH

Elevation / Depth Top of Rock: N/A

Type of Backfill: Type I Portland Cement

Elevation / Depth of Seal: 11.5 FT.

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 12.5 FT.

Elevation / Depth of Top of Screen: 13.5 FT.

Type of Screen: Sch. 40, PVC

Slot Size x Length: 0.010 IN. x 10 FT.

I.D. of Screen: 2 INCH

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 113.5 FT.

Note: 6 in. slump on bottom

Elevation / Depth of Bottom of Filter Pack: 115 FT.

Type of Backfill Below Well: 20/30 Sand

Elevation / Total Depth of Borehole: 115 FT.

Not to Scale



Tetra Tech NUS, Inc.

WELL No.:

CEF-334-325

MONITORING WELL SHEET

PROJECT: NAS CECIL FIELD

DRILLING Co.:

Groundwater

^{PROTECTION} BORING No.:

001

PROJECT No.: ~~0039~~-396

DRILLER:

G. WAGNER

DATE COMPLETED:

6/1/01

SITE:

JETC

DRILLING METHOD:

Hollow Stem

NORTHING:

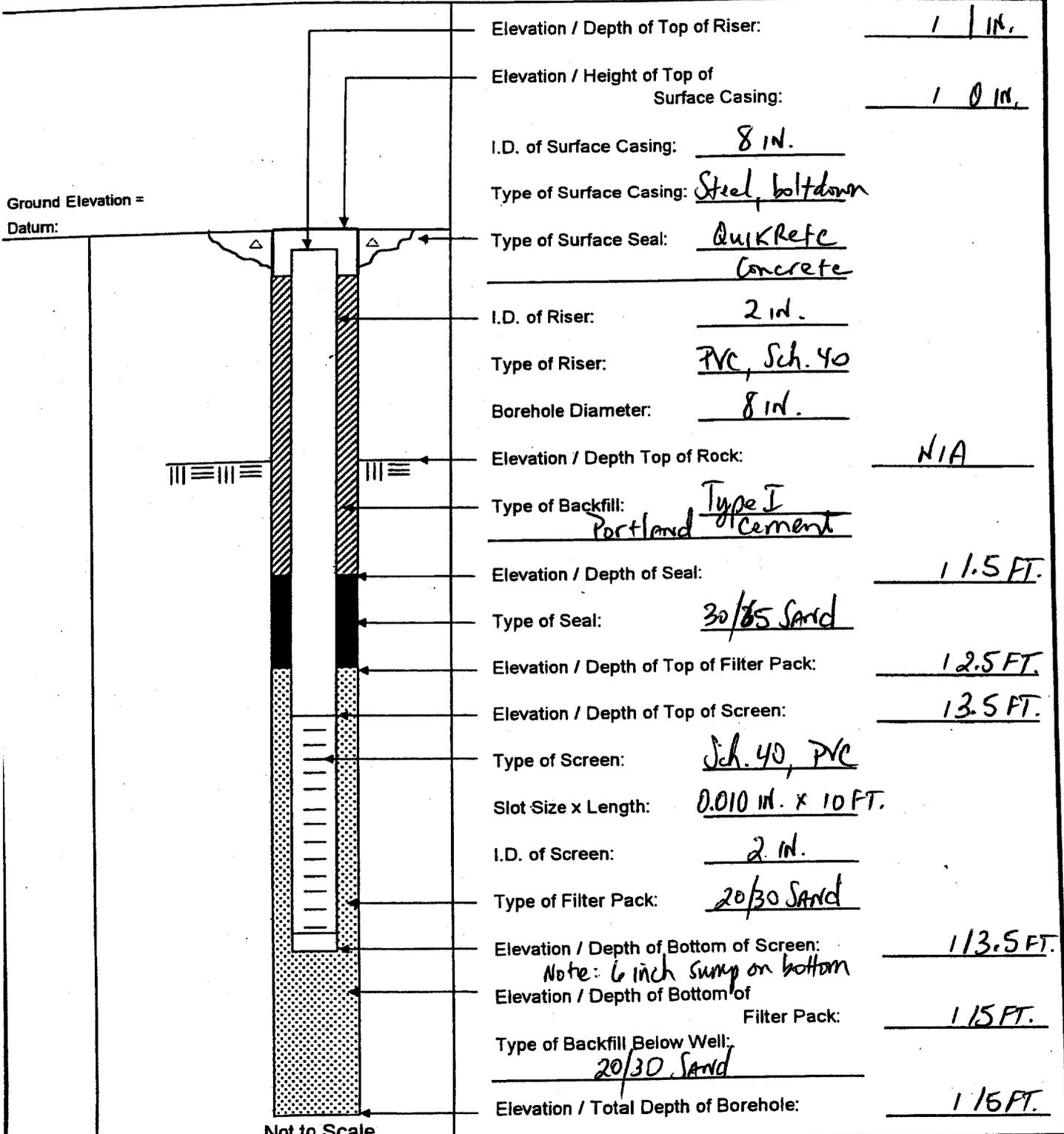
GEOLOGIST:

M. DALE

DEV. METHOD:

Submersible

EASTING:



Elevation / Depth of Top of Riser: 1 1/2 in.

Elevation / Height of Top of Surface Casing: 1 0 in.

I.D. of Surface Casing: 8 in.

Type of Surface Casing: Steel, bolt down

Type of Surface Seal: Quikrete Concrete

I.D. of Riser: 2 in.

Type of Riser: PVC, Sch. 40

Borehole Diameter: 8 in.

Elevation / Depth Top of Rock: N/A

Type of Backfill: Portland Type I Cement

Elevation / Depth of Seal: 1 1.5 FT.

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 1 2.5 FT.

Elevation / Depth of Top of Screen: 1 3.5 FT.

Type of Screen: Sch. 40, PVC

Slot Size x Length: 0.010 in. x 10 FT.

I.D. of Screen: 2 in.

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 1 13.5 FT.

Note: 6 inch sump on bottom
Elevation / Depth of Bottom of Filter Pack: 1 15 FT.

Type of Backfill Below Well: 20/30 Sand

Elevation / Total Depth of Borehole: 1 15 FT.

Not to Scale



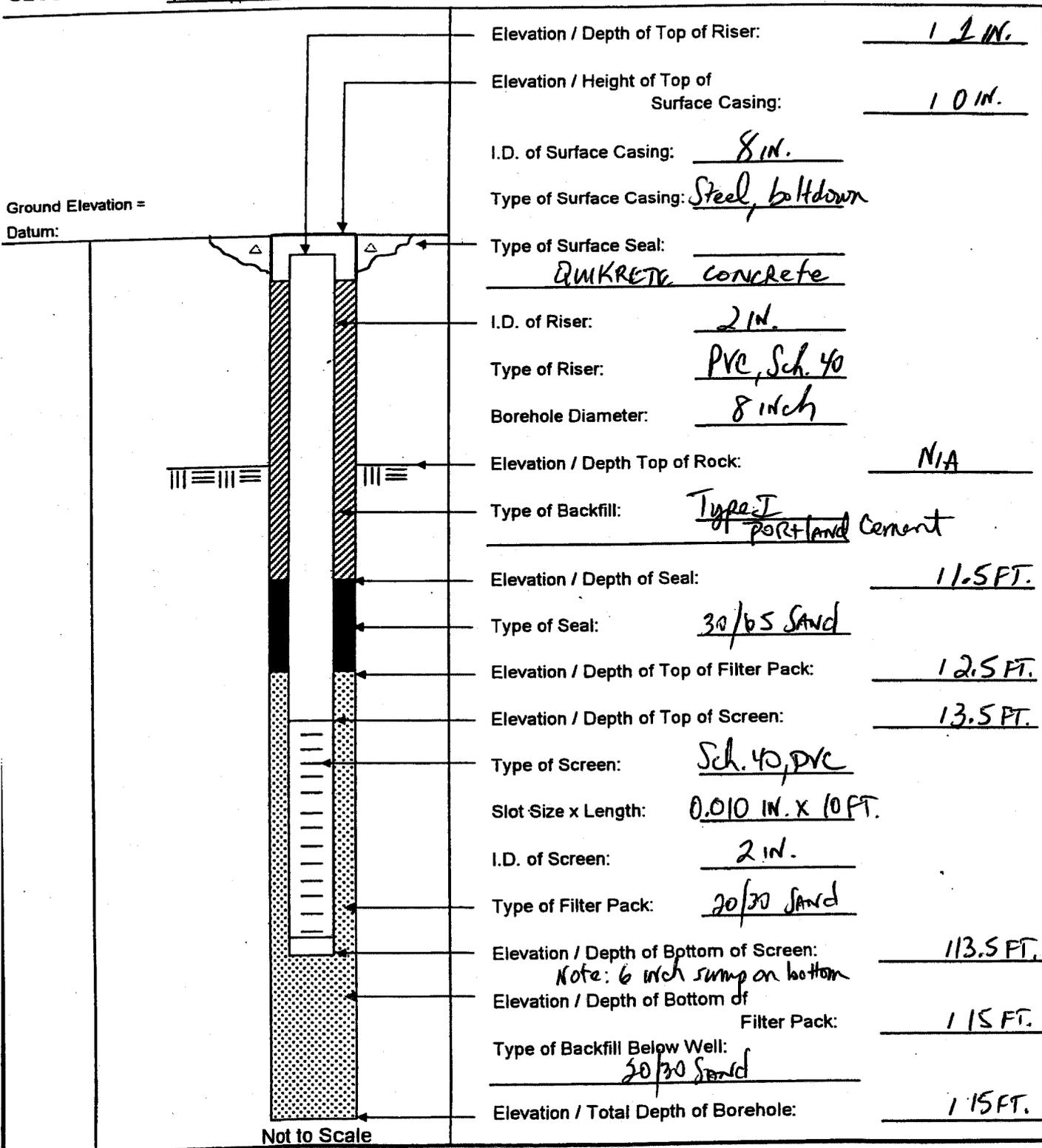
Tetra Tech NUS, Inc.

WELL No.:

CEF-334-338

MONITORING WELL SHEET

PROJECT: NAS CECIL FIELD DRILLING Co.: Groundwater PROTECTION BORING No.: 002
 PROJECT No.: 0039-3996 DRILLER: G. WAGNER DATE COMPLETED: 6/1/01
 SITE: JETC DRILLING METHOD: Hollow Stem NORTHING: _____
 GEOLOGIST: M. DALE DEV. METHOD: Submersible EASTING: _____



Ground Elevation = Datum:

Not to Scale

Elevation / Depth of Top of Riser: 1.2 IN.
 Elevation / Height of Top of Surface Casing: 1.0 IN.
 I.D. of Surface Casing: 8 IN.
 Type of Surface Casing: Steel, bolt-down
 Type of Surface Seal: QUKRETE concrete
 I.D. of Riser: 2 IN.
 Type of Riser: PVC, Sch. 40
 Borehole Diameter: 8 inch
 Elevation / Depth Top of Rock: N/A
 Type of Backfill: Type I portland Cement
 Elevation / Depth of Seal: 11.5 FT.
 Type of Seal: 30/65 Sand
 Elevation / Depth of Top of Filter Pack: 12.5 FT.
 Elevation / Depth of Top of Screen: 13.5 FT.
 Type of Screen: Sch. 40, PVC
 Slot Size x Length: 0.010 IN. X 10 FT.
 I.D. of Screen: 2 IN.
 Type of Filter Pack: 20/30 Sand
 Elevation / Depth of Bottom of Screen: 113.5 FT.
 Note: 6 inch sump on bottom
 Elevation / Depth of Bottom of Filter Pack: 115 FT.
 Type of Backfill Below Well: 20/30 Sand
 Elevation / Total Depth of Borehole: 115 FT.

BORING LOG



Tetra Tech NUS, Inc.

Page 1 of 1

PROJECT NAME: NAS CECIL FIELD, JETC ^{SARA} BORING NO.: CEF-334-335'
 PROJECT NUMBER: N3996 DATE: 6/1/11
 DRILLING COMPANY: GROUNDWATER PROTECTION GEOLOGIST: MRAV DALE
 DRILLING RIG: Diedrich D-120 DRILLER: GARY WAGNER

Sample No. and Type or RQD	Depth (Fl. or Run No.)	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Fl.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler #2	Borehole	Driller #2
	0-3	/			BRN	SILTY FINE SAND	SP	DRY					
	3-4	/			GRY	SILTY FINE SAND	SP	DRY				3	6
	4-7	/			BRN	SILTY FINE SAND	SP	DRY, wet @ 7'					
	7-14	/			LT BRN	SILTY FINE SAND	SP	wet					
EOB @ 14 feet													

* When rock or ~~or~~ rock brokenness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: Drilled overdrills approx. 1 foot typically.
GW says EOB @ 15 ft.

Drilling Area Background (ppm): 6

Converted to Well: Yes X No Well I.D. #: CEF-334-335'



Tetra Tech NUS, Inc.

WELL No.:

CEF-811-345

MONITORING WELL SHEET

PROJECT: NAS CECIL FIELD

DRILLING Co.:

Groundwater Protection

BORING No.:

003

PROJECT No.: 0039-3996

DRILLER:

G. WAGNER

DATE COMPLETED:

6/1/01

SITE: JRTC

DRILLING METHOD:

Hollow Stem

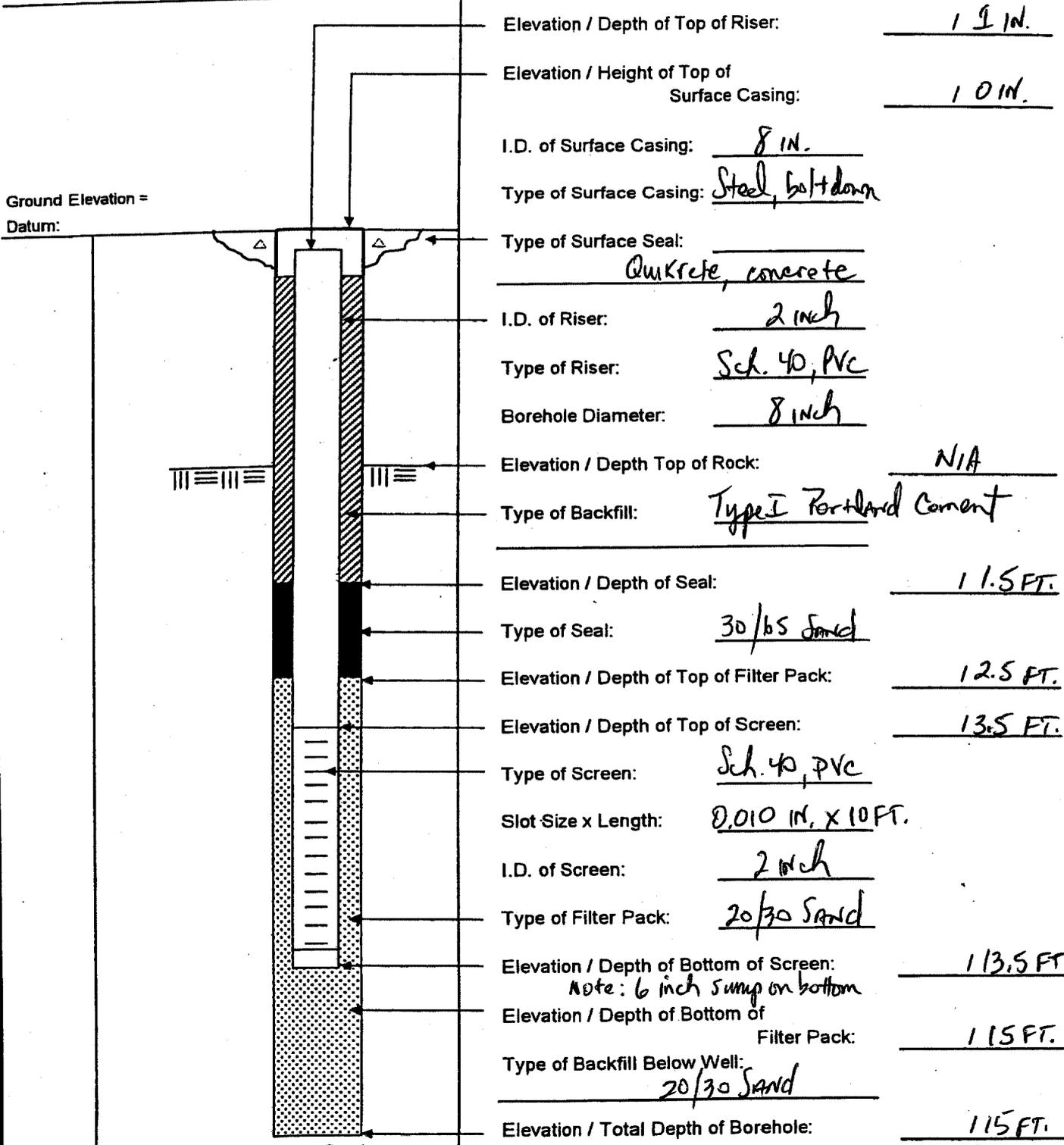
NORTHING:

GEOLOGIST: M. DALE

DEV. METHOD:

Submersible

EASTING:



Elevation / Depth of Top of Riser: 1.9 IN.

Elevation / Height of Top of Surface Casing: 1.0 IN.

I.D. of Surface Casing: 8 IN.

Type of Surface Casing: Steel, bolt down

Type of Surface Seal: Quikrete, concrete

I.D. of Riser: 2 inch

Type of Riser: Sch. 40, PVC

Borehole Diameter: 8 inch

Elevation / Depth Top of Rock: NIA

Type of Backfill: Type I Portland Cement

Elevation / Depth of Seal: 1.5 FT.

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 12.5 FT.

Elevation / Depth of Top of Screen: 13.5 FT.

Type of Screen: Sch. 40, PVC

Slot Size x Length: 0.010 IN. x 10 FT.

I.D. of Screen: 2 inch

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 113.5 FT.

Note: 6 inch sump on bottom
Elevation / Depth of Bottom of Filter Pack: 1.15 FT.

Type of Backfill Below Well: 20/30 Sand

Elevation / Total Depth of Borehole: 11.5 FT.

Not to Scale



Tetra Tech NUS, Inc.

WELL No.:

CEF-334-35I

MONITORING WELL SHEET

PROJECT: NAS CECIL FIELD

DRILLING Co.:

Groundwater

PROTECTION BORING No.:

005

PROJECT No.: ~~0039~~ 3996

DRILLER:

G. WAGNER

DATE COMPLETED:

6/1/01

SITE: JETC

DRILLING METHOD:

Hollow Stem

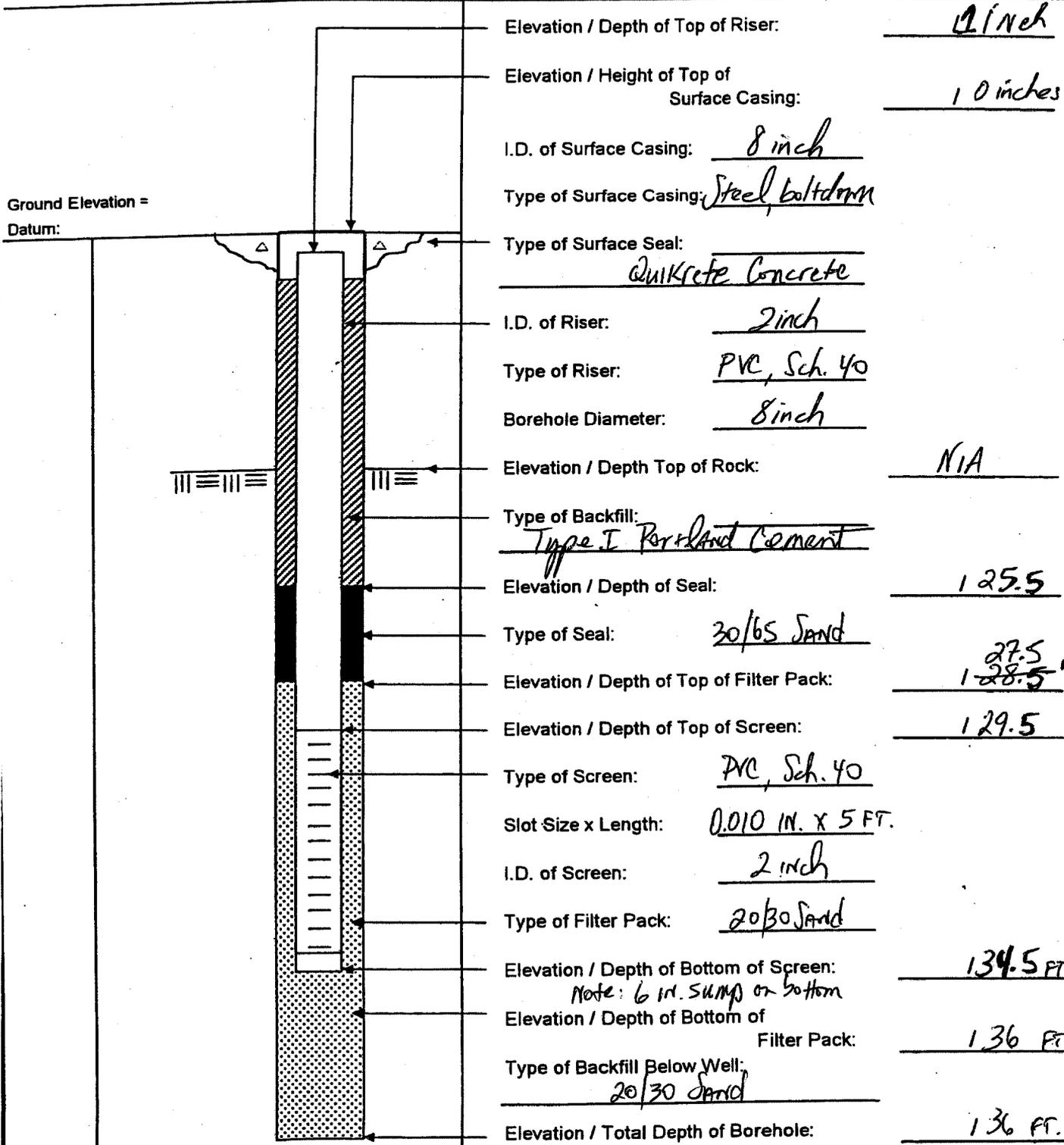
NORTHING:

GEOLOGIST: M. DALE

DEV. METHOD:

Submersible

EASTING:



Elevation / Depth of Top of Riser: 1 inch

Elevation / Height of Top of Surface Casing: 1.0 inches

I.D. of Surface Casing: 8 inch

Type of Surface Casing: Steel bolt-down

Type of Surface Seal: Quikrete Concrete

I.D. of Riser: 2 inch

Type of Riser: PVC, Sch. 40

Borehole Diameter: 8 inch

Elevation / Depth Top of Rock: NIA

Type of Backfill: Type I Portland Cement

Elevation / Depth of Seal: 125.5

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 27.5
128.5 MD

Elevation / Depth of Top of Screen: 129.5

Type of Screen: PVC, Sch. 40

Slot Size x Length: 0.010 IN. X 5 FT.

I.D. of Screen: 2 inch

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 134.5 FT.

Note: 6 in. SUMP on bottom
Elevation / Depth of Bottom of Filter Pack: 136 FT.

Type of Backfill Below Well: 20/30 Sand

Elevation / Total Depth of Borehole: 136 FT.

Not to Scale

Ground Elevation = Datum:

BORING LOG



Tetra Tech NUS, Inc.

Page 1 of 1

PROJECT NAME: NAS CECIL FIELD, JETC ^{SARA} BORING NO.: CEF-334-35I
 PROJECT NUMBER: N3996 DATE: 6/1/11
 DRILLING COMPANY: GROUNDWATER PROTECTION GEOLOGIST: MERVIN DALE
 DRILLING RIG: Diedrich D-120 DRILLER: GARY WAGNER

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 5" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler RZ	Screening	Driller RZ**
	0-4	/			BLK		SILTY FINE SAND	SP	DRY				0.8
	4-7	/			BLK		SILTY FINE SAND	SP	Petroleum odor	29			0.8
MD	7-18	/			LT. GRAY		SILTY FINE SAND		@ 6 to 7 bls.				
	7-18	/			LT. GRAY		SILTY FINE SAND	SP	Petroleum odor wet				
	18-20	/			DK. GRAY		SILTY FINE SAND	SP	wet				
	20-27	/			LT. GRAY		SILTY FINE SAND	SP					
	27-35	/			LT. BRN GRAY		SILTY FINE SAND	SP	Slight Pet. odor wet	0.0	1.5	0.8	0.3 MD
EOB @ 35 feet.													

* When rock or rock brokenness.

** Include monitoring reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks: Driller overdrills approx. 1 foot typically.
GR says EOB @ 35 feet.

Drilling Area 0.9 ^{MD}
 Background (ppm): 0.8

Converted to Well: Yes No Well I.D. #: CEF-334-35I

APPENDIX D

LABORATORY REPORTS



Southeast

ACCUTEST.

07/10/01

Technical Report for

Tetra Tech, NUS

NAS Cecil Field - JETC

3996JG0050145 WR#168CF-1

Accutest Job Number: F9965

Report to:

Tetra Tech, NUS

davisb@ttnus.com

ATTN: Bob Davis

Total number of pages in report: 28



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi
Harry Behzadi, Ph.D.
Laboratory Director

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Sample Summary

Tetra Tech, NUS

Job No: F9965

NAS Cecil Field - JETC

Project No: 3996JG0050145 WR#168CF-1

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F9965-1	06/13/01	10:55 ER	06/14/01	AQ	Ground Water	FL-SMW-10-03
F9965-2	06/13/01	11:11 ER	06/14/01	AQ	Ground Water	FL-SMW-8-03
F9965-3	06/13/01	17:00 ER	06/14/01	AQ	Ground Water	CEF-811-GW-16SR-03
F9965-4	06/13/01	17:15 ER	06/14/01	AQ	Ground Water	CEF-811-GW-17S-03
F9965-5	06/13/01	13:24 ER	06/14/01	AQ	Ground Water	CEF-811-GW-34S-01
F9965-6	06/13/01	14:00 ER	06/14/01	AQ	Ground Water	CEF-811-GW-21S-03

Report of Analysis

Client Sample ID:	FL-SMW-10-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-1	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006241.D	1	06/21/01	RA	n/a	n/a	GQR228
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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:	FL-SMW-10-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-1	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	98%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	112%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	117%		80-120%
98-08-8	aaa-Trifluorotoluene	102%		70-127%

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:	FL-SMW-10-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-1	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007887.D	1	06/22/01	MRE	06/20/01	OP3335	GAA329
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.0	ug/l	
208-96-8	Acenaphthylene	ND	4.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		33-141%
92-94-4	p-Terphenyl	84%		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: FL-SMW-10-03 Lab Sample ID: F9965-1 Matrix: AQ - Ground Water Method: FLORIDA-PRO SW846 3510C Project: NAS Cecil Field - JETC	Date Sampled: 06/13/01 Date Received: 06/14/01 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15609.D	1	06/20/01	MCC	06/19/01	OP3331	GOP605
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	0.25	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

Report of Analysis

Client Sample ID:	FL-SMW-8-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-2	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006300.D	1	06/23/01	RA	n/a	n/a	GQR230
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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:	FL-SMW-8-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-2	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	102%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	102%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	104%		80-120%
98-08-8	aaa-Trifluorotoluene	98%		70-127%

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:	FL-SMW-8-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-2	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007888.D	1	06/22/01	MRE	06/20/01	OP3335	GAA329
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.4	ug/l	
208-96-8	Acenaphthylene	ND	4.4	ug/l	
120-12-7	Anthracene	ND	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l	
218-01-9	Chrysene	ND	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l	
206-44-0	Fluoranthene	ND	2.2	ug/l	
86-73-7	Fluorene	ND	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l	
91-20-3	Naphthalene	ND	2.2	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l	
85-01-8	Phenanthrene	ND	2.2	ug/l	
129-00-0	Pyrene	ND	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	100%		33-141%
92-94-4	p-Terphenyl	77%		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:	FL-SMW-8-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-2	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15610.D	1	06/20/01	MCC	06/19/01	OP3331	GOP605
Run #2							

CAS No.	Compound	Result	RL	Units	Q
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	TPH (C8-C40)	ND	0.25	mg/l	
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CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
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84-15-1	o-Terphenyl	93%		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

Report of Analysis

Client Sample ID:	CEF-811-GW-16SR-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-3	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QR006301.D	1	06/23/01	RA	n/a	n/a	GQR230
Run #2 ^b	EF012198.D	1	06/26/01	RM	n/a	n/a	GEF348

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	14.3 ^c	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	33.3 ^c	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	0.76 ^c	1.0	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane ^d	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	4.3 ^c	3.0	ug/l	

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-811-GW-16SR-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-3	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	97%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	107%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	109%	105%	80-120%
98-08-8	aaa-Trifluorotoluene	113%		70-127%
98-08-8	aaa-Trifluorotoluene		103%	70-127%

(a) Confirmed by GC/MS

(b) Sample vial(s) contained significant headspace; reported results are considered minimum values. Confirmed by dual column analysis.

(c) Result is from Run# 2

(d) Elevated reporting limits due to matrix interference.

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-811-GW-16SR-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-3	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007889.D	1	06/22/01	MRE	06/20/01	OP3335	GAA329
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.0	ug/l	
208-96-8	Acenaphthylene	ND	4.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		33-141%
92-94-4	p-Terphenyl	74%		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-811-GW-16SR-03 Lab Sample ID: F9965-3 Matrix: AQ - Ground Water Method: FLORIDA-PRO SW846 3510C Project: NAS Cecil Field - JETC	Date Sampled: 06/13/01 Date Received: 06/14/01 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15631.D	8	06/21/01	SKW	06/19/01	OP3331	GOP606
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	6.16	2.2	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

Client Sample ID:	CEF-811-GW-17S-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-4	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006302.D	1	06/23/01	RA	n/a	n/a	GQR230
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	4.6	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total) ^a	ND	3.0	ug/l	

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-811-GW-17S-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-4	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	95%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	107%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	110%		80-120%
98-08-8	aaa-Trifluorotoluene	101%		70-127%

(a) Confirmed by reanalysis on dual column.

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-811-GW-17S-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-4	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007891.D	1	06/22/01	MRE	06/20/01	OP3335	GAA329
Run #2	AA007892.D	4	06/22/01	MRE	06/20/01	OP3335	GAA329

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND ^a	17	ug/l	
208-96-8	Acenaphthylene	ND ^a	17	ug/l	
120-12-7	Anthracene	ND	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l	
218-01-9	Chrysene	ND	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l	
206-44-0	Fluoranthene	ND	2.2	ug/l	
86-73-7	Fluorene	ND ^a	8.6	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l	
91-20-3	Naphthalene	38.3 ^a	8.6	ug/l	
90-12-0	1-Methylnaphthalene	28.8 ^a	8.6	ug/l	
91-57-6	2-Methylnaphthalene	19.7 ^a	8.6	ug/l	
85-01-8	Phenanthrene	ND	2.2	ug/l	
129-00-0	Pyrene	ND	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%	106%	33-141%
92-94-4	p-Terphenyl	76%	89%	31-122%

(a) Result is from Run# 2

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-811-GW-17S-03 Lab Sample ID: F9965-4 Matrix: AQ - Ground Water Method: FLORIDA-PRO SW846 3510C Project: NAS Cecil Field - JETC	Date Sampled: 06/13/01 Date Received: 06/14/01 Percent Solids: n/a
--	--

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15632.D	20	06/21/01	SKW	06/19/01	OP3331	GOP606
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	17.6	5.5	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	112%		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

Client Sample ID:	CEF-811-GW-34S-01	Date Sampled:	06/13/01
Lab Sample ID:	F9965-5	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 504.1 EPA 504		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DD02338.D	1	06/25/01	SKW	06/25/01	OP3366	GDD87
Run #2							

CAS No.	Compound	Result	RL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.020	ug/l	

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-811-GW-34S-01	Date Sampled:	06/13/01
Lab Sample ID:	F9965-5	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QR006303.D	1	06/24/01	RA	n/a	n/a	GQR230
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-811-GW-34S-01	Date Sampled:	06/13/01
Lab Sample ID:	F9965-5	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	111%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	104%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	108%		80-120%
98-08-8	aaa-Trifluorotoluene	100%		70-127%

(a) Confirmed by GC/MS

(b) Elevated reporting limits due to matrix interference.

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-811-GW-34S-01	Date Sampled: 06/13/01
Lab Sample ID: F9965-5	Date Received: 06/14/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: EPA 8310 SW846 3510C	
Project: NAS Cecil Field - JETC	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007893.D	1	06/22/01	MRE	06/20/01	OP3335	GAA329
Run #2 ^a	AA007909.D	5	06/22/01	MRE	06/20/01	OP3335	GAA329

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND ^b	21	ug/l	
208-96-8	Acenaphthylene	ND ^b	21	ug/l	
120-12-7	Anthracene	ND	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l	
218-01-9	Chrysene	ND	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l	
206-44-0	Fluoranthene	ND	2.2	ug/l	
86-73-7	Fluorene	ND ^b	11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l	
91-20-3	Naphthalene	ND ^b	11	ug/l	
90-12-0	1-Methylnaphthalene	ND ^b	11	ug/l	
91-57-6	2-Methylnaphthalene	ND ^b	11	ug/l	
85-01-8	Phenanthrene	ND	2.2	ug/l	
129-00-0	Pyrene	ND	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	317% ^c	364% ^c	33-141%
92-94-4	p-Terphenyl	64%	67%	31-122%

(a) Dilution required due to matrix interference.

(b) Result is from Run# 2

(c) Outside control limits due to matrix interference.

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-811-GW-34S-01	Date Sampled:	06/13/01
Lab Sample ID:	F9965-5	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15633.D	20	06/21/01	SKW	06/19/01	OP3331	GOP606
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	24.1	5.5	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	116%		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

Client Sample ID:	CEF-811-GW-34S-01	Date Sampled:	06/13/01
Lab Sample ID:	F9965-5	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	NAS Cecil Field - JETC		

Metals Analysis

Analyte	Result	RL	IDL	Units	DF	Prep	Analyzed By	Method
Lead	1.2 U	5.0	1.2	ug/l	1	06/15/01	06/18/01 JK	SW846 6010B

RL = Reporting Limit
 IDL = Instrument Detection Limit

U = Indicates a result < IDL
 B = Indicates a result > = IDL but < RL

Report of Analysis

Client Sample ID: CEF-811-GW-21S-03	Date Sampled: 06/13/01
Lab Sample ID: F9965-6	Date Received: 06/14/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8021B	
Project: NAS Cecil Field - JETC	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006243.D	1	06/21/01	RA	n/a	n/a	GQR228
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-811-GW-21S-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-6	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	98%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	113%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	119%		80-120%
98-08-8	aaa-Trifluorotoluene	102%		70-127%

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-811-GW-21S-03		Date Sampled:	06/13/01	
Lab Sample ID:	F9965-6		Date Received:	06/14/01	
Matrix:	AQ - Ground Water		Percent Solids:	n/a	
Method:	EPA 8310 SW846 3510C				
Project:	NAS Cecil Field - JETC				

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA007895.D	1	06/22/01	MRE	06/20/01	OP3335	GAA329
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.4	ug/l	
208-96-8	Acenaphthylene	ND	4.4	ug/l	
120-12-7	Anthracene	ND	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l	
218-01-9	Chrysene	ND	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l	
206-44-0	Fluoranthene	ND	2.2	ug/l	
86-73-7	Fluorene	ND	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l	
91-20-3	Naphthalene	ND	2.2	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l	
85-01-8	Phenanthrene	ND	2.2	ug/l	
129-00-0	Pyrene	ND	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	84%		33-141%
92-94-4	p-Terphenyl	84%		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-811-GW-21S-03	Date Sampled:	06/13/01
Lab Sample ID:	F9965-6	Date Received:	06/14/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15634.D	1	06/21/01	SKW	06/19/01	OP3331	GOP606
Run #2							

CAS No.	Compound	Result	RL	Units	Q
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	TPH (C8-C40)	ND	0.28	mg/l	
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CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
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84-15-1	o-Terphenyl	97%		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

Technical Report for

Tetra Tech, NUS

NAS Cecil Field - JETC

WORK RELEASE 168CF-1

Accutest Job Number: F10016

Report to:

Tetra Tech, NUS

davisb@ttnus.com

ATTN: Bob Davis

Total number of pages in report: 34



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Harry Behzadi, Ph.D.
Laboratory Director

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Sample Summary

Tetra Tech, NUS

Job No: F10016

NAS Cecil Field - JETC
 Project No: WORK RELEASE 168CF-1

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F10016-1	06/15/01	13:22 ER	06/16/01	AQ	Ground Water	CEF-334-GW-33S-01
F10016-2	06/15/01	13:14 ER	06/16/01	AQ	Ground Water	CEF-334-GW-32S-01
F10016-3	06/15/01	10:12 ER	06/16/01	AQ	Ground Water	CEF-334-GW-6S-03
F10016-4	06/15/01	15:15 ER	06/16/01	AQ	Ground Water	CEF-334-GW-1S-03
F10016-5	06/15/01	15:39 ER	06/16/01	AQ	Ground Water	CEF-811-GW-18S-03
F10016-6	06/15/01	00:00 ER	06/16/01	AQ	Ground Water	CEF-JETC-DU01-GW-03
F10016-7	06/15/01	10:12 ER	06/16/01	AQ	Ground Water	CEF-811-GW-8S-03

Report of Analysis

Client Sample ID: CEF-334-GW-33S-01 Lab Sample ID: F10016-1 Matrix: AQ - Ground Water Method: EPA 504.1 EPA 504 Project: NAS Cecil Field - JETC	Date Sampled: 06/15/01 Date Received: 06/16/01 Percent Solids: n/a
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	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DD02340.D	1	06/25/01	SKW	06/25/01	OP3366	GDD87
Run #2							

CAS No.	Compound	Result	RL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.020	ug/l	

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-334-GW-33S-01	Date Sampled:	06/15/01
Lab Sample ID:	F10016-1	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006292.D	1	06/23/01	RA	n/a	n/a	GQR230
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-334-GW-33S-01	Date Sampled:	06/15/01
Lab Sample ID:	F10016-1	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	101%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	97%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	99%		80-120%
98-08-8	aaa-Trifluorotoluene	97%		70-127%

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-334-GW-33S-01	Date Sampled:	06/15/01
Lab Sample ID:	F10016-1	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA008174.D	1	07/05/01	MRE	06/20/01	OP3338	GAA342
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.0	ug/l	
208-96-8	Acenaphthylene	ND	4.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

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

Client Sample ID: CEF-334-GW-33S-01 Lab Sample ID: F10016-1 Matrix: AQ - Ground Water Method: FLORIDA-PRO SW846 3510C Project: NAS Cecil Field - JETC	Date Sampled: 06/15/01 Date Received: 06/16/01 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15687.D	1	06/22/01	SKW	06/20/01	OP3341	GOP606
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	100%		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

Client Sample ID:	CEF-334-GW-33S-01	Date Sampled:	06/15/01
Lab Sample ID:	F10016-1	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	NAS Cecil Field - JETC		

Metals Analysis

Analyte	Result	RL	IDL	Units	DF	Prep	Analyzed By	Method
Lead	1.2 B	5.0	1.2	ug/l	1	06/19/01	06/21/01 JK	SW846 6010B

RL = Reporting Limit
IDL = Instrument Detection Limit

U = Indicates a result < IDL
B = Indicates a result > = IDL but < RL

Report of Analysis

Client Sample ID:	CEF-334-GW-32S-01	Date Sampled:	06/15/01
Lab Sample ID:	F10016-2	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 504.1 EPA 504		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DD02341.D	1	06/25/01	SKW	06/25/01	OP3366	GDD87
Run #2							

CAS No.	Compound	Result	RL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.020	ug/l	

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-334-GW-32S-01	Date Sampled:	06/15/01
Lab Sample ID:	F10016-2	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QR006293.D	1	06/23/01	RA	n/a	n/a	GQR230
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	2.1	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	7.6	3.0	ug/l	

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-334-GW-32S-01	Date Sampled:	06/15/01
Lab Sample ID:	F10016-2	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	103%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	97%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	100%		80-120%
98-08-8	aaa-Trifluorotoluene	98%		70-127%

(a) Confirmed by reanalysis on dissimilar column.

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-334-GW-32S-01		Date Sampled:	06/15/01	
Lab Sample ID:	F10016-2		Date Received:	06/16/01	
Matrix:	AQ - Ground Water		Percent Solids:	n/a	
Method:	EPA 8310 SW846 3510C				
Project:	NAS Cecil Field - JETC				

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA008175.D	1	07/05/01	MRE	06/20/01	OP3338	GAA342
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.4	ug/l	
208-96-8	Acenaphthylene	ND	4.4	ug/l	
120-12-7	Anthracene	ND	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l	
218-01-9	Chrysene	ND	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l	
206-44-0	Fluoranthene	ND	2.2	ug/l	
86-73-7	Fluorene	ND	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l	
91-20-3	Naphthalene	30.4	2.2	ug/l	
90-12-0	1-Methylnaphthalene	19.5	2.2	ug/l	
91-57-6	2-Methylnaphthalene	14.9	2.2	ug/l	
85-01-8	Phenanthrene	ND	2.2	ug/l	
129-00-0	Pyrene	ND	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		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

Report of Analysis

Client Sample ID:	CEF-334-GW-32S-01	Date Sampled:	06/15/01
Lab Sample ID:	F10016-2	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15710.D	2	06/23/01	SKW	06/20/01	OP3341	GOP607
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	2.30	0.55	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

Client Sample ID:	CEF-334-GW-32S-01	Date Sampled:	06/15/01
Lab Sample ID:	F10016-2	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	NAS Cecil Field - JETC		

Metals Analysis

Analyte	Result	RL	IDL	Units	DF	Prep	Analyzed By	Method
Lead	3.7 B	5.0	1.2	ug/l	1	06/19/01	06/21/01 JK	SW846 6010B

RL = Reporting Limit
IDL = Instrument Detection Limit

U = Indicates a result < IDL
B = Indicates a result > = IDL but < RL

Report of Analysis

Client Sample ID:	CEF-334-GW-6S-03		Date Sampled:	06/15/01
Lab Sample ID:	F10016-3		Date Received:	06/16/01
Matrix:	AQ - Ground Water		Percent Solids:	n/a
Method:	SW846 8021B			
Project:	NAS Cecil Field - JETC			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006289.D	1	06/23/01	RA	n/a	n/a	GQR230
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-334-GW-6S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-3	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	109%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	98%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	106%		80-120%
98-08-8	aaa-Trifluorotoluene	98%		70-127%

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-334-GW-6S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-3	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA008176.D	1	07/05/01	MRE	06/20/01	OP3338	GAA342
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.0	ug/l	
208-96-8	Acenaphthylene	ND	4.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		33-141%
92-94-4	p-Terphenyl	81%		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-334-GW-6S-03	Date Sampled: 06/15/01
Lab Sample ID: F10016-3	Date Received: 06/16/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: FLORIDA-PRO SW846 3510C	
Project: NAS Cecil Field - JETC	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15689.D	1	06/22/01	SKW	06/20/01	OP3341	GOP606
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	98%		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

Client Sample ID:	CEF-334-GW-1S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-4	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006294.D	1	06/23/01	RA	n/a	n/a	GQR230
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-334-GW-1S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-4	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	101%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	100%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	102%		80-120%
98-08-8	aaa-Trifluorotoluene	101%		70-127%

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-334-GW-1S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-4	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA008179.D	1	07/05/01	MRE	06/20/01	OP3338	GAA342
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.0	ug/l	
208-96-8	Acenaphthylene	ND	4.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	13.6	2.0	ug/l	
90-12-0	1-Methylnaphthalene	8.5	2.0	ug/l	
91-57-6	2-Methylnaphthalene	5.9	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		33-141%
92-94-4	p-Terphenyl	78%		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-334-GW-1S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-4	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15711.D	1	06/23/01	SKW	06/20/01	OP3341	GOP607
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.908	0.25	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

Client Sample ID:	CEF-811-GW-18S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-5	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006295.D	1	06/23/01	RA	n/a	n/a	GQR230
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-811-GW-18S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-5	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	101%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	100%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	101%		80-120%
98-08-8	aaa-Trifluorotoluene	98%		70-127%

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-811-GW-18S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-5	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA008180.D	1	07/05/01	MRE	06/20/01	OP3338	GAA342
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	10.3	4.0	ug/l	
208-96-8	Acenaphthylene	ND	4.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	22.8	2.0	ug/l	
90-12-0	1-Methylnaphthalene	9.6	2.0	ug/l	
91-57-6	2-Methylnaphthalene	10.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	117%		33-141%
92-94-4	p-Terphenyl	86%		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-811-GW-18S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-5	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15712.D	2	06/23/01	SKW	06/20/01	OP3341	GOP607
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	2.75	0.55	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	98%		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

Client Sample ID:	CEF-JETC-DU01-GW-03		Date Sampled:	06/15/01
Lab Sample ID:	F10016-6	Date Received:	06/16/01	
Matrix:	AQ - Ground Water	Percent Solids:	n/a	
Method:	SW846 8021B			
Project:	NAS Cecil Field - JETC			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006296.D	1	06/23/01	RA	n/a	n/a	GQR230
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-JETC-DU01-GW-03	Date Sampled: 06/15/01
Lab Sample ID: F10016-6	Date Received: 06/16/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8021B	
Project: NAS Cecil Field - JETC	

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	100%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	104%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	104%		80-120%
98-08-8	aaa-Trifluorotoluene	100%		70-127%

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-JETC-DU01-GW-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-6	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA008181.D	1	07/05/01	MRE	06/20/01	OP3338	GAA342
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.0	ug/l	
208-96-8	Acenaphthylene	ND	4.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		33-141%
92-94-4	p-Terphenyl	92%		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-JETC-DU01-GW-03	Date Sampled: 06/15/01
Lab Sample ID: F10016-6	Date Received: 06/16/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: FLORIDA-PRO SW846 3510C	
Project: NAS Cecil Field - JETC	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15695.D	1	06/23/01	SKW	06/20/01	OP3341	GOP606
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.277	0.28	mg/l	J
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

Report of Analysis

Client Sample ID:	CEF-811-GW-8S-03		Date Sampled:	06/15/01
Lab Sample ID:	F10016-7		Date Received:	06/16/01
Matrix:	AQ - Ground Water		Percent Solids:	n/a
Method:	SW846 8021B			
Project:	NAS Cecil Field - JETC			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006297.D	1	06/23/01	RA	n/a	n/a	GQR230
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-811-GW-8S-03	Date Sampled: 06/15/01
Lab Sample ID: F10016-7	Date Received: 06/16/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8021B	
Project: NAS Cecil Field - JETC	

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	101%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	94%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	96%		80-120%
98-08-8	aaa-Trifluorotoluene	97%		70-127%

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-811-GW-8S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-7	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA008182.D	1	07/06/01	MRE	06/20/01	OP3338	GAA342
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.0	ug/l	
208-96-8	Acenaphthylene	ND	4.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		33-141%
92-94-4	p-Terphenyl	76%		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-811-GW-8S-03	Date Sampled:	06/15/01
Lab Sample ID:	F10016-7	Date Received:	06/16/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	OP15713.D	1	06/23/01	SKW	06/20/01	OP3341	GOP607
Run #2	OP15810.D	1	06/28/01	SKW	06/26/01	OP3371	GOP609

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.216	0.25	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	47% ^b	24%	55-130%

(a) Surrogates outside of control limits, all values should be considered estimated.

(b) Outside control limits due to matrix interference. Confirmed by re-extraction and reanalysis.

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



Southeast

ACCUTEST

07/12/01

Technical Report for

Tetra Tech, NUS

NAS Cecil Field - JETC

Work Release 168CF-1

Accutest Job Number: F9982

Report to:

Tetra Tech, NUS

davisb@ttnus.com

ATTN: Bob Davis

Total number of pages in report: 25



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi
Harry Behzadi, Ph.D.
Laboratory Director

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Sample Summary

Tetra Tech, NUS

Job No: F9982

NAS Cecil Field - JETC

Project No: Work Release 168CF-1

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F9982-1	06/14/01	09:55 ER	06/15/01	AQ	Ground Water	CEF-334-GW-2SA-03
F9982-2	06/14/01	09:58 ER	06/15/01	AQ	Ground Water	CEF-334-GW-35I-01
F9982-3	06/14/01	11:55 ER	06/15/01	AQ	Ground Water	CEF-339-GW-29S-03
F9982-4	06/14/01	12:16 ER	06/15/01	AQ	Ground Water	CEF-339-GW-30S-03
F9982-5	06/14/01	14:08 ER	06/15/01	AQ	Ground Water	CEF-811-GW-31S-03

Report of Analysis

Client Sample ID:	CEF-334-GW-2SA-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-1	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QR006306.D	2	06/24/01	RA	n/a	n/a	GQR230
Run #2 ^a	QR006253.D	10	06/21/01	RA	n/a	n/a	GQR228

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	11.8 ^b	10	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	ug/l	
75-25-2	Bromoform	ND	2.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	2.0	ug/l	
67-66-3	Chloroform	ND	2.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	76.3 ^b	10	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/l	
127-18-4	Tetrachloroethene	ND	2.0	ug/l	
108-88-3	Toluene	86.4 ^b	10	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	ug/l	
79-01-6	Trichloroethene	ND	2.0	ug/l	
75-69-4	Trichlorofluoromethane ^c	ND	35	ug/l	
75-01-4	Vinyl chloride	ND	2.0	ug/l	
1330-20-7	Xylenes (total)	296 ^b	30	ug/l	

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-334-GW-2SA-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-1	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	158% ^d	122%	56-125%
352-33-0	1-Chloro-4-fluorobenzene	106%	114%	80-120%
352-33-0	1-Chloro-4-fluorobenzene	109%	117%	80-120%
98-08-8	aaa-Trifluorotoluene	103%	104%	70-127%

- (a) Confirmed by GC/MS
- (b) Result is from Run# 2
- (c) Elevated reporting limits due to matrix interference.
- (d) Outside control limits due to matrix interference.

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-334-GW-2SA-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-1	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA008168.D	1	07/05/01	MRE	06/20/01	OP3338	GAA342
Run #2 ^a	AA008190.D	10	07/06/01	MRE	06/20/01	OP3338	GAA343

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND ^b	40	ug/l	
208-96-8	Acenaphthylene	ND ^b	40	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND ^b	20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	378 ^b	20	ug/l	
90-12-0	1-Methylnaphthalene	172 ^b	20	ug/l	
91-57-6	2-Methylnaphthalene	181 ^b	20	ug/l	
85-01-8	Phenanthrene	ND ^b	20	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	123%	135%	33-141%
92-94-4	p-Terphenyl	84%	100%	31-122%

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

(b) Result is from Run# 2

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-334-GW-2SA-03 Lab Sample ID: F9982-1 Matrix: AQ - Ground Water Method: FLORIDA-PRO SW846 3510C Project: NAS Cecil Field - JETC	Date Sampled: 06/14/01 Date Received: 06/15/01 Percent Solids: n/a
--	--

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15708.D	16	06/23/01	SKW	06/20/01	OP3341	GOP607
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	14.6	4.0	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	107%		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

Client Sample ID:	CEF-334-GW-2SA-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-1	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	NAS Cecil Field - JETC		

Metals Analysis

Analyte	Result	RL	IDL	Units	DF	Prep	Analyzed By	Method
Lead	1.8 B	5.0	1.2	ug/l	1	06/18/01	06/19/01 JK	SW846 6010B

RL = Reporting Limit
IDL = Instrument Detection Limit

U = Indicates a result < IDL
B = Indicates a result > = IDL but < RL

Report of Analysis

Client Sample ID:	CEF-334-GW-35I-01	Date Sampled:	06/14/01
Lab Sample ID:	F9982-2	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 504.1 EPA 504		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DD02339.D	1	06/25/01	SKW	06/25/01	OP3366	GDD87
Run #2							

CAS No.	Compound	Result	RL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.020	ug/l	

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-334-GW-35I-01	Date Sampled:	06/14/01
Lab Sample ID:	F9982-2	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QR006304.D	1	06/24/01	RA	n/a	n/a	GQR230
Run #2 ^b	EF012197.D	1	06/26/01	RM	n/a	n/a	GEF348

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	2.0	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	5.8	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	1.6	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	1.6 ^c	3.0	ug/l	J

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-334-GW-35I-01	Date Sampled:	06/14/01
Lab Sample ID:	F9982-2	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	97%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	102%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	102%	104%	80-120%
98-08-8	aaa-Trifluorotoluene	110%		70-127%
98-08-8	aaa-Trifluorotoluene		101%	70-127%

(a) Confirmed by GC/MS

(b) Sample vial(s) contained significant headspace; reported results are considered minimum values.

(c) Result is from Run# 2

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-334-GW-351-01	Date Sampled:	06/14/01
Lab Sample ID:	F9982-2	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA008186.D	1	07/06/01	MRE	06/20/01	OP3338	GAA343
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.0	ug/l	
208-96-8	Acenaphthylene	ND	4.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		33-141%
92-94-4	p-Terphenyl	78%		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-334-GW-351-01	Date Sampled:	06/14/01
Lab Sample ID:	F9982-2	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15682.D	1	06/22/01	SKW	06/20/01	OP3341	GOP606
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.528	0.28	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	99%		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

Client Sample ID:	CEF-334-GW-35I-01	Date Sampled:	06/14/01
Lab Sample ID:	F9982-2	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	NAS Cecil Field - JETC		

Metals Analysis

Analyte	Result	RL	IDL	Units	DF	Prep	Analyzed By	Method
Lead	4.4 B	5.0	1.2	ug/l	1	06/18/01	06/19/01 JK	SW846 6010B

RL = Reporting Limit
IDL = Instrument Detection Limit

U = Indicates a result < IDL
B = Indicates a result > = IDL but < RL

Report of Analysis

Client Sample ID:	CEF-339-GW-29S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-3	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EF012155.D	1	06/22/01	RM	n/a	n/a	GEF345
Run #2 ^a	QR006305.D	1	06/24/01	RA	n/a	n/a	GQR230

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND ^b	1.0	ug/l	
75-27-4	Bromodichloromethane	ND ^b	1.0	ug/l	
75-25-2	Bromoform	ND ^b	1.0	ug/l	
74-83-9	Bromomethane	ND ^b	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND ^b	1.0	ug/l	
108-90-7	Chlorobenzene	ND ^b	1.0	ug/l	
124-48-1	Dibromochloromethane	ND ^b	1.0	ug/l	
75-00-3	Chloroethane	ND ^b	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND ^b	1.0	ug/l	
67-66-3	Chloroform	ND ^b	1.0	ug/l	
74-87-3	Chloromethane	ND ^b	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND ^b	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND ^b	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND ^b	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND ^b	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND ^b	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND ^b	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND ^b	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND ^b	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND ^b	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND ^b	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND ^b	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND ^b	1.0	ug/l	
100-41-4	Ethylbenzene	21.2	1.0	ug/l	
75-09-2	Methylene chloride	ND ^b	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND ^b	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND ^b	1.0	ug/l	
127-18-4	Tetrachloroethene	ND ^b	1.0	ug/l	
108-88-3	Toluene	ND ^b	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND ^b	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND ^b	1.0	ug/l	
79-01-6	Trichloroethene	ND ^b	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND ^b	1.0	ug/l	
75-01-4	Vinyl chloride	ND ^b	1.0	ug/l	
1330-20-7	Xylenes (total)	4.5	3.0	ug/l	

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-339-GW-29S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-3	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane		96%	56-125%
352-33-0	1-Chloro-4-fluorobenzene		103%	80-120%
352-33-0	1-Chloro-4-fluorobenzene	102%	106%	80-120%
98-08-8	aaa-Trifluorotoluene		99%	70-127%
98-08-8	aaa-Trifluorotoluene	103%		70-127%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.

(b) Result is from Run# 2

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-339-GW-29S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-3	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA008170.D	1	07/05/01	MRE	06/20/01	OP3338	GAA342
Run #2 ^a	AA008191.D	5	07/06/01	MRE	06/20/01	OP3338	GAA343

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND ^b	20	ug/l	
208-96-8	Acenaphthylene	ND ^b	20	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND ^b	10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	133 ^b	10	ug/l	
90-12-0	1-Methylnaphthalene	93.5 ^b	10	ug/l	
91-57-6	2-Methylnaphthalene	71.7 ^b	10	ug/l	
85-01-8	Phenanthrene	ND ^b	10	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%	93%	33-141%
92-94-4	p-Terphenyl	72%	79%	31-122%

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

(b) Result is from Run# 2

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-339-GW-29S-03	Date Sampled: 06/14/01
Lab Sample ID: F9982-3	Date Received: 06/15/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: FLORIDA-PRO SW846 3510C	
Project: NAS Cecil Field - JETC	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15709.D	10	06/23/01	SKW	06/20/01	OP3341	GOP607
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	8.00	2.8	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	103%		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

Client Sample ID:	CEF-339-GW-30S-03		Date Sampled:	06/14/01
Lab Sample ID:	F9982-4		Date Received:	06/15/01
Matrix:	AQ - Ground Water		Percent Solids:	n/a
Method:	SW846 8021B			
Project:	NAS Cecil Field - JETC			

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	QR006251.D	1	06/21/01	RA	n/a	n/a	GQR228

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	0.75	1.0	ug/l	J
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-339-GW-30S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-4	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	95%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	116%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	119%		80-120%
98-08-8	aaa-Trifluorotoluene	104%		70-127%

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-339-GW-30S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-4	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA008187.D	1	07/06/01	MRE	06/20/01	OP3338	GAA343
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.4	ug/l	
208-96-8	Acenaphthylene	ND	4.4	ug/l	
120-12-7	Anthracene	ND	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l	
218-01-9	Chrysene	ND	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l	
206-44-0	Fluoranthene	ND	2.2	ug/l	
86-73-7	Fluorene	ND	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l	
91-20-3	Naphthalene	ND	2.2	ug/l	
90-12-0	1-Methylnaphthalene	4.0	2.2	ug/l	
91-57-6	2-Methylnaphthalene	2.2	2.2	ug/l	
85-01-8	Phenanthrene	ND	2.2	ug/l	
129-00-0	Pyrene	ND	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%		33-141%
92-94-4	p-Terphenyl	87%		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-339-GW-30S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-4	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	OP15684.D	1	06/22/01	SKW	06/20/01	OP3341	GOP606
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	0.28	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	90%		55-130%	

(a) Sample not preserved, adjusted to pH < 2 prior to extraction.

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-811-GW-31S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-5	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006252.D	1	06/21/01	RA	n/a	n/a	GQR228
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-811-GW-31S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-5	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	94%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	107%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	109%		80-120%
98-08-8	aaa-Trifluorotoluene	99%		70-127%

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-811-GW-31S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9982-5	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	AA008172.D	1	07/05/01	MRE	06/20/01	OP3338	GAA342
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	7.9	4.4	ug/l	
208-96-8	Acenaphthylene	ND	4.4	ug/l	
120-12-7	Anthracene	ND	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l	
218-01-9	Chrysene	ND	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l	
206-44-0	Fluoranthene	ND	2.2	ug/l	
86-73-7	Fluorene	3.6	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l	
91-20-3	Naphthalene	ND	2.2	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l	
85-01-8	Phenanthrene	4.6	2.2	ug/l	
129-00-0	Pyrene	ND	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	87%		33-141%
92-94-4	p-Terphenyl	78%		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-811-GW-31S-03	Date Sampled: 06/14/01
Lab Sample ID: F9982-5	Date Received: 06/15/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: FLORIDA-PRO SW846 3510C	
Project: NAS Cecil Field - JETC	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15686.D	1	06/22/01	SKW	06/20/01	OP3341	GOP606
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.490	0.25	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	94%		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



Southeast

ACCUTEST

07/17/01

Technical Report for

Tetra Tech, NUS

NAS Cecil Field - JETC

Work Release 168CF-1

Accutest Job Number: F9980

Report to:

Tetra Tech, NUS

davisb@ttnus.com

ATTN: Bob Davis

Total number of pages in report: 20



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi
Harry Behzadi, Ph.D.
Laboratory Director

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Sample Summary

Tetra Tech, NUS

Job No: F9980

NAS Cecil Field - JETC

Project No: Work Release 168CF-1

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F9980-1	06/14/01	11:28 ER	06/15/01	SO	Soil	CEF-JETC-IDW-001
F9980-2	06/14/01	11:55 ER	06/15/01	SO	Soil	CEF-JETC-IDW-002
F9980-3	06/14/01	13:55 ER	06/15/01	AQ	Ground Water	CEF-339-GW-28S-03
F9980-4	06/14/01	00:00 ER	06/15/01	AQ	Ground Water	CEF-JETC-DUO2-GW-03

Report of Analysis

Client Sample ID:	CEF-JETC-IDW-001		Date Sampled:	06/14/01
Lab Sample ID:	F9980-1		Date Received:	06/15/01
Matrix:	SO - Soil		Percent Solids:	91.5
Method:	SW846 8260B			
Project:	NAS Cecil Field - JETC			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K005887.D	1	06/27/01	NAF	n/a	n/a	VK167
Run #2							

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	50	ug/kg	
71-43-2	Benzene	ND	5.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	ug/kg	
75-25-2	Bromoform	ND	5.0	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	ug/kg	
67-66-3	Chloroform	ND	5.0	ug/kg	
75-15-0	Carbon disulfide	ND	10	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	ug/kg	
591-78-6	2-Hexanone	ND	10	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/kg	
74-83-9	Methyl bromide	ND	5.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	ug/kg	
75-09-2	Methylene chloride	ND	10	ug/kg	
78-93-3	Methyl ethyl ketone	ND	10	ug/kg	
100-42-5	Styrene	ND	5.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	ug/kg	
108-88-3	Toluene	ND	5.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	ug/kg	

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-JETC-IDW-001	Date Sampled:	06/14/01
Lab Sample ID:	F9980-1	Date Received:	06/15/01
Matrix:	SO - Soil	Percent Solids:	91.5
Method:	SW846 8260B		
Project:	NAS Cecil Field - JETC		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		75-125%
2037-26-5	Toluene-D8	100%		75-125%
460-00-4	4-Bromofluorobenzene	102%		72-137%
17060-07-0	1,2-Dichloroethane-D4	116%		68-125%

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-JETC-IDW-001	Date Sampled:	06/14/01
Lab Sample ID:	F9980-1	Date Received:	06/15/01
Matrix:	SO - Soil	Percent Solids:	91.5
Method:	FLORIDA-PRO SW846 3550B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15717.D	1	06/23/01	SKW	06/22/01	OP3352	GOP607
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	10.9	9.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		66-130%

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

Client Sample ID: CEF-JETC-IDW-001	Date Sampled: 06/14/01
Lab Sample ID: F9980-1	Date Received: 06/15/01
Matrix: SO - Soil	Percent Solids: 91.5
Project: NAS Cecil Field - JETC	

Metals Analysis

Analyte	Result	RL	IDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.44 B	0.56	0.35	mg/kg	1	06/20/01	06/25/01 JK	SW846 6010B
Cadmium	0.030 U	0.45	0.030	mg/kg	1	06/20/01	06/25/01 JK	SW846 6010B
Chromium	2.6	1.1	0.039	mg/kg	1	06/20/01	06/25/01 JK	SW846 6010B
Lead	2.9 B	11	0.13	mg/kg	1	06/20/01	06/25/01 JK	SW846 6010B

RL = Reporting Limit
IDL = Instrument Detection Limit

U = Indicates a result < IDL
B = Indicates a result > = IDL but < RL

Report of Analysis

Client Sample ID: CEF-JETC-IDW-001	Date Sampled: 06/14/01
Lab Sample ID: F9980-1	Date Received: 06/15/01
Matrix: SO - Soil	Percent Solids: 91.5
Project: NAS Cecil Field - JETC	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed By	Method
Solids, Percent	91.5		%	1	06/26/01 LIR	EPA 160.3 M
Solids, Percent	91.5		%	1	06/26/01 LIR	EPA 160.3 M
Total Organic Halides	< 10	10	mg/kg	1	07/03/01 ANJ	SW846 9023

RL = Reporting Limit

Report of Analysis

Client Sample ID: CEF-JETC-IDW-002	Date Sampled: 06/14/01
Lab Sample ID: F9980-2	Date Received: 06/15/01
Matrix: SO - Soil	Percent Solids: 79.6
Method: SW846 8260B	
Project: NAS Cecil Field - JETC	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K005905.D	50	06/28/01	NAF	n/a	n/a	VK168
Run #2							

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	2900	ug/kg	
71-43-2	Benzene	ND	290	ug/kg	
75-27-4	Bromodichloromethane	ND	290	ug/kg	
75-25-2	Bromoform	ND	290	ug/kg	
108-90-7	Chlorobenzene	ND	290	ug/kg	
75-00-3	Chloroethane	ND	290	ug/kg	
67-66-3	Chloroform	ND	290	ug/kg	
75-15-0	Carbon disulfide	ND	590	ug/kg	
56-23-5	Carbon tetrachloride	ND	290	ug/kg	
75-34-3	1,1-Dichloroethane	ND	290	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	290	ug/kg	
107-06-2	1,2-Dichloroethane	ND	290	ug/kg	
78-87-5	1,2-Dichloropropane	ND	290	ug/kg	
124-48-1	Dibromochloromethane	ND	290	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	290	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	290	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	290	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	290	ug/kg	
100-41-4	Ethylbenzene	331	290	ug/kg	
591-78-6	2-Hexanone	ND	590	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	590	ug/kg	
74-83-9	Methyl bromide	ND	290	ug/kg	
74-87-3	Methyl chloride	ND	290	ug/kg	
75-09-2	Methylene chloride	ND	590	ug/kg	
78-93-3	Methyl ethyl ketone	ND	590	ug/kg	
100-42-5	Styrene	ND	290	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	290	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	290	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	290	ug/kg	
127-18-4	Tetrachloroethylene	ND	290	ug/kg	
108-88-3	Toluene	ND	290	ug/kg	
79-01-6	Trichloroethylene	ND	290	ug/kg	
75-01-4	Vinyl chloride	ND	290	ug/kg	
1330-20-7	Xylene (total)	1540	880	ug/kg	

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-JETC-IDW-002	Date Sampled:	06/14/01
Lab Sample ID:	F9980-2	Date Received:	06/15/01
Matrix:	SO - Soil	Percent Solids:	79.6
Method:	SW846 8260B		
Project:	NAS Cecil Field - JETC		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		75-125%
2037-26-5	Toluene-D8	100%		75-125%
460-00-4	4-Bromofluorobenzene	100%		72-137%
17060-07-0	1,2-Dichloroethane-D4	119%		68-125%

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-JETC-IDW-002	Date Sampled: 06/14/01
Lab Sample ID: F9980-2	Date Received: 06/15/01
Matrix: SO - Soil	Percent Solids: 79.6
Method: FLORIDA-PRO SW846 3550B	
Project: NAS Cecil Field - JETC	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15744.D	10	06/25/01	SKW	06/22/01	OP3352	GOP608
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	408	100	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	93%		66-130%	

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

Client Sample ID:	CEF-JETC-IDW-002	Date Sampled:	06/14/01
Lab Sample ID:	F9980-2	Date Received:	06/15/01
Matrix:	SO - Soil	Percent Solids:	79.6
Project:	NAS Cecil Field - JETC		

Metals Analysis

Analyte	Result	RL	IDL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.38 U	0.61	0.38	mg/kg	1	06/20/01	06/25/01 JK	SW846 6010B
Cadmium	0.094 B	0.49	0.033	mg/kg	1	06/20/01	06/25/01 JK	SW846 6010B
Chromium	5.6	1.2	0.043	mg/kg	1	06/20/01	06/25/01 JK	SW846 6010B
Lead	6.7 B	12	0.14	mg/kg	1	06/20/01	06/25/01 JK	SW846 6010B

RL = Reporting Limit
 IDL = Instrument Detection Limit

U = Indicates a result < IDL
 B = Indicates a result > = IDL but < RL

Report of Analysis

Client Sample ID:	CEF-JETC-IDW-002	Date Sampled:	06/14/01
Lab Sample ID:	F9980-2	Date Received:	06/15/01
Matrix:	SO - Soil	Percent Solids:	79.6
Project:	NAS Cecil Field - JETC		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed By	Method
Solids, Percent	79.6		%	1	06/26/01 LIR	EPA 160.3 M
Solids, Percent	79.6		%	1	06/26/01 LIR	EPA 160.3 M
Total Organic Halides	< 10	10	mg/kg	1	07/03/01 ANJ	SW846 9023

Report of Analysis

Client Sample ID:	CEF-339-GW-28S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9980-3	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QR006244.D	1	06/21/01	RA	n/a	n/a	GQR228
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	2.3	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	41.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	0.90	1.0	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	6.2	3.0	ug/l	

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-339-GW-28S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9980-3	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	95%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	113%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	116%		80-120%
98-08-8	aaa-Trifluorotoluene	104%		70-127%

(a) Confirmed by GC/MS

(b) Elevated reporting limits due to matrix interference.

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-339-GW-28S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9980-3	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA008166.D	1	07/05/01	MRE	06/20/01	OP3338	GAA342
Run #2 ^a	AA008188.D	4	07/06/01	MRE	06/20/01	OP3338	GAA343

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND ^b	17	ug/l	
208-96-8	Acenaphthylene	ND ^b	17	ug/l	
120-12-7	Anthracene	ND	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l	
218-01-9	Chrysene	ND	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l	
206-44-0	Fluoranthene	ND	2.2	ug/l	
86-73-7	Fluorene	ND ^b	8.6	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l	
91-20-3	Naphthalene	101 ^b	8.6	ug/l	
90-12-0	1-Methylnaphthalene	92.8 ^b	8.6	ug/l	
91-57-6	2-Methylnaphthalene	102 ^b	8.6	ug/l	
85-01-8	Phenanthrene	ND ^b	8.6	ug/l	
129-00-0	Pyrene	ND	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	114%	112%	33-141%
92-94-4	p-Terphenyl	86%	95%	31-122%

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

(b) Result is from Run# 2

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-339-GW-28S-03	Date Sampled:	06/14/01
Lab Sample ID:	F9980-3	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15706.D	10	06/23/01	SKW	06/20/01	OP3341	GOP607
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	13.6	2.8	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	99%		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

Client Sample ID:	CEF-JETC-DUO2-GW-03	Date Sampled:	06/14/01
Lab Sample ID:	F9980-4	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QR006245.D	1	06/21/01	RA	n/a	n/a	GQR228
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	2.2	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	42.2	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	0.91	1.0	ug/l	J
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane ^b	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	5.9	3.0	ug/l	

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-JETC-DUO2-GW-03	Date Sampled:	06/14/01
Lab Sample ID:	F9980-4	Date Received:	06/15/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	93%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	115%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	118%		80-120%
98-08-8	aaa-Trifluorotoluene	106%		70-127%

(a) Confirmed by GC/MS

(b) Elevated reporting limits due to matrix interference.

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-JETC-DUO2-GW-03		Date Sampled:	06/14/01
Lab Sample ID:	F9980-4		Date Received:	06/15/01
Matrix:	AQ - Ground Water		Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C			
Project:	NAS Cecil Field - JETC			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA008167.D	1	07/05/01	MRE	06/20/01	OP3338	GAA342
Run #2 ^a	AA008189.D	5	07/06/01	MRE	06/20/01	OP3338	GAA343

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND ^b	21	ug/l	
208-96-8	Acenaphthylene	ND ^b	21	ug/l	
120-12-7	Anthracene	ND	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l	
218-01-9	Chrysene	ND	2.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l	
206-44-0	Fluoranthene	ND	2.2	ug/l	
86-73-7	Fluorene	ND ^b	11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l	
91-20-3	Naphthalene	132 ^b	11	ug/l	
90-12-0	1-Methylnaphthalene	118 ^b	11	ug/l	
91-57-6	2-Methylnaphthalene	130 ^b	11	ug/l	
85-01-8	Phenanthrene	ND ^b	11	ug/l	
129-00-0	Pyrene	ND	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	129%	128%	33-141%
92-94-4	p-Terphenyl	94%	101%	31-122%

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

(b) Result is from Run# 2

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-JETC-DUO2-GW-03 Lab Sample ID: F9980-4 Matrix: AQ - Ground Water Method: FLORIDA-PRO SW846 3510C Project: NAS Cecil Field - JETC	Date Sampled: 06/14/01 Date Received: 06/15/01 Percent Solids: n/a
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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP15707.D	16	06/23/01	SKW	06/20/01	OP3341	GOP607
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	13.8	4.0	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



Southeast

ACCUTEST®

08/17/01

Technical Report for

Tetra Tech, NUS

NAS Cecil Field - JETC

WORK RELEASE 168CF-3

Accutest Job Number: F10515

Report to:

Tetra Tech, NUS

davisb@ttnus.com

ATTN: Bob Davis

Total number of pages in report: 8



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

H. Behzadi
Harry Behzadi, Ph.D.
Laboratory Director

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Sample Summary

Tetra Tech, NUS

Job No: F10515

NAS Cecil Field - JETC
Project No: WORK RELEASE 168CF-3

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
F10515-1	08/07/01	10:05 ER	08/07/01	AQ	Ground Water	CEF-334-GW-35I-02
F10515-2	08/07/01	09:59 ER	08/07/01	AQ	Ground Water	CEF-NG-GW-24S-01

Report of Analysis

Client Sample ID:	CEF-334-GW-35I-02	Date Sampled:	08/07/01
Lab Sample ID:	F10515-1	Date Received:	08/07/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	QR006802.D	1	08/09/01	RA	n/a	n/a	GQR262
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	1.3	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-334-GW-35I-02	Date Sampled:	08/07/01
Lab Sample ID:	F10515-1	Date Received:	08/07/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	102%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	102%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	111%		80-120%
98-08-8	aaa-Trifluorotoluene	116%		70-127%

(a) Confirmed by reanalysis on dissimilar column.

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-24S-01	Date Sampled: 08/07/01
Lab Sample ID: F10515-2	Date Received: 08/07/01
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8021B	
Project: NAS Cecil Field - JETC	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	QR006803.D	1	08/09/01	RA	n/a	n/a	GQR262
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
110-75-8	2-Chloroethylvinyl ether	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

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-24S-01	Date Sampled:	08/07/01
Lab Sample ID:	F10515-2	Date Received:	08/07/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8021B		
Project:	NAS Cecil Field - JETC		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
75-29-6	2-Chloropropane	101%		56-125%
352-33-0	1-Chloro-4-fluorobenzene	100%		80-120%
352-33-0	1-Chloro-4-fluorobenzene	108%		80-120%
98-08-8	aaa-Trifluorotoluene	97%		70-127%

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-24S-01	Date Sampled:	08/07/01
Lab Sample ID:	F10515-2	Date Received:	08/07/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 8310 SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA008388.D	1	08/10/01	MRE	08/09/01	OP3621	GAA354
Run #2							

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	4.0	ug/l	
208-96-8	Acenaphthylene	ND	4.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	2.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		33-141%
92-94-4	p-Terphenyl	99%		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-24S-01	Date Sampled:	08/07/01
Lab Sample ID:	F10515-2	Date Received:	08/07/01
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Cecil Field - JETC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP16541.D	1	08/11/01	MCC	08/09/01	OP3624	GOP638
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	0.28	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	83%		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