N60200.AR.002943
NAS CECIL FIELD, FL
5090.3a

FIRST SEMI-ANNUAL YEAR 3 GROUNDWATER MONITORING LETTER REPORT FOR DAY TANK 1 NAS CECIL FIELD FL

5/11/2001

TETRA TECH NUS INC

TETRA TECH NUS, INC.
7018 A.C. Skinner Parkway ■ Suite 250 ■ Jacksonville, FL 32256
(904) 281-0400 ■ FAX (904) 281-0070 ■ www.tetratech.com

Document Tracking No. 01JAX0078

May 11, 2001

Project Number 0486

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

Reference: Clean Contract No. N62467-94-D0888
Contract Task Order No. 0121

Subject: Groundwater Monitoring Report, 1st Semi-Annual, Year 3
July 2000-January 2001
Day Tank 1
Former Naval Air Station Cecil Field
Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this semi-annual Groundwater Monitoring Report for the referenced Contract Task Order (CTO) for the Day Tank 1 site. This report was prepared for the United States Navy Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) under CTO-0121, for the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract Number N62467-94-D0888. This report summarizes the fieldwork and analytical results for the subject site at the former Naval Air Station Cecil Field (NASCF) for the period July 2000 to January 2001 (Figure 1). Fieldwork associated with this deliverable was performed on January 29, 2001. The guidance document for this report is Chapter 62-770, Florida Administrative Code (FAC).

BACKGROUND

This report documents the fifth semi-annual groundwater sampling event in the Florida Department of Environmental Protection (FDEP) approved monitoring program for the Day Tank 1 site. The semi-annual monitoring report previously submitted (October 2000) recommended the installation of additional monitoring wells to further delineate the dissolved hydrocarbon plume and determine if the Day Tank 1 plume had commingled with the plume at Building 824A, (located to the southeast of the Day Tank 1 site). The Building 824A site is a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site with chlorinated solvents and petroleum compounds present in the groundwater. Data from the Building 824A investigation was presented at the March 2001 Base Closure Team (BCT) meeting. The data presented suggests that the Day Tank 1 and Building 824A plumes are commingled. Also, the extent of the plume is such that multiple monitoring wells at various depths will be required to delineate the plume. Attachment A contains a copy of one of the slides presented at the BCT meeting, which shows the extent of the plume and the multiple wells that may be needed.

During the March 2001 BCT meeting the Remedial Action Contractor (RAC) presented the Operation and Maintenance data for the Biosparge/Vapor Collection (BVC) System at Day Tank 1. The RAC reported that measurable free product was detected in vapor extraction wells VEW-01 and VEW-02. As of March 15, 2001, 2.16 feet of free product was measured in VEW-01 and 0.02 feet of free product was measured in VEW-02. Several other vapor extraction wells and monitoring wells were also periodically checked for free product. Free product was only observed in VEW-01 and VEW-02. Figure 2 shows the approximate location of VEW-01 and VEW-02. The tabulated product thickness data prepared by the RAC is included as Attachment B.

Based on the data presented to the BCT in March 2001, it was agreed that additional site assessment activities should be conducted to further delineate the groundwater contaminant plumes at the Day Tank 1 and the Building 824A sites. A work plan for the additional investigation is currently being prepared. Based on the results of the additional investigation, a decision will be made whether to continue the current Day Tank 1 monitoring program under the petroleum program or switch the site to the Installation Restoration Program (IRP).

FIELD OPERATIONS

On January 29, 2001, TtNUS personnel mobilized to conduct semi-annual groundwater monitoring at the Day Tank 1 site. Prior to collecting groundwater samples, synoptic groundwater level measurements were recorded from each of the monitoring wells in the monitoring program. An additional water level was collected in a downgradient well, CEF-824A-8S. The depth to water ranged from 8.41 feet below top of casing (ft btoc) (CEF-293-13) to 9.57 ft btoc (CEF-824A-8S). Water level measurements were recorded to the nearest 0.01-foot on a log sheet. The groundwater flow direction, shown on Figure 2, is to the southeast over most of the site. However, the flow direction appears to shift slightly to the south-southeast just to the east of the hangars on the flightline.

TtNUS collected groundwater samples from seven monitoring wells, beginning with the well identification prefix CEF-293-, as follows: 4, 11, 13, 14, 19, 20 and 21. Following collection, the groundwater samples were placed on ice and shipped to Accutest Laboratory in Orlando, Florida via Federal Express. Samples from CEF-293-4, 13 and 14 were analyzed for volatile organic compounds (VOCs) specified in United States Environmental Protection Agency (USEPA) Methods 8021B. The remaining samples from CEF-293-11, 19, 20 and 21 were analyzed for the target compound list (TCL) of VOCs in USEPA Method 8260B. The extra analyses were conducted to provide data for the ongoing groundwater investigation at Building 824A. The seven samples were also analyzed for polynuclear aromatic hydrocarbons (PAHs) specified in USEPA Method 8310. Table 1 summarizes the concentrations for benzene, toluene, ethylbenzene and total xylenes (BTEX), methyl-tert-butyl ether (MTBE) and naphthalene compounds (naphthalene, 1-methylnaphthalene and 2-methylnaphthalene) detected for each monitoring well. The table also summarizes those non-petroleum compounds that were detected. Figure 3 depicts the concentrations for BTEX and naphthalene compounds. A copy of the laboratory report is provided in Attachment C.

The monitoring wells are listed below with a brief note to indicate any petroleum-related groundwater cleanup target levels (GCTLs) that were exceeded.

- Background well, CEF-293-4 – no compounds of concern (COC) were detected.
- CEF-293-11 – BTEX and naphthalene compounds exceeded GCTLs.
- CEF-293-13 – two naphthalene compounds exceeded GCTLs.
- CEF-293-14 – continuing to detect no COCs in samples from this monitoring well.
- CEF-293-19 – BTEX and naphthalene exceeded GCTLs.
- CEF-293-20 – continuing to detect no COCs in samples from this monitoring well.
- CEF-293-21 – benzene exceeds GCTL.

The four monitoring wells that were sampled for the TCL VOCs are listed below with a brief note to indicate any non-petroleum compounds that were detected above applicable GCTLs. Table 1 provides details on specific compound data.

- CEF-293-11 – no COCs detected were above GCTLs.
- CEF-293-19 – two chlorinated VOCs were above GCTLs.
- CEF-293-20 – one chlorinated VOC was above GCTL.
- CEF-293-21 – no COCs were detected.

CONCLUSIONS and RECOMMENDATIONS

Day Tank 1 Conclusions

The slide in Attachment A appears to indicate that the source area of the Building 824A plume may have been centered around the wash rack area adjacent to and north of Building 1848. In addition, the free product detected in the area of VEW-01 and VEW-02 may be acting as a source for the entire Day Tank 1 and Building 824A plume.

The background monitoring well CEF-293-4 and monitoring well CEF-293-14 continued to yield samples free of COCs. The background monitoring well data was intended to provide background to a source identified as Day Tank 1 itself. However, the free product in VEW-01 suggests that delineation closer to this source may be necessary. The RAC has also been monitoring and sampling CEF-293-9, which is upgradient of VEW-01 (Figure 2). The data from that well for the last three events indicate that no free product has been detected and the BTEX and naphthalene compounds have been below detection limits. This data indicates that CEF-293-4 remains a useful background well for the site. The data for CEF-293-14 coupled with the groundwater flow information (Figure 2) and the source information from VEW-01 suggests that CEF-293-14 is sidegradient to the COC plume. Therefore, that monitoring well delineates the plume to the southwest until one reaches the downgradient well CEF-293-13.

Monitoring well CEF-293-11 is approximately 120 feet east-northeast of VEW-01, and monitoring well CEF-293-19 is about 150 feet further east of CEF-293-11 (Figure 2). Since the concentrations of benzene and naphthalene compounds in wells CEF-293-11 and CEF-293-19 continue to exceed GCTLs, the data indicate that the dissolved hydrocarbon plume extends beyond these wells. Therefore, the area of the plume to the east-northeast and southeast (sidegradient and downgradient, respectively) of these wells is not delineated. The Building 824A investigation should attempt to address those concerns.

Monitoring well CEF-293-13 is downgradient of VEW-01. While the concentration of benzene was below GCTLs in the most recent sample collected from CEF-293-13, the benzene concentration in that well has historically ranged from approximately 67 micrograms per liter (μg/L) to 790 μg/L. Additionally, the concentrations of naphthalene compounds in that well were above GCTLs for this sampling event. This suggests that the plume is not delineated to the south and southeast of that well. Monitoring well CEF-824A-1S could be used to delineate the plume in that direction.

The concentration of benzene in samples from CEF-293-21 has fluctuated from 28 μg/L to the current value of 141 μg/L. This data suggests that the petroleum plume is migrating past that well, which is the furthest downgradient well in the current Day Tank 1 monitoring program. Therefore, the plume is not delineated downgradient of that well. Sidegradient of monitoring well CEF-293-21, the analytical data for samples from CEF-293-20 appear to indicate that the petroleum plume has not impacted the groundwater that far to the northeast. Thus, the plume in the area of CEF-293-21 appears delineated by well CEF-293-20. Since the groundwater flow appears to turn more to the south-southeast in this area, well CEF-824A-1S could be used to delineate the plume to the southwest of CEF-293-21.

Day Tank 1 Recommendations

In accordance with Rule 62-770.690(1)(a), monitoring for natural attenuation is not appropriate for sites where free product is present. Therefore, TtNUS recommends discontinuing the groundwater monitoring program at Day Tank 1 pending the results of the additional investigation at the Day Tank 1 and Building 824A sites. In addition, in accordance with Rule 62-770.300(1), TtNUS recommends that free product recovery be implemented to address the free product discovered in the area of VEW-01 and VEW-02.

If you have any questions with regard to this submittal, please contact me at (850) 385-9899.

Sincerely,

for

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

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

PC/jj

Attachments

cc: N. Ugolini, SOUTHDIV (1 copy)
D. Vaughn-Wright, USEPA (1 copy)
D. Wroblewski, TtNUS (cover letter only)
M. Perry, TtNUS (1 copy unbound)

bcc: M. Dale, TtNUS
J. Johnson (2 copies, Information Repository)
R. Simcik, (bookcase file)

Table 1
Groundwater Sampling Results

Groundwater Monitoring Report
Day Tank 1
Naval Air Station Cecil Field
Jacksonville, Florida

Monitoring Well	GCTL	CEF-293-4								
Sample Date		1993	1996	1997	1998	1999	Jul-1999	Jan-2000	Jul-2000	Jan-2001
Field Analyses										
pH (standard units)		NC	NC	NC	NC	NC	6.19	6.31	6.68	6.42
Temperature (Fahrenheit)		NC	NC	NC	NC	NC	78.6	70.16	78.26	69.62
Conductivity (see notes)		NC	NC	NC	NC	NC	0.292	0.32	0.289	0.249
Turbidity (NTU)		NC	NC	NC	NC	NC	NM	990	>990	152
Compounds										
Acetone (µg/L)	700	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
Benzene (µg/L)	1	NC	NC	NC	NC	NC	ND	<1.0	<1.0	<1.0
Toluene (µg/L)	40	NC	NC	NC	NC	NC	ND	<1.0	<1.0	<1.0
Ethylbenzene (µg/L)	30	NC	NC	NC	NC	NC	ND	<1.0	<1.0	<1.0
Xylenes (µg/L)	20	NC	NC	NC	NC	NC	ND	<1.0	<1.0	<3.0
1,1 - Dichloroethane (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
1,1-Dichloroethylene (µg/L)	7	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	ND
cis - 1,2 - Dichloroethylene (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
trans - 1,2 - Dichloroethylene (µg/L)	100	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
4 - Methyl - 2- pentanone (µg/L)	560	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
Trichloroethylene (µg/L)	3	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
Naphthalene (µg/L)	20	NC	NC	NC	NC	NC	ND	<5.0	<5.0	<2.0
1-methylnaphthalene (µg/L)	20	NC	NC	NC	NC	NC	ND	<5.0	<5.0	<2.0
2-methylnaphthalene (µg/L)	20	NC	NC	NC	NC	NC	ND	<5.0	<5.0	<2.0
Total Naphthalenes (µg/L)	N/A	NC	NC	NC	NC	NC	ND	<5.0	<5.0	<2.0
Methyl tert-butyl ether (µg/L)	50	NC	NC	NC	NC	NC	ND	<10	<10	<1.0

See notes at end of table.

Table 1 (cont'd)
Groundwater Sampling Results

Groundwater Monitoring Report
Day Tank 1
Naval Air Station Cecil Field
Jacksonville, Florida

Monitoring Well	GCTL	CEF-293-11								
Sample Date		1993	1996	1997	1998	1999	Jul-1999	Jan-2000	Jul-2000	Jan-2001
Field Analyses										
pH (standard units)		NC	5	4.93	5.37	4.94	4.70	4.99	4.20	5.12
Temperature (Fahrenheit)		NC	80.6	92.5	65.3	74.84	78.8	73.53	78.26	71.24
Conductivity (see notes)		NC	77	120	217	0.066	0.067	0.8	0.065	0.079
Turbidity (NTU)		NC	70	12	3.94	4	NM	990	450	999
Compounds										
Acetone (µg/L)	700	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<50
Benzene (µg/L)	1	29	27	ND	ND	76	62	74	48	63.2
Toluene (µg/L)	40	ND	63	ND	ND	25	30	65	54	72.9
Ethylbenzene (µg/L)	30	81	ND	ND	ND	140	110	190	140	237
Xylenes (µg/L)	20	160	100	ND	ND	730	580	670	360	826
1,1 - Dichloroethane (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	1.0J
1,1-Dichloroethylene (µg/L)	7	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	1.0
cis - 1,2 - Dichloroethylene (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<2.0
trans - 1,2 - Dichloroethylene (µg/L)	100	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<2.0
4 - Methyl - 2- pentanone (µg/L)	560	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<10
Trichloroethylene (µg/L)	3	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<2.0
Naphthalene (µg/L)	20	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	180D	167
1-methylnaphthalene (µg/L)	20	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	84D	100
2-methylnaphthalene (µg/L)	20	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	120D	92.9
Total Naphthalenes (µg/L)	N/A	429	367	267	59	650	350	477	384	359.9
Methyl tert-butyl ether (µg/L)	50	NPR	NPR	NPR	NPR	NPR	40	<100	<50	<2.0

See notes at end of table.

Table 1 (cont'd)
Groundwater Sampling Results

Groundwater Monitoring Report
Day Tank 1
Naval Air Station Cecil Field
Jacksonville, Florida

Monitoring Well	GCTL	CEF-293-13								
Sample Date		1993	1996	1997	1998	1999	Jul-1999	Jan-2000	Jul-2000	Jan-2001
Field Analyses										
pH (standard units)		NC	5.15	5.47	5.82	5.17	4.77	5.24	5.08	5.54
Temperature (Fahrenheit)		NC	79.5	86.2	67.7	71.6	77.4	70.11	75.38	67.46
Conductivity (see notes)		NC	94	184	154.3	0.109	0.078	0.08	0.075	0.070
Turbidity (NTU)		NC	10	1.56	3.48	0	NM	990	610	676
Compounds										
Acetone (µg/L)	700	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
Benzene (µg/L)	1	69	330	71	790	580	240	140	67D	0.95J
Toluene (µg/L)	40	11	89	14	310	100	94	27	1.0	<1.0
Ethylbenzene (µg/L)	30	100	38	32	430	300	340	200	95D	0.64J
Xylenes (µg/L)	20	340	340	130	1220	1050	1810	570	27	<3.0
1,1 - Dichloroethane (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
1,1-Dichloroethylene (µg/L)	7	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	ND
cis - 1,2 - Dichloroethylene (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
trans - 1,2 - Dichloroethylene (µg/L)	100	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
4 - Methyl - 2- pentanone (µg/L)	560	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
Trichloroethylene (µg/L)	3	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
Naphthalene (µg/L)	20	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	88D	13.1
1-methylnaphthalene (µg/L)	20	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	43D	27.6
2-methylnaphthalene (µg/L)	20	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	PRTN	62D	30.8
Total Naphthalenes (µg/L)	N/A	491	640	335	322	290	334	392	193	71.5
Methyl tert-butyl ether (µg/L)	50	NPR	NPR	NPR	NPR	NPR	390	<100	<10	<1.0

See notes at end of table.

Table 1 (cont'd)
Groundwater Sampling Results

Groundwater Monitoring Report
Day Tank 1
Naval Air Station Cecil Field
Jacksonville, Florida

Monitoring Well	GCTL	CEF-293-14								
Sample Date		1993	1996	1997	1998	1999	Jul-1999	Jan-2000	Jul-2000	Jan-2001
Field Analyses										
pH (standard units)		NC	5.61	5.92	5.84	5.80	5.37	5.73	5.48	5.72
Temperature (Fahrenheit)		NC	76.6	80.5	65.2	69.26	75.4	70.18	73.76	66.92
Conductivity (see notes)		NC	96	151	136.8	0.115	0.114	0.13	0.132	0.130
Turbidity (NTU)		NC	16	3.31	3.76	0	NM	990	999	545
Compounds										
Acetone (µg/L)	700	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
Benzene (µg/L)	1	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0
Toluene (µg/L)	40	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0
Ethylbenzene (µg/L)	30	ND	ND	ND	ND	1.3	ND	<1.0	<1.0	<1.0
Xylenes (µg/L)	20	ND	ND	ND	ND	2.3	ND	<1.0	<1.0	<3.0
1,1 - Dichloroethane (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
1,1-Dichloroethylene (µg/L)	7	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	ND
cis - 1,2 - Dichloroethylene (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
trans - 1,2 - Dichloroethylene (µg/L)	100	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
4 - Methyl - 2- pentanone (µg/L)	560	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
Trichloroethylene (µg/L)	3	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NPR	NM
Naphthalene (µg/L)	20	PRTN	PRTN	ND	ND	PRTN	ND	<5.0	<5.0	<2.0
1-methylnaphthalene (µg/L)	20	PRTN	PRTN	ND	ND	PRTN	ND	<5.0	<5.0	<2.0
2-methylnaphthalene (µg/L)	20	PRTN	PRTN	ND	ND	PRTN	ND	<5.0	<5.0	<2.0
Total Naphthalenes (µg/L)	N/A	11	4.1	ND	ND	7.3	ND	<5.0	<5.0	<2.0
Methyl tert-butyl ether (µg/L)	50	NPR	NPR	NPR	NPR	NPR	ND	<10	<10	<1.0

See notes at end of table.

Table 1 (cont'd)
Groundwater Sampling Results

Groundwater Monitoring Report
Day Tank 1
Naval Air Station Cecil Field
Jacksonville, Florida

Monitoring Well	GCTL	CEF-293-19							
Sample Date		1996	1997	1998	1999	Jul-1999	Jan-2000	Jul-2000	Jan-2001
Field Analyses									
pH (standard units)		5.72	5.73	7.01	5.58	5.36	5.60	5.68	5.67
Temperature (Fahrenheit)		84	87.5	63.8	75.74	80.8	74.25	80.96	71.6
Conductivity (see notes)		250	376	294	0.203	0.181	0.25	0.169	0.155
Turbidity (NTU)		140	55	26.2	10	NM	820	>990	301
Compounds									
Acetone (µg/L)	700	NPR	NPR	NPR	NPR	NPR	NPR	NPR	57.5
Benzene (µg/L)	1	1.4	NC	1	<2.0	1.7	2.8	1.9	1.9
Toluene (µg/L)	40	2.1	NC	25	51	34	50	30D	41.4
Ethylbenzene (µg/L)	30	3	NC	4	5.4	2.7	5	4.3	4.9
Xylenes (µg/L)	20	3.5	NC	10	29.7	16.3	27	12	31.2
1,1 - Dichloroethane (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	55.0
1,1-Dichloroethylene (µg/L)	7	NPR	NPR	NPR	NPR	NPR	NPR	NPR	1.1
cis - 1,2 - Dichloroethylene (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	815
trans - 1,2 - Dichloroethylene (µg/L)	100	NPR	NPR	NPR	NPR	NPR	NPR	NPR	3.2
4 - Methyl - 2- pentanone (µg/L)	560	NPR	NPR	NPR	NPR	NPR	NPR	NPR	40.4
Trichloroethylene (µg/L)	3	NPR	NPR	NPR	NPR	NPR	NPR	NPR	48.9
Naphthalene (µg/L)	20	ND	NC	PRTN	PRTN	PRTN	<5.0	16	20.8
1-methylnaphthalene (µg/L)	20	ND	NC	PRTN	PRTN	PRTN	<5.0	<5.0	<4.0
2-methylnaphthalene (µg/L)	20	ND	NC	PRTN	PRTN	PRTN	<5.0	<5.0	<2.0
Total Naphthalenes (µg/L)	N/A	ND	NC	37	12.0	13.0	18	16	20.8
Methyl tert-butyl ether (µg/L)	50	NPR	NPR	NPR	NPR	ND	<20	13	<2.0

See notes at end of table.

Table 1 (cont'd)
Groundwater Sampling Results

Groundwater Monitoring Report
Day Tank 1
Naval Air Station Cecil Field
Jacksonville, Florida

Monitoring Well	GCTL	CEF-293-20							
Sample Date		1996	1997	1998	1999	Jul-1999	Jan-2000	Jul-2000	Jan-2001
Field Analyses									
pH (standard units)		5.46	5.68	7.73	5.41	4.97	5.49	5.21	5.47
Temperature (Fahrenheit)		83.8	87.2	65	74.48	81.7	75.13	81.68	73.04
Conductivity (see notes)		151	216	158	0.121	0.105	0.14	0.103	0.105
Turbidity (NTU)		10	>200	18.4	19	NM	520	320	165
Compounds									
Acetone (µg/L)	700	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<50
Benzene (µg/L)	1	1.6	NC	1	ND	ND	<1.0	<1.0	0.58J
Toluene (µg/L)	40	ND	NC	ND	ND	ND	<1.0	<1.0	<2.0
Ethylbenzene (µg/L)	30	ND	NC	ND	ND	ND	<1.0	<1.0	<2.0
Xylenes (µg/L)	20	1.3	NC	2	<2.0	ND	<1.0	<1.0	<6.0
1,1 - Dichloroethane (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<2.0
1,1-Dichloroethylene (µg/L)	7	NPR	NPR	NPR	NPR	NPR	NPR	NPR	ND
cis-1,2-Dichloroethylene (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	210
trans - 1,2 - Dichloroethylene (µg/L)	100	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<2.0
4 - Methyl - 2- pentanone (µg/L)	560	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<10
Trichloroethylene (µg/L)	3	NPR	NPR	NPR	NPR	NPR	NPR	NPR	2.7
Naphthalene (µg/L)	20	ND	NC	ND	<3.0	ND	<5.0	<5.0	<2.0
1-methylnaphthalene (µg/L)	20	ND	NC	ND	<3.0	ND	<5.0	<5.0	<2.0
2-methylnaphthalene (µg/L)	20	ND	NC	ND	<3.0	ND	<5.0	<5.0	<2.0
Total Naphthalenes (µg/L)	N/A	ND	NC	ND	<3.0	ND	<5.0	<5.0	<2.0
Methyl tert-butyl ether (µg/L)	50	NPR	NPR	NPR	NPR	ND	<10	<10	<2.0

See notes at end of table.

Table 1 (cont'd)
Groundwater Sampling Results

Groundwater Monitoring Report
Day Tank 1
Naval Air Station Cecil Field
Jacksonville, Florida

Monitoring Well	GCTL	CEF-293-21							
Sample Date		1996	1997	1998	1999	Jul-1999	Jan-2000	Jul-2000	Jan-2001
Field Analyses									
pH (standard units)		5.67	5.9	6.09	5.65	5.26	5.64	5.11	5.60
Temperature (Fahrenheit)		83.3	90.6	67.6	74.3	80.6	74.6	80.06	71.6
Conductivity (see notes)		224	357	261	0.188	0.153	0.19	0.132	0.147
Turbidity (NTU)		25	3.4	3.23	12	NM	990	140	999
Compounds									
Acetone (µg/L)	700	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<50
Benzene (µg/L)	1	ND	NC	28	72	160	46	66D	141
Toluene (µg/L)	40	ND	NC	3.4	<5.0	ND	<2.0	<1.0	<2.0
Ethylbenzene (µg/L)	30	ND	NC	5.9	<5.0	18	2.9	4	11.0
Xylenes (µg/L)	20	ND	NC	8.4	<10.0	60	3.5	7.4	14.1
1,1 - Dichloroethane (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<2.0
1,1-Dichloroethylene (µg/L)	7	NPR	NPR	NPR	NPR	NPR	NPR	NPR	ND
cis - 1,2 - Dichloroethylene (µg/L)	70	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<2.0
trans - 1,2 - Dichloroethylene (µg/L)	100	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<2.0
4 - Methyl - 2- pentanone (µg/L)	560	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<10
Trichloroethylene (µg/L)	3	NPR	NPR	NPR	NPR	NPR	NPR	NPR	<2.0
Naphthalene (µg/L)	20	ND	NC	ND	PRTN	PRTN	PRTN	8.8	16.6
1-methylnaphthalene (µg/L)	20	ND	NC	ND	PRTN	PRTN	PRTN	10	13.2
2-methylnaphthalene (µg/L)	20	ND	NC	ND	PRTN	PRTN	PRTN	14	13.2
Total Naphthalenes (µg/L)	N/A	ND	NC	ND	5.6	25.2	46	32.8	43
Methyl tert-butyl ether (µg/L)	50	NPR	NPR	NPR	NPR	28	<20	<10	<2.0

See notes at end table.

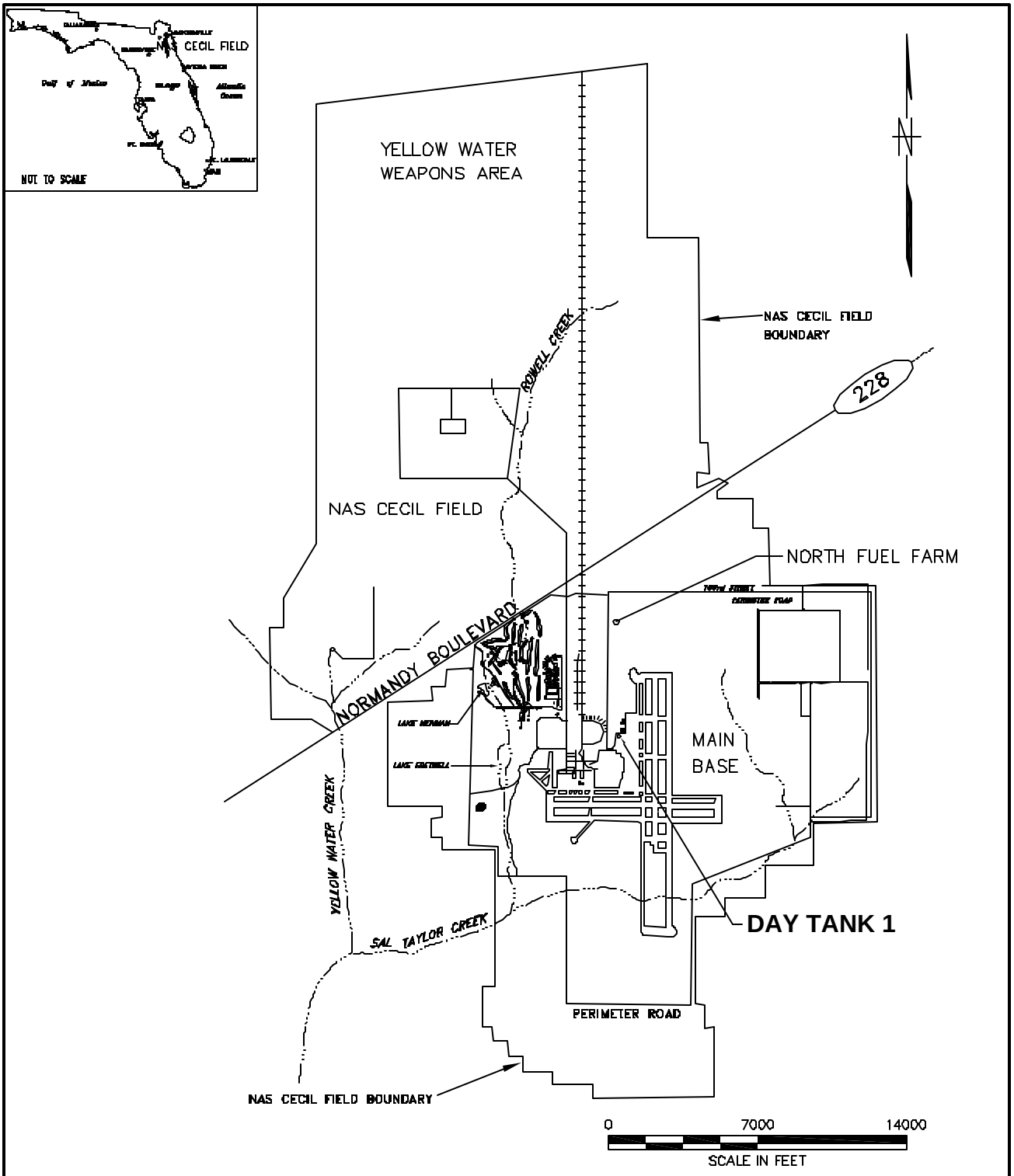
Table 1 (cont'd)
Groundwater Sampling Results

Groundwater Monitoring Report
Day Tank 1
Naval Air Station Cecil Field
Jacksonville, Florida

Notes:

J = estimated.
N/A = not applicable.
NC = not collected.
ND = not detected.
NM = not measured.
NPR = not previously reported.
PRTN = previously reported as total naphthalenes.
D = lab result following sample dilution and re-analysis.
umhos/cm = micromhos per centimeter (these units applicable to conductivity data from 1998 and earlier).
mS/cm = milliSiemens per centimeter (these units applicable to 1999 and later conductivity data).
NTU = nephelometric turbidity units.
µg/L = microgram per liter.
GCTL = Groundwater Cleanup Target Levels (shaded areas show no levels applicable for this program).

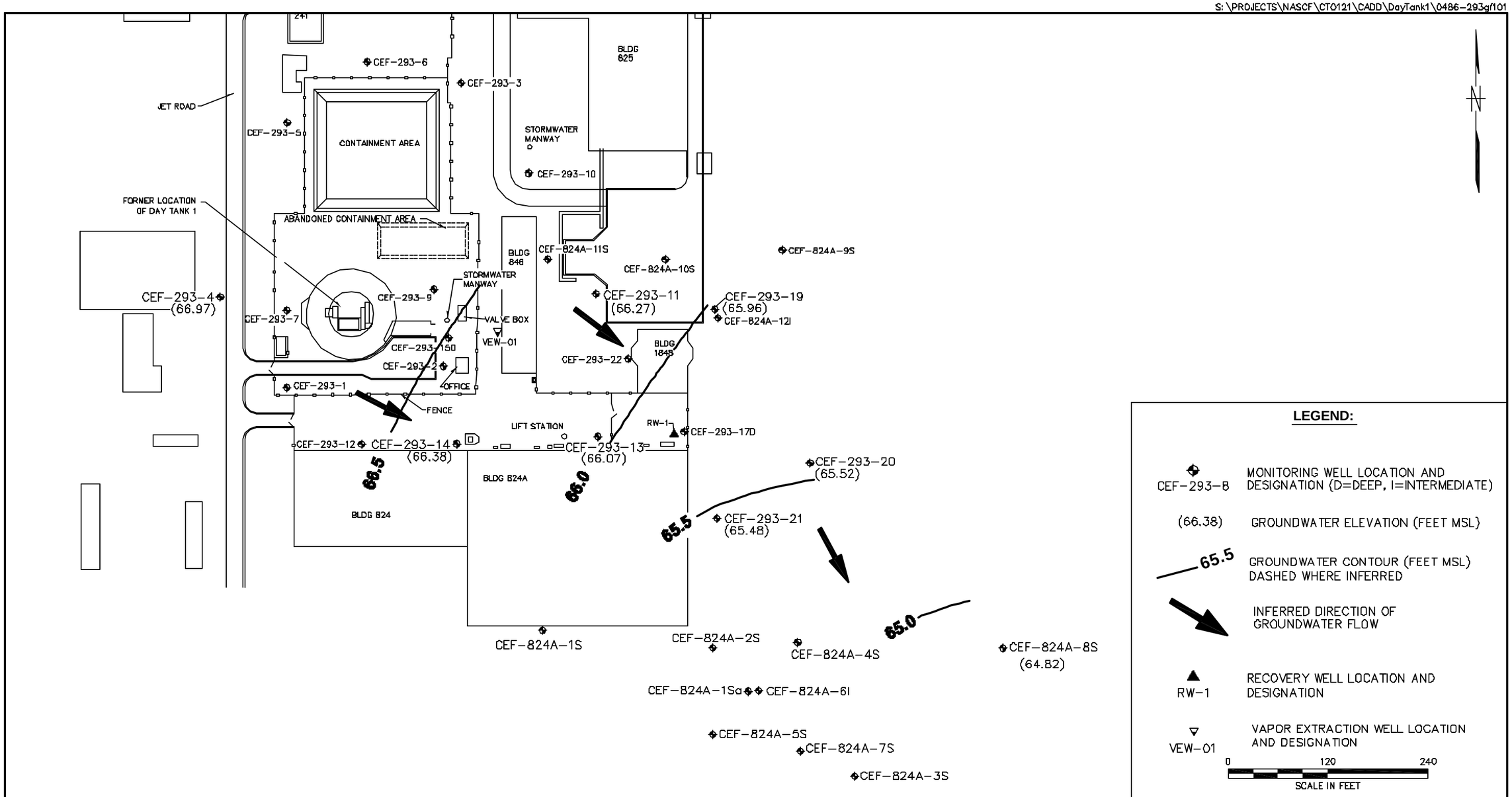
S:\PROJECTS\NAS CF\CTO 121\CADD\0486-BM



DRAWN BY LLK DATE 4/27/01		SITE LOCATION MAP DAY TANK 1 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NO. 0486
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1 / REV. 0

FORM CADD NO. SDIV_AV.DWG – REV D – 1/20/98

S:\PROJECTS\NASCF\CTO121\CADD\DayTank1\0486-293gf101



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

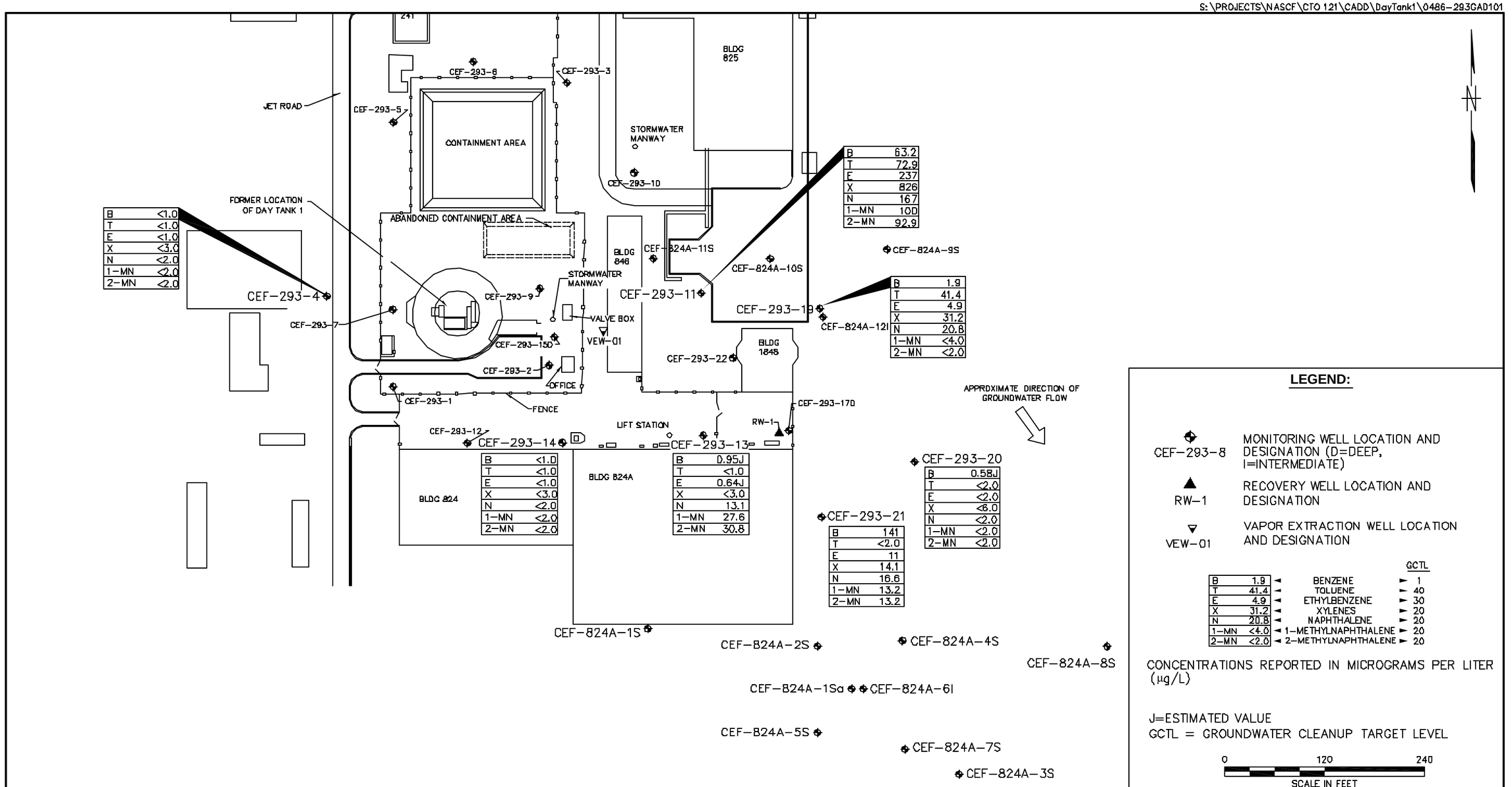
DRAWN BY LLK DATE 4/27/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

DAY TANK 1, FACILITY 293
GROUNDWATER ELEVATION CONTOUR MAP
JANUARY 29, 2001
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NO. 0486
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 2
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

S:\PROJECTS\NASCF\CTO 121\CADD\DayTank1\0486-293GAD101



B	<1.0
T	<1.0
E	<1.0
X	<3.0
N	<2.0
1-MN	<2.0
2-MN	<2.0

B	63.2
T	72.9
E	237
X	826
N	167
1-MN	10D
2-MN	92.9

B	1.9
T	41.4
E	4.9
X	31.2
N	20.8
1-MN	<4.0
2-MN	<2.0

B	<1.0
T	<1.0
E	<1.0
X	<3.0
N	<2.0
1-MN	<2.0
2-MN	<2.0

B	0.95J
T	<1.0
E	0.64J
X	<3.0
N	13.1
1-MN	27.6
2-MN	30.8

B	0.58J
T	<2.0
E	<2.0
X	<6.0
N	<2.0
1-MN	<2.0
2-MN	<2.0

B	141
T	<2.0
E	11
X	14.1
N	16.6
1-MN	13.2
2-MN	13.2

LEGEND:

CEF-293-8 — MONITORING WELL LOCATION AND DESIGNATION (D=DEEP, I=INTERMEDIATE)

RW-1 — RECOVERY WELL LOCATION AND DESIGNATION

VEW-01 — VAPOR EXTRACTION WELL LOCATION AND DESIGNATION

			GCTL
B	1.9	BENZENE	1
T	41.4	TOLUENE	40
E	4.9	ETHYLBENZENE	30
X	31.2	XYLENES	20
N	20.8	NAPHTHALENE	20
1-MN	<4.0	1-METHYLNAPHTHALENE	20
2-MN	<2.0	2-METHYLNAPHTHALENE	20

CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (µg/L)

J=ESTIMATED VALUE
GCTL = GROUNDWATER CLEANUP TARGET LEVEL

0 120 240
SCALE IN FEET

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY LLK DATE 4/27/01
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

DAY TANK 1, FACILITY 293
DISSOLVED HYDROCARBON CONCENTRATIONS
JANUARY 29, 2001
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NO. 0486
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 3
REV. 0

FORM CADD NO. SOIV_BH.DWG - REV D - 1/20/98

ATTACHMENT A

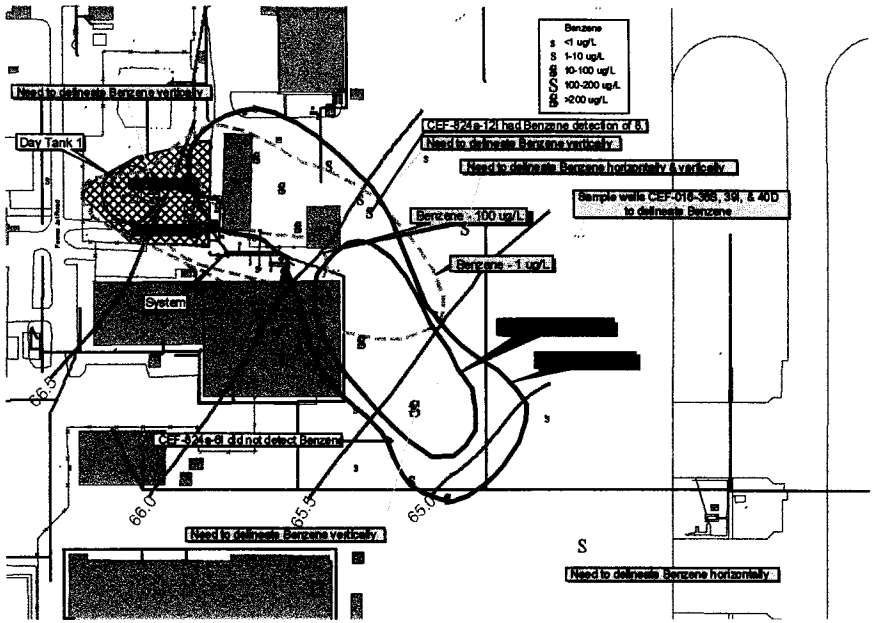
DAY TANK 1 AND BUILDING 824A SLIDE

FROM

MARCH 2001 BCT MEETING

Day Tank 1 & Bldg 824a

- Source area may require installation of monitoring well(s)
  - Status of groundwater & existing wells is unknown due to excavation
- Horizontal & Vertical delineation
  - Sample CEF-016-38S, 39I, & 40D for BTEX
  - Install shallow & intermediate wells west of CEF-016-38S, 39I, & 40D
  - Install deeper well at CEF-824a-12I
  - Install shallow & intermediate wells downgradient
  - Install intermediate well at CEF-824a-04S



ATTACHMENT B

PRODUCT THICKNESS DATA

DEPTH TO GROUNDWATER/FREE PRODUCT MEASUREMENTS

DAY TANK 1 BIOSPARGE/VAPOR COLLECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Date	Depth to Free Product (ft)	Depth to Water (ft)	Product Thickness (ft)
CEF-293-01	06/13/00	NA	8.79	0.00
	09/14/00	NA	5.55	0.00
	12/21/00	NA	7.72	0.00
	03/15/01	NA	8.03	0.00
CEF-293-02	06/13/00	NA	9.70	0.00
	09/14/00	NA	6.83	0.00
	12/21/00	NA	8.81	0.00
	03/15/01	NA	9.22	0.00
CEF-293-04	06/13/00	NA	9.45	0.00
	09/14/00	NA	5.44	0.00
	12/21/00	NA	8.33	0.00
	03/15/01	NA	8.62	0.00
CEF-293-05	06/13/00	NA	9.01	0.00
	09/14/00	NA	3.18	0.00
	12/21/00	NA	7.95	0.00
	03/15/01	NM	NM	NM
CEF-293-06	06/13/00	NA	9.77	0.00
	09/14/00	NA	6.89	0.00
	12/21/00	NA	8.75	0.00
	03/15/01	NA	9.00	0.00
CEF-293-07	06/13/00	NA	9.95	0.00
	09/14/00	NA	6.85	0.00
	12/21/00	NA	8.92	0.00
	03/15/01	NA	9.29	0.00
CEF-293-09	06/13/00	NA	9.93	0.00
	09/14/00	NA	7.01	0.00
	12/21/00	NA	8.96	0.00
	03/15/01	NA	9.29	0.00
CEF-293-10	06/13/00	NA	9.46	0.00
	09/14/00	NA	6.75	0.00
	12/21/00	NA	8.52	0.00
	03/15/01	NA	8.80	0.00
CEF-293-11	06/13/00	NA	9.62	0.00
	09/14/00	NA	6.91	0.00
	12/21/00	NA	8.70	0.00
	03/15/01	NA	9.12	0.00

DEPTH TO GROUNDWATER/FREE PRODUCT MEASUREMENTS

DAY TANK 1 BIOSPARGE/VAPOR COLLECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Date	Depth to Free Product (ft)	Depth to Water (ft)	Product Thickness (ft)
CEF-293-13	06/13/00	NA	9.05	0.00
	09/14/00	NA	6.31	0.00
	12/21/00	NA	8.11	0.00
	03/15/01	NA	8.63	0.00
CEF-293-14	06/13/00	NA	9.34	0.00
	09/14/00	NA	6.45	0.00
	12/21/00	NA	8.40	0.00
	03/15/01	NA	9.71	0.00
CEF-293-19	06/13/00	NA	8.95	0.00
	09/14/00	NA	6.99	0.00
	12/21/00	NA	8.75	0.00
	03/15/01	NA	9.11	0.00
CEF-293-20	06/13/00	NA	9.40	0.00
	09/14/00	NA	6.85	0.00
	12/21/00	NA	8.53	0.00
	03/15/01	NA	8.81	0.00
CEF-293-21	06/13/00	NA	9.51	0.00
	09/14/00	NA	6.98	0.00
	12/21/00	NA	8.62	0.00
	03/15/01	NA	8.94	0.00
CEF-293-22	06/13/00	NA	8.88	0.00
	09/14/00	NA	6.20	0.00
	12/21/00	NA	7.89	0.00
	03/15/01	NA	8.34	0.00

DEPTH TO GROUNDWATER/FREE PRODUCT MEASUREMENTS

DAY TANK 1 BIOSPARGE/VAPOR COLLECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Date	Depth to Free Product (ft)	Depth to Water (ft)	Product Thickness (ft)
VEW-01	06/13/00	8.60	10.89	2.29
	09/14/00	4.85	7.70	2.85
	10/12/00	6.26	7.39	1.13
	10/18/00	6.39	7.29	0.90
	10/24/00	6.55	7.56	1.01
	10/30/00	6.80	7.70	0.90
	11/07/00	6.95	7.20	0.25
	11/13/00	7.05	8.13	1.08
	11/20/00	7.10	8.30	1.20
	11/27/00	7.05	9.05	2.00
	12/06/01	7.25	10.15	2.90
	12/11/00	7.35	10.10	2.75
	12/18/00	7.32	10.80	3.48
	12/21/00	7.80	9.61	1.81
	01/03/01	7.45	11.85	4.40
	01/17/01	8.16	9.36	1.20
	01/29/01	7.68	11.11	3.43
	02/13/01	7.57	11.48	3.91
	02/19/01	7.61	11.45	3.84
	02/26/01	7.70	11.68	3.98
	03/06/01	7.55	11.10	3.55
	03/12/01	7.59	11.31	3.72
	03/15/01	8.34	10.50	2.16
VEW-02	06/13/00	7.50	13.02	5.52
	09/14/00	5.75	5.76	0.01
	12/21/00	7.70	7.73	0.03
	03/15/01	8.34	8.36	0.02
VEW-03	06/13/00	NA	8.05	0.00
	09/14/00	NA	5.25	0.00
	12/21/00	NA	7.21	0.00
	03/15/01	NA	7.75	0.00
VEW-04	06/13/00	NA	8.38	0.00
	09/14/00	NA	5.68	0.00
	12/21/00	NA	7.60	0.00
	03/15/01	NA	8.07	0.00

DEPTH TO GROUNDWATER/FREE PRODUCT MEASUREMENTS

DAY TANK 1 BIOSPARGE/VAPOR COLLECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Date	Depth to Free Product (ft)	Depth to Water (ft)	Product Thickness (ft)
VEW-05	06/13/00	NA	7.53	0.00
	09/14/00	NA	4.85	0.00
	12/21/00	NA	6.75	0.00
	03/15/01	NA	7.18	0.00
VEW-06	06/13/00	NA	7.26	0.00
	09/14/00	NA	4.60	0.00
	12/21/00	NA	6.40	0.00
	03/15/01	NA	6.94	0.00
VEW-07	06/13/00	NA	9.06	0.00
	09/14/00	NA	6.15	0.00
	12/21/00	NA	8.15	0.00
	03/15/01	NA	8.65	0.00
VEW-08	06/13/00	NA	9.06	0.00
	09/14/00	NA	6.16	0.00
	12/21/00	NA	8.11	0.00
	03/15/01	NA	8.57	0.00

ATTACHMENT C

GROUNDWATER ANALYTICAL REPORT

DAY TANK 1

ACCUTEST

02/12/01

Technical Report for

Tetra Tech, NUS

Cecil Field-BLDG. 824A/Day Tank1

0486- Work Release # CF-19

Accutest Job Number: F8841

Report to:

Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15520

ATTN: Joe Logan

Total number of pages in report: 355

Harry Behzadi, Ph.D.
Laboratory Director

ACCUTEST LABORATORIES SOUTHEAST
SAMPLE RECEIPT CONFIRMATION

Accutest Job Number: F8841

Client/Project: Tetra Tech / 0486

Date/Time Received: 1-30-01 15:00

Method of Delivery: (Fed Ex) Greyhound UPS Pickup Delivery Other

Air Bill Number: 7904 5751 7544

Cooler Temperatures: 2.0°c

Custody Seals Intact?	(YES)	NO
Chain Of Custody Provided?	(YES)	NO
Chain Of Custody Match Bottles?	(YES)	NO
Sample Labels Present?	(YES)	NO
Are All Bottles Unbroken?	(YES)	NO
Proper Preservative?	(YES)	NO
Correct Containers Used?	(YES)	NO
Sufficient Sample Volume?	(YES)	NO

Number of Encores: ϕ

COMMENTS:

Signature: Rob A Shoe Date: 1-30-01

Linda Williams

To: Heather Wandrey
Subject: FW: Day Tank 1 and 824A samples

Heather

Please make the necessary changes per Merv Dale's email below.

Thanks
Linda R. Williams
Project Manager
Accutest Laboratories, SE
Ph: 407-425-6700 Ext. 121
Fax: 407-425-0707
email: lindaw@accutest.com

-----Original Message-----
From: Dale, Mervin [SMTP:DaleM@ttnus.com]
Sent: Wednesday, January 31, 2001 9:11 AM
To: Ellen Pampel; Harry Behzadi; Linda Williams
Cc: Logan, Joe; Calligan, Paul
Subject: Day Tank 1 and 824A samples

Linda,

Joe Logan gave me directions on those samples we collected on 012901 covered by chain of custodies 012901-01, 012901-02 and 012901-03. He wants them logged under the project name of "824A/Day Tank1", and please send a set of electronic and hard copy data to Ralinda Miller in Pittsburgh and also to Suzanne Smith in Tallahassee, Florida, when it becomes available. I know you have Ralinda's e-mail address, but you might not have Suzanne's e-mail address/snail mail address. It is as follows:

smithsi@ttnus.com

1401 Oven Park Drive
Suite 102
Tallahassee, FL 32308

If you have any other questions, please let me know. Thanks.

Mervin W. Dale, P.G.
Earth Scientist IV
Tetra Tech NUS, Inc.
7018 A. C. Skinner Parkway, Suite 250
Jacksonville, Florida 32256
Ph. No. (904) 281-1941 ext. 14
Fax No. (904) 281-0070
Pager: 1-800-471-6451
E-Mail: dalem@ttnus.com

Ellen Pampel

From: Linda Williams
Sent: Monday, January 29, 2001 3:42 PM
To: Heather Wandrey; Ellen Pampel
Subject: FW: Daytank 1 and B.824A Groundwater Samples

Thanks
Linda R. Williams
Project Manager
Accutest Laboratories, SE
Ph: 407-425-6700 Ext. 121
Fax: 407-425-0707
email: lindaw@accutest.com

-----Original Message-----
From: Ferranti, Joe [SMTP:FerrantiJ@ttnus.com]
Sent: Monday, January 29, 2001 3:27 PM
To: Linda Williams
Cc: Dale, Mervin
Subject: Daytank 1 and B.824A Groundwater Samples

Hi Linda,

I thought I would let you know, we have sent two coolers to you for tomorrow morning (1/30/01)delivery.

The first cooler:
COC#: 012901-1
Job: Daytank 1
3 wells plus a duplicate and MSMSD for groundwater analysis via 8021B BTEX plus MTBE, and PAHS by 8310.
Standard TAT

The second cooler:
COC#s: 012901-2, and 012901-3
Jobs: Daytank 1 and B.824A
COC# 012901-2 is for 4 wells for Daytank 1, analysis via VOCs plus MTBE 8260B, and PAHs by 8310.

COC# 012901-3 is for one well at B. 824A, analysis via VOCs by 8260B, and PAHs by 8310.
Both 7 day TAT

The work release is CF-19, if you have any questions, please call me or Merv Dale at 281-0400.

Thanks
Joe Ferranti
Tetra Tech NUS

TABLE OF CONTENTS
FULL LABORATORY DATA DELIVERABLES

ACCUTEST

Sample Summary

Tetra Tech, NUS

Job No: F8841

Cecil Field-BLDG. 824A/Day Tank1
Project No: 0486- Work Release # CF-19

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
F8841-1	01/29/01	11:22	JF	01/30/01	AQ	Ground Water	CEF-293-GW-11-05
F8841-2	01/29/01	11:08	JF	01/30/01	AQ	Ground Water	CEF-293-GW-19-05
F8841-3	01/29/01	10:38	JF	01/30/01	AQ	Ground Water	CEF-293-GW-20-05
F8841-4	01/29/01	10:14	JF	01/30/01	AQ	Ground Water	CEF-293-GW-21-05
F8841-5	01/29/01	11:47	JF	01/30/01	AQ	Ground Water	CEF-293-GW-04-05
F8841-6	01/29/01	12:39	JF	01/30/01	AQ	Ground Water	CEF-293-GW-13-05
F8841-7	01/29/01	12:10	JF	01/30/01	AQ	Ground Water	CEF-293-GW-14-05
F8841-8	01/29/01	00:00	JF	01/30/01	AQ	Ground Water	CEF-293-GW-DU01-05

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-11-05		
Lab Sample ID:	F8841-1	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0002397.D	1	02/01/01	JG	n/a	n/a	VC108
Run #2	C0002398.D	10	02/01/01	JG	n/a	n/a	VC108

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	50	ug/l	
71-43-2	Benzene	63.2	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	ug/l	
75-25-2	Bromoform	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	ug/l	
75-00-3	Chloroethane	ND	5.0	ug/l	
67-66-3	Chloroform	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	10	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.0	2.0	ug/l	J
107-06-2	1,2-Dichloroethane	ND	2.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	237 [a]	20	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	5.0	ug/l	
74-87-3	Methyl chloride	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	**Methyl Tert Butyl Ether**	ND	2.0	ug/l	
100-42-5	Styrene	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	ug/l	
108-88-3	Toluene	72.9	2.0	ug/l	
79-01-6	Trichloroethylene	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	826 [a]	60	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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-11-05		
Lab Sample ID:	F8841-1	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	96%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	102%	69-128%
2037-26-5	Toluene-D8	102%	102%	80-120%
460-00-4	4-Bromofluorobenzene	101%	101%	80-120%

(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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-11-05		
Lab Sample ID:	F8841-1	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	EPA 8310 SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA006288.D	1	02/05/01	MRE	02/02/01	OP2670	GAA235
Run #2	AA006328.D	5	02/06/01	MRE	02/02/01	OP2670	GAA236

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND [a]	22	ug/l	
208-96-8	Acenaphthylene	ND [a]	22	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]	11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l	
91-20-3	Naphthalene	167 [a]	11	ug/l	
90-12-0	1-Methylnaphthalene	100 [a]	11	ug/l	
91-57-6	2-Methylnaphthalene	92.9 [a]	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	94%	102%	29-133%
92-94-4	p-Terphenyl	67%	72%	33-133%

(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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-19-05		
Lab Sample ID:	F8841-2	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0002391.D	1	02/01/01	JG	n/a	n/a	VC108
Run #2	B003772.D	10	02/02/01	JG	n/a	n/a	VB143

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	57.8	50	ug/l	
71-43-2	Benzene	1.9	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	ug/l	
75-25-2	Bromoform	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	ug/l	
75-00-3	Chloroethane	ND	5.0	ug/l	
67-66-3	Chloroform	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	10	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	55.0	2.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.1	2.0	ug/l	J
107-06-2	1,2-Dichloroethane	ND	2.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	815 [a]	20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	3.2	2.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	4.9	2.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
108-10-1	4-Methyl-2-pentanone	40.4	10	ug/l	
74-83-9	Methyl bromide	ND	5.0	ug/l	
74-87-3	Methyl chloride	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	**Methyl Tert Butyl Ether**	ND	2.0	ug/l	
100-42-5	Styrene	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	ug/l	
108-88-3	Toluene	41.4	2.0	ug/l	
79-01-6	Trichloroethylene	48.9	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	31.2	6.0	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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-19-05		
Lab Sample ID:	F8841-2	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	110%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	108%	69-128%
2037-26-5	Toluene-D8	100%	96%	80-120%
460-00-4	4-Bromofluorobenzene	101%	90%	80-120%

(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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-19-05		
Lab Sample ID:	F8841-2	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	EPA 8310 SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA006289.D	1	02/05/01	MRE	02/02/01	OP2670	GAA235
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	20.8	2.0	ug/l	
90-12-0	1-Methylnaphthalene [a]	ND	4.0	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	66%		29-133%
92-94-4	p-Terphenyl	44%		33-133%

(a) 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-20-05		
Lab Sample ID:	F8841-3	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0002392.D	1	02/01/01	JG	n/a	n/a	VC108
Run #2	B003759.D	5	02/02/01	JG	n/a	n/a	VB143

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	50	ug/l	
71-43-2	Benzene	0.58	1.0	ug/l	J
75-27-4	Bromodichloromethane	ND	2.0	ug/l	
75-25-2	Bromoform	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	ug/l	
75-00-3	Chloroethane	ND	5.0	ug/l	
67-66-3	Chloroform	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	10	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	210 [a]	10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	5.0	ug/l	
74-87-3	Methyl chloride	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	**Methyl Tert Butyl Ether**	ND	2.0	ug/l	
100-42-5	Styrene	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
79-01-6	Trichloroethylene	2.7	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	6.0	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

Florida • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-0707 • http://www.accutest.com

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-20-05		
Lab Sample ID:	F8841-3	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	110%	80-120%
17060-07-0	1,2-Dichloroethane-D4	101%	115%	69-128%
2037-26-5	Toluene-D8	101%	96%	80-120%
460-00-4	4-Bromofluorobenzene	99%	92%	80-120%

(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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-20-05		
Lab Sample ID:	F8841-3	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	EPA 8310 SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA006290.D	1	02/05/01	MRE	02/02/01	OP2670	GAA235
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	73%		29-133%
92-94-4	p-Terphenyl	57%		33-133%

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

Florida • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-0707 • http://www.accutest.com

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-21-05		
Lab Sample ID:	F8841-4	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0002393.D	1	02/01/01	JG	n/a	n/a	VC108
Run #2	B003760.D	2	02/02/01	JG	n/a	n/a	VB143

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	50	ug/l	
71-43-2	Benzene	141 [a]	2.0	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	ug/l	
75-25-2	Bromoform	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	ug/l	
75-00-3	Chloroethane	ND	5.0	ug/l	
67-66-3	Chloroform	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	10	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	11.0	2.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	5.0	ug/l	
74-87-3	Methyl chloride	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	**Methyl Tert Butyl Ether**	ND	2.0	ug/l	
100-42-5	Styrene	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
79-01-6	Trichloroethylene	ND	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	14.1	6.0	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

Florida • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-0707 • http://www.accutest.com

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-21-05		
Lab Sample ID:	F8841-4	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	110%	80-120%
17060-07-0	1,2-Dichloroethane-D4	102%	115%	69-128%
2037-26-5	Toluene-D8	100%	96%	80-120%
460-00-4	4-Bromofluorobenzene	99%	91%	80-120%

(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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-21-05		
Lab Sample ID:	F8841-4	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	EPA 8310 SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA006291.D	1	02/05/01	MRE	02/02/01	OP2670	GAA235
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	16.6	2.2	ug/l	
90-12-0	1-Methylnaphthalene	13.2	2.2	ug/l	
91-57-6	2-Methylnaphthalene	13.2	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	86%		29-133%
92-94-4	p-Terphenyl	76%		33-133%

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-04-05		
Lab Sample ID:	F8841-5	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD021688.D	1	02/01/01	KW	n/a	n/a	GCD801
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		63-120%
98-08-8	aaa-Trifluorotoluene	94%		66-122%

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-04-05		
Lab Sample ID:	F8841-5	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	EPA 8310 SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA006292.D	1	02/05/01	MRE	02/02/01	OP2670	GAA235
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	71%		29-133%
92-94-4	p-Terphenyl	61%		33-133%

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

Florida • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-0707 • http://www.accutest.com

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-13-05		
Lab Sample ID:	F8841-6	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD021689.D	1	02/01/01	KW	n/a	n/a	GCD801
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.95	1.0	ug/l	J
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	0.64	1.0	ug/l	J
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		63-120%
98-08-8	aaa-Trifluorotoluene	98%		66-122%

(a) All hits confirmed by dual column analysis.

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

Florida • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-0707 • http://www.accutest.com

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-13-05		
Lab Sample ID:	F8841-6	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	EPA 8310 SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA006293.D	1	02/05/01	MRE	02/02/01	OP2670	GAA235
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	13.1	2.2	ug/l	
90-12-0	1-Methylnaphthalene	27.6	2.2	ug/l	
91-57-6	2-Methylnaphthalene	30.8	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	95%		29-133%
92-94-4	p-Terphenyl	65%		33-133%

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

Florida • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-0707 • http://www.accutest.com

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-14-05		
Lab Sample ID:	F8841-7	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD021691.D	1	02/01/01	KW	n/a	n/a	GCD801
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	87%		63-120%
98-08-8	aaa-Trifluorotoluene	92%		66-122%

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

Florida • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-0707 • http://www.accutest.com

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-14-05		
Lab Sample ID:	F8841-7	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	EPA 8310 SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA006294.D	1	02/05/01	MRE	02/02/01	OP2670	GAA235
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	65%		29-133%
92-94-4	p-Terphenyl	54%		33-133%

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

Florida • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-0707 • http://www.accutest.com

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-DU01-05		
Lab Sample ID:	F8841-8	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD021694.D	1	02/01/01	KW	n/a	n/a	GCD801
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.75	1.0	ug/l	J
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		63-120%
98-08-8	aaa-Trifluorotoluene	102%		66-122%

(a) All hits confirmed by dual column analysis.

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

Florida • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-0707 • http://www.accutest.com

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-293-GW-DU01-05		
Lab Sample ID:	F8841-8	**Date Sampled:**	01/29/01
Matrix:	AQ - Ground Water	**Date Received:**	01/30/01
Method:	EPA 8310 SW846 3510C	**Percent Solids:**	n/a
Project:	Cecil Field-BLDG. 824A/Day Tank1		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA006298.D	1	02/05/01	MRE	02/02/01	OP2670	GAA235
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	12.3	2.2	ug/l	
90-12-0	1-Methylnaphthalene	25.4	2.2	ug/l	
91-57-6	2-Methylnaphthalene	28.4	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	94%		29-133%
92-94-4	p-Terphenyl	66%		33-133%

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

Florida • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • fax: 407-425-0707 • http://www.accutest.com

TETRA TECH NUS, INC. F8841 CHAIN OF CUSTODY | NUMBER 012901-02 | PAGE 1 OF 1

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
0486	Daz Tank 1	Paul Calligan (877) 592-1628	Accutest - Linda Williams (407) 425-6700
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: Merv Dale (904) 281-0400	ADDRESS: 4405 Vineland Rd. Suite C-15
		CARRIER/WAYBILL NUMBER: Fedex 7904 5751 7544	CITY, STATE: Orlando, FL 32811

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

	DATE YEAR 2001	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)								
							PRESERVATIVE USED								
							TYPE OF ANALYSIS	VOCs 8260B + MTBE	PAHs 8310						COMMENTS
1	11/29	1122	CEF-293-GW-11-05	GW	G	4		2	2						
2		1108	CEF-293-GW-19-05			4		2	2						
3		1038	CEF-293-GW-20-05			4		2	2						
4	↓	1014	CEF-293-GW-21-05	↓	↓	4		2	2						cool to 4°C
															Work Release CF-19

1. RELINQUISHED BY: Jeff R. Zemanta	DATE 11/29	TIME 1600	1. RECEIVED BY: R. Stubbs	DATE 1-30-01	TIME 15:00
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: 0486 GHO 050 505 — 2.0°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY)

TETRA TECH NUS, INC. F8841 CHAIN OF CUSTODY | NUMBER 012901-01 | PAGE 1 OF 1

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT: (407)
0486	DAy Tank 1	Paul Calligan (877) 592-1628	Accutest - Linda Williams 425-6700
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: Mew Dale (904) 281-0400	ADDRESS: 4405 Vineland Rd. Suite C-15
		CARRIER/WAYBILL NUMBER: Fedex 7919 5774 9730	CITY, STATE: Orlando, FL 32811

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

	DATE YEAR 2001	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)								
							PRESERVATIVE USED								
							TYPE OF ANALYSIS	VOCs 8260 8021 (BTEX + Cl Note: only MTBE)	PAHs 8310						COMMENTS
5	1/29	1147	CEF-293-GW-04-05	GW	G	4	2	2							
6		1239	CEF-293-GW-13-05			4	2	2							
7		1210	CEF-293-GW-14-05			4	2	2							
8		0000	CEF-293-GW-DUP01-05			4	2	2							Cool to 4°C
9	↓	1210	CEF-293-GW-MSMSD01-05	↓	↓	8	4	4							
															Work Release
															CF-19

1. RELINQUISHED BY: Gen Fauntz	DATE 1/29	TIME 1600	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: 0486 GHO 050 505 2.0°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)