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NAS CECIL FIELD, FL
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THIRD QUARTER 2003 OPERATIONS AND MAINTENANCE STATUS REPORT FOR NUTRIENT INJECTION SYSTEM AT BUILDING 9 FORMER TANKS 9L1 AND 9L2 NAS CECIL FIELD FL

12/1/2003

TERRAINE INC ENVIRONMENTAL SERVICES

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THIRD QUARTER 2003
Operation and Maintenance Status Report
July 1, 2003 – September 30, 2003

NUTRIENT INJECTION SYSTEM

BUILDING 9

Former Tanks 9L1 and 9L2

Naval Air Station Cecil Field
Jacksonville, Florida

Contract No. N62467-02-G-0352
Contract Task Order No. 0001

Submitted to:

U.S. Naval Facilities
Engineering Command
Southern Division

Prepared by:

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December 2003

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A Laboratory Analytical Reports for Soil Samples (on CD only)
B Laboratory Analytical Reports for Groundwater Samples (on CD only)
C 3rd Quarter 2003 Groundwater Sampling Logs
D 3rd Quarter 2003 Site Visit Reports

Signature Page

I, James L. Young, do hereby affirm that the information contained in this report is accurate and correct to the best of my knowledge and belief.

_____		PG-FL2090, REM-6089
James L. Young, P.G., REM President/CEO TERRAINE, Inc	Date	Registration Nos.

Acronym List

acfh	actual cubic feet per hour
acfm	actual cubic feet per minute
bls	below land surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CCI	CH2M HILL Constructors, Inc.
cfm	cubic feet per minute
CTO	Contract Task Order
EPA	Environmental Protection Agency
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	Flame Ionization Detector
FL PRO	Florida Petroleum Residual Organic
GCTL	Groundwater Cleanup Target Levels
HLA	Harding Lawson Associates
LNAPL	Light Non-Aqueous Phase Liquid
MTBE	Methyl-Tert Butyl Ether
MW	Monitoring Well
NAS	Naval Air Station
NAVFAC	Naval Facilities Engineering Command
O&M	Operation and Maintenance
OVA	Organic Vapor Analyzer
PAH	Polycyclic Aromatic Hydrocarbons
ppb	parts per billion
psig	pounds per square inch gauge
SAR	Site Assessment Report
scfm	standard cubic feet per minute
SCTL	Soil Cleanup Target Levels
SOUTHDIV	Department of the Navy, Southern Division
TEP	Triethylphosphate
TtNUS	TetraTech, NUS
TRPH	Total Recoverable Petroleum Hydrocarbons
UST	Underground Storage Tank
VOC	Volatile Organic Compounds

1.0 Introduction

Terraine, Inc. (TERRAINE) has been contracted by the Department of the Navy, Southern Division Naval Facilities Engineering Command (Southern Division, NAVFAC), to provide Operation and Maintenance (O&M) services at Building 9, NAS Cecil Field, Jacksonville, Florida, under the **Remedial Action Contract No. N62467-02-G-0352, Contract Task Order (CTO) No. 0001**. The purpose of this Third Quarter 2003 O&M Report is to provide a summary of activities performed at the site during the period of July 1, 2003 to September 30, 2003.

1.1 Objective

The objective of the remedial action at the Building 9 site is to reduce the concentrations of petroleum-related contaminants in the groundwater and unsaturated soils to target levels specified by Florida Administrative Code (FAC) 62-777. Nutrient injection, using the *PHOSter Nutrient Injection System*, is the technology being used to achieve this objective.

1.2 Site History

Building 9 served as the NAS Cecil Field main fire base station from 1953 until base closure. Prior to 1953, the site served as a public works center and incorporated a transportation garage and automotive hobby shop. As such, the site contained two gasoline underground storage tanks (USTs), Tanks 9L1 and 9L2, which were removed from the site around 1985 (TetraTech, NUS (TtNUS), June 2000). A fuel-storage tank was located west of the former UST location; the removal date of this tank is unknown (TtNUS, February 1999).

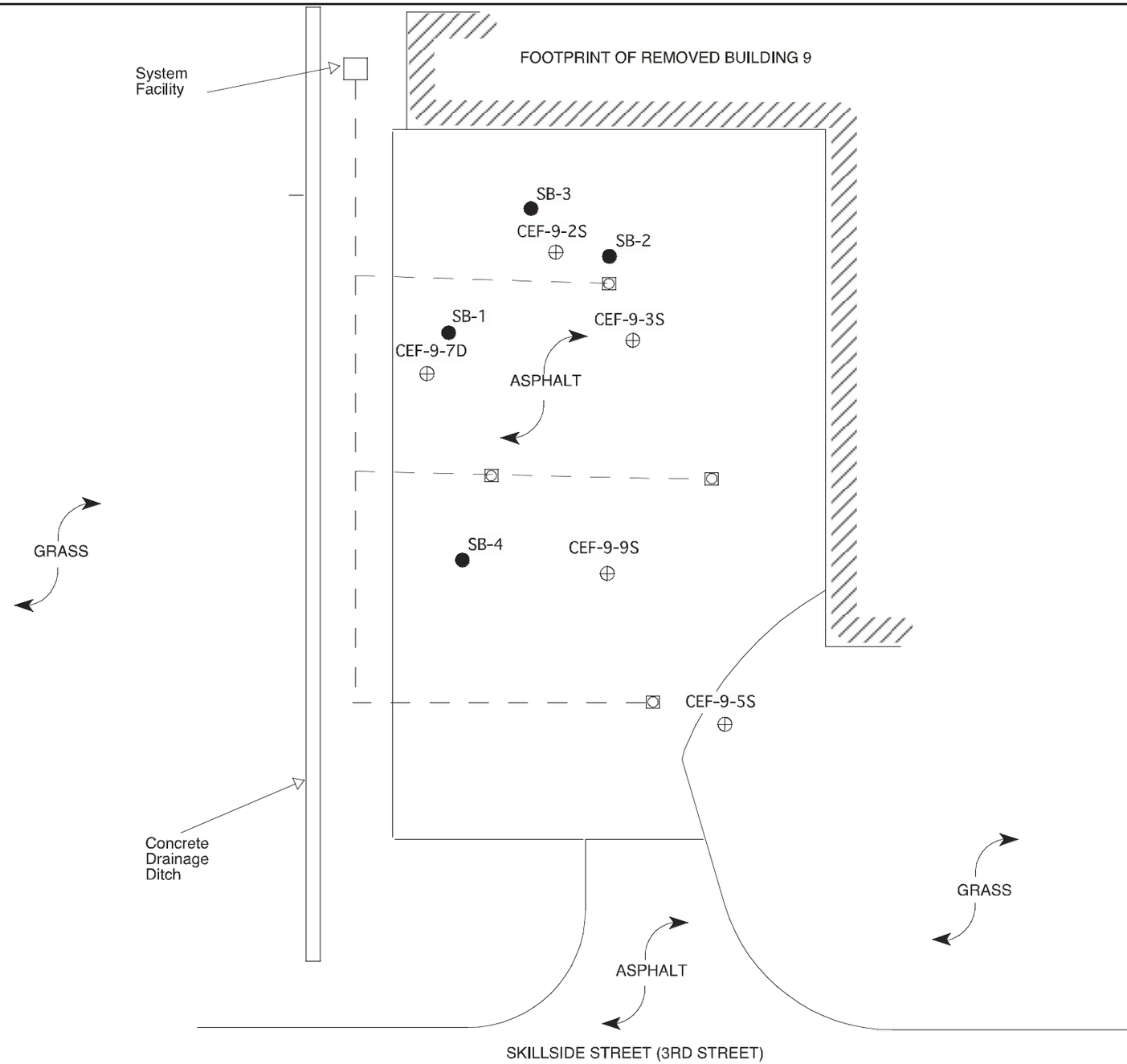
A Site Assessment Report (SAR) prepared for Building 9 (Harding Lawson Associates [HLA], 1998) concluded that operation of the two former USTs had resulted in contamination of soil and groundwater with fuel-related compounds, including Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), Naphthalene, Acenaphthylene, and Total Recoverable Petroleum Hydrocarbons (TRPH). The SAR determined that an area of soil of approximately 3,000 square feet at the location of the former USTs was highly contaminated to a depth of 7 feet below land surface (bls) and acted as a source of groundwater contamination. The SAR also established that groundwater contamination extends only to the shallow surficial aquifer (7 to 25 feet bls) to a depth of 20 feet bls over an approximately 3,000-square-foot area, which coincides with the area of soil contamination.

A nutrient injection system was installed at the site during the period of November 2000 to January 2001 to treat the impacted soil and groundwater to achieve State-mandated cleanup target levels. The nutrient injection system commenced operation on January 9, 2001.

1.3 Remediation System/Technology Description

The *PHOSter Nutrient Injection System* provides subsurface delivery of Oxygen, Nitrogen, and Phosphorus to enhance the development of naturally occurring heterotrophic bacteria that have the capability of metabolizing petroleum wastes. A compressor is used to inject air as the Oxygen source, and the airflow is mixed with nitrous oxide and vapor-phase triethylphosphate (TEP) to provide nitrogen and phosphorus, respectively. Toward the end of cleanup operations, when contaminant concentrations have been reduced to the point where insufficient food (contaminant) is available to sustain an effective microorganism population, propane will also be injected as a carbon source (TtNUS, June 2000).

The Building 9 nutrient injection system consists of four 30-foot-deep injection wells (labeled CEF-9-11 through CEF-9-14) that are screened from 27 to 30 feet bls, and a temporary trailer containing a compressor, injection gas storage containers, and associated piping and instrumentation. The nutrient injection system is designed for each injection well to operate at a flow rate of 3 to 5 cubic feet per minute (cfm) at an injection pressure of 15 pounds per square inch gauge (psig). The locations of the injection wells are shown on **Figure 1-1**.



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NOTES

DASHED LINES INDICATE SUBSURFACE FEATURES

LEGEND

- INJECTION LINE
- INJECTION WELL
- MONITORING WELL
- SOIL BORING

TERRAINE, Inc.
ENVIRONMENTAL SERVICES

FIGURE 1-1

SITE MAP

BUILDING 9
NAVAL AIR STATION JACKSONVILLE
JACKSONVILLE, FL

30 FT.

DWN BY: DNH	REVISED BY: RAH
DATE: 02/18/02	DATE: 08/11/03
SCALE: 1" = 30'	APR BY: JLY

2.0 System Performance Monitoring

O&M checks of the system were performed daily for the first week of operation and periodically thereafter. System checks were performed daily during the first week of operation and periodically thereafter to coincide with the O&M check.

During an O&M check, a preventative maintenance checklist (based upon manufacturer's recommendations) is completed, and any required maintenance activity is performed. A system check consists of an O&M check and system performance monitoring, including reading of all meters and gauges.

2.1 Operational Efficiencies

2.1.1 Nutrient Injection System

3rd QTR. 2003	Period	To Date
*Hours of Possible Operation:	2,208	23,832
*Hours of Actual Operation:	2,208	23,362
*Percent Hours of Operation:	100	98.0

*Note: Hours of Operation assumes 100% up-time for second and third quarter 2002 data, since this information has not been made available to Terraine, Inc.

2.2 Summary of Maintenance and System Downtime

2.2.1 Nutrient Injection System

During the period of July 1, 2003 to September 30, 2003, the nutrient injection system ran a total of 92 days out of a possible 92 days resulting in no system downtime.

2.3 Pressure/Flow Rate Monitoring

2.3.1 Nutrient Injection System

During the third quarter of 2003, the injection pressure at the compressors averaged 33 psig, compared to the design injection pressure of 15 psig. The total gas injection flow rate averaged 5.0 actual cubic feet per minute (acfm), compared to the design total gas injection flow rate of 12 to 20 acfm. The nitrous oxide injection rate averaged 0.1 actual cubic feet per hour (acfh) which is 0.005 percent by volume of airflow, compared to the design nitrous oxide injection rate of 0.07 to 0.10 percent by volume of airflow. The TEP injection mass for the third quarter totaled 11.63 pounds, compared to the design injection mass of 9.5 pounds per quarter. The data for the injection wells and injection system are provided on **Table 2-1** and **Table 2-2**, respectively.

The injection flow rates were rebalanced during the second quarter of 2001 to maximize injection in the area of monitoring well CEF-9-9S by diverting all flow equally between injection wells CEF-9-I3 and CEF-9-I4 on a continuous basis (see **Table 2-1**). The injection flow rates remained in this configuration during the third quarter of 2001. The previous configuration was to alternate injection on 12-hour cycles between the four injection wells. During the fourth quarter of 2001, the injection rates were adjusted to divert 100 percent of the airflow to a single injection well for one month each during the quarter as follows: CEF-9-I4 (October), CEF-9-I2 (November), and CEF-9-I3 (December). Diverting all flow to a single injection well increased the radius of influence for the active injection well in an attempt to affect monitoring well CEF-9-9S. This change caused a decrease in contaminant-concentrations in CEF-9-9S during the fourth quarter of 2001. Injection rates were split between injection wells CEF-9-I1 and CEF-9-I3 in January 2002. All flow was diverted to CEF-9-I4 in February 2002, and split between CEF-9-I1 and CEF-9-I4 in March 2002.

2.4 Water Level Measurements

Third quarter depth-to-water measurements were recorded at selected monitoring wells on September 2, 2003. The top-of-casing elevation, depth-to-water measurements and calculated water-level elevations are provided on **Table 2-3**.

Light Non-Aqueous Phase Liquid (LNAPL) was not noted in any monitoring well during the monitoring period.

TABLE 2-1

INJECTION WELL MEASUREMENTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Injection Well	Date	Valve % Open	Wellhead Flow (acfm)
CEF-9-I1	1/9/2001	100	3
	2/28/2001	100	4.75
	3/30/2001	100	4
	4/13/2001	0	0
	5/10/2001	0	0
	6/7/2001	0	0
	7/2/2001	0	0
	8/6/2001	0	0
	9/11/2001	0	0
	10/3/2001	0	0
	11/15/2001	0	0
	12/10/2001	0	0
	1/11/2002	100	4
	2/4/2002	0	0
	3/11/2002	25	1
	4/15/2002	25	0
	5/13/2002	25	1
	6/17/2002	0	0
	7/16/2002	0	0
	8/19/2002	0	0
	9/25/2002	0	0
	10/16/2002	0	0
	11/19/2002	0	0
	12/17/2002	0	0
	1/30/2003	100	3
	2/26/2003	100	3
	3/25/2003	100	3
	4/16/2003	100	3
	5/28/2003	100	2
	6/6/2003	100	2
	7/22/2003	100	2
	8/18/2003	0	0
	9/24/2003	100	4

TABLE 2-1

INJECTION WELL MEASUREMENTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Injection Well	Date	Valve % Open	Wellhead Flow (acfm)
CEF-9-I2	1/9/2001	100	4
	2/28/2001	50	4
	3/30/2001	100	4
	4/13/2001	100	5
	5/10/2001	0	0
	6/7/2001	0	0
	7/2/2001	0	0
	8/6/2001	0	0
	9/11/2001	0	0
	10/3/2001	0	0
	11/15/2001	100	4
	12/10/2001	0	0
	1/11/2002	0	0
	2/4/2002	0	0
	3/11/2002	0	0
	4/15/2002	0	0
	5/13/2002	0	0
	6/17/2002	25	1
	7/16/2002	25	1
	8/19/2002	25	1
	9/25/2002	25	2
	10/16/2002	25	1
	11/19/2002	25	1
	12/17/2002	15	2
	1/30/2003	5	2
	2/26/2003	15	2
	3/25/2003	15	2
	4/16/2003	15	2
	5/28/2003	15	1
	6/6/2003	15	1
	7/22/2003	15	1
	8/18/2003	0	0
	9/24/2003	15	4

TABLE 2-1

INJECTION WELL MEASUREMENTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Injection Well	Date	Valve % Open	Wellhead Flow (acfm)
CEF-9-I3	1/9/2001	100	4
	2/28/2001	0	0
	3/30/2001	100	3
	4/13/2001	100	5
	5/10/2001	100	3
	6/7/2001	100	3
	7/2/2001	100	3
	8/6/2001	100	3
	9/11/2001	100	3
	10/3/2001	0	0
	11/15/2001	0	0
	12/10/2001	100	4
	1/11/2002	100	4
	2/4/2002	0	0
	3/11/2002	0	0
	4/15/2002	100	0
	5/13/2002	0	0
	6/17/2002	100	8
	7/16/2002	100	8
	8/19/2002	0	0
	9/25/2002	100	0
	10/16/2002	0	0
	11/19/2002	100	8
	12/17/2002	0	0
	1/30/2003	0	0
	2/26/2003	0	0
	3/25/2003	0	0
	4/16/2003	0	0
	5/28/2003	0	0
	6/6/2003	0	0
	7/22/2003	0	0
	8/18/2003	100	4
	9/24/2003	0	0

TABLE 2-1

INJECTION WELL MEASUREMENTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Injection Well	Date	Valve % Open	Wellhead Flow (acfm)
CEF-9-I4	1/9/2001	100	2.75
	2/28/2001	50	5
	3/30/2001	100	3
	4/13/2001	100	4
	5/10/2001	100	3
	6/7/2001	100	3
	7/2/2001	100	3
	8/6/2001	100	3
	9/11/2001	100	3
	10/3/2001	100	6
	11/15/2001	0	0
	12/10/2001	0	0
	1/11/2002	0	0
	2/4/2002	100	4
	3/11/2002	100	4
	4/15/2002	100	0
	5/13/2002	100	4
	6/17/2002	0	0
	7/16/2002	0	0
	8/19/2002	100	8
	9/25/2002	0	6
	10/16/2002	100	8
	11/19/2002	0	0
	12/17/2002	100	5
	1/30/2003	0	0
	2/26/2003	0	0
	3/25/2003	0	0
	4/16/2003	0	0
	5/28/2003	0	0
	6/6/2003	0	0
	7/22/2003	0	0
	8/18/2003	50	4
	9/24/2003	0	0

NR = No Reading
acfm = actual cubic feet per minute

TABLE 2-2

INJECTION SYSTEM DATA

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Date	Air Supply Pressure (psig)	Total Gas Flow (acfm)	NOX Flow (acfh)	TEP Injection (pounds)
1/9/2001	NR	13.75	1	--
2/28/2001	17	13.75	0.8	1.78
3/30/2001	16	14	0.8	1.52
4/13/2001	19	14	0.8	2.68
5/10/2001	28	6	0.5	2.68
6/7/2001	28	6	0.5	3.57
7/2/2001	23	6	0.5	1.78
8/6/2001	24	6	0.5	1.78
9/11/2001	18	6	0.5	7.14
10/3/2001	35	6	0.5	1.78
11/15/2001	30	4	0.25	0.89
12/10/2001	30	4	0.25	1.78
1/11/2002	24	8	0.4	1.78
2/4/2002	21	4	0.4	0.89
3/11/2002	30	5	0.4	0.89
4/15/2002	28	0	0.01	0.71
5/13/2002	30	9	0.4	1.07
6/17/2002	36	0	0.5	1.16
7/16/2002	42	3.75	0.5	0.00
8/19/2002	48	6	0.5	0.00
9/25/2002	33	5	0.5	0.80
10/16/2002	34	9	0.05	1.07
11/19/2002	32	9	0.05	1.16
12/17/2002	39	7	0.05	0.36
1/30/2003	33	8.5	0.1	0.98
2/26/2003	32	5	0.1	1.07
3/25/2003	32	5	0.1	0.00
4/16/2003	33	5	0.1	4.46
5/28/2003	33	3	0.1	1.78
6/6/2003	33	3	0.1	8.03
7/22/2003	33	3	0.1	8.95
8/18/2003	33	8	0.1	2.68
9/24/2003	33	8	0.1	0

NR = No Reading
psig = pounds per square inch gauge
acfm = actual cubic feet per minute
acfh = actual cubic feet per hour

TABLE 2-3

GROUNDWATER MONITORING WELL - WATER LEVEL & FREE PRODUCT DATA

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Well Total Depth (feet bgs)	Date	Top of Casing Elevation (Feet)	Depth to Product (Feet)	Depth to Water (Feet)	Water Level Elevation (Feet)
CEF-9-2S	14.45	12/18/2000	78.74	no product	7.93	70.81
		1/18/2001		no product	8.55	70.19
		1/24/2001		no product	8.60	70.14
		1/31/2001		no product	8.74	70.00
		2/7/2001		no product	8.58	70.16
		2/14/2001		no product	8.72	70.02
		2/21/2001		no product	8.75	69.99
		3/7/2001		no product	8.49	70.25
		3/20/2001		no product	7.46	71.28
		4/3/2001		no product	6.99	71.75
		4/17/2001		no product	7.61	71.13
		5/1/2001		no product	8.13	70.61
		6/14/2001		no product	7.62	71.12
		7/24/2001		no product	6.62	72.12
		8/13/2001		no product	5.38	73.36
		9/17/2001		no product	3.41	75.33
		10/22/2001		no product	5.72	73.02
		11/13/2001		no product	6.50	72.24
		12/17/2001		no product	6.73	72.01
		3/18/2002		no product	6.56	72.18
		6/5/2002		no LNAPL	7.95	70.79
		9/26/2002		no LNAPL	4.48	74.26
		12/11/2002		no product	6.40	72.34
		3/13/2003		no product	4.18	74.56
		6/9/2003		no product	5.35	73.39
		9/2/2003		no product	4.57	74.17
CEF-9-3S	15.54	12/18/2000	78.81	no product	8.04	70.77
		1/18/2001		no product	8.67	70.14
		1/24/2001		no product	8.72	70.09
		1/31/2001		no product	8.89	69.92
		2/7/2001		no product	8.69	70.12
		2/14/2001		no product	8.83	69.98
		2/21/2001		no product	8.87	69.94
		3/7/2001		no product	8.60	70.21
		3/20/2001		no product	7.55	71.26
		4/3/2001		no product	7.12	71.69
		4/17/2001		no product	7.72	71.09
		5/1/2001		no product	8.50	70.31
		6/14/2001		no product	7.75	71.06
		7/24/2001		no product	6.47	72.34
		8/13/2001		no product	5.50	73.31
		9/17/2001		no product	3.51	75.30
		10/22/2001		no product	5.86	72.95
		11/13/2001		no product	6.62	72.19
		12/17/2001		no product	6.87	71.94
		3/18/2002		no product	6.75	72.06
		6/5/2002		no LNAPL	8.04	70.77
		9/16/2002		no LNAPL	4.59	74.22
		12/11/2002		no product	6.55	72.26
		3/13/2003		no product	4.28	74.53
		6/9/2003		no product	5.30	73.51
		9/2/2003		no product	4.74	74.07

TABLE 2-3

GROUNDWATER MONITORING WELL - WATER LEVEL & FREE PRODUCT DATA

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Well Total Depth (feet bgs)	Date	Top of Casing Elevation (Feet)	Depth to Product (Feet)	Depth to Water (Feet)	Water Level Elevation (Feet)
CEF-9-5S	13.72	12/18/2000	78.93	no product	8.34	70.59
		1/18/2001		no product	8.96	69.97
		1/24/2001		no product	9.03	69.90
		1/31/2001		no product	9.13	69.80
		2/7/2001		no product	8.97	69.96
		2/14/2001		no product	9.11	69.82
		2/21/2001		no product	9.10	69.83
		3/7/2001		no product	8.81	70.12
		3/20/2001		no product	7.61	71.32
		4/3/2001		no product	7.40	71.53
		4/17/2001		no product	8.02	70.91
		5/1/2001		no product	8.25	70.68
		6/14/2001		no product	7.99	70.94
		7/24/2001		no product	6.91	72.02
		8/13/2001		no product	5.78	73.15
		9/17/2001		no product	3.70	75.23
		10/22/2001		no product	6.21	72.72
		11/13/2001		no product	6.97	71.96
		12/17/2001		no product	7.17	71.76
		3/18/2002		no product	7.02	71.91
		6/5/2002		no LNAPL	8.36	70.57
		9/16/2002		no LNAPL	4.75	74.18
		12/11/2002		no product	6.90	72.03
		3/13/2003		no product	4.57	74.36
		6/9/2003		no product	5.50	73.43
		9/2/2003		no product	5.1	73.83
CEF-9-7D	29.23	12/18/2000	78.59	no product	7.83	70.76
		1/18/2001		no product	8.45	70.14
		1/24/2001		no product	8.50	70.09
		1/31/2001		no product	8.63	69.96
		2/7/2001		no product	8.46	70.13
		2/14/2001		no product	8.61	69.98
		2/21/2001		no product	8.62	69.97
		3/7/2001		no product	8.36	70.23
		3/20/2001		no product	7.29	71.30
		4/3/2001		no product	6.90	71.69
		4/17/2001		no product	7.52	71.07
		5/1/2001		no product	8.02	70.57
		6/14/2001		no product	7.51	71.08
		7/24/2001		no product	6.38	72.21
		8/13/2001		no product	5.28	73.31
		9/17/2001		no product	3.25	75.34
		10/22/2001		no product	5.66	72.93
		11/13/2001		no product	6.42	72.17
		12/17/2001		no product	6.65	71.94
		3/18/2002		no product	6.48	72.11
		6/5/2002		no LNAPL	7.83	70.76
		9/16/2002		no LNAPL	4.31	74.28
		12/11/2002		no product	6.34	72.25
		3/13/2003		no product	4.05	74.54
		6/9/2003		no product	4.90	73.69
		9/2/2003		no product	4.82	73.77

TABLE 2-3

GROUNDWATER MONITORING WELL - WATER LEVEL & FREE PRODUCT DATA

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identification	Well Total Depth (feet bgs)	Date	Top of Casing Elevation (Feet)	Depth to Product (Feet)	Depth to Water (Feet)	Water Level Elevation (Feet)
CEF-9-9S	14.23	12/18/2000	78.89	no product	8.39	70.50
		1/18/2001		no product	8.81	70.08
		1/24/2001		no product	8.88	70.01
		1/31/2001		no product	9.00	69.89
		2/7/2001		no product	8.85	70.04
		2/14/2001		no product	8.98	69.91
		2/21/2001		no product	8.97	69.92
		3/7/2001		no product	8.72	70.17
		3/20/2001		no product	7.66	71.23
		4/3/2001		no product	7.28	71.61
		4/17/2001		no product	7.89	71.00
		5/1/2001		no product	8.38	70.51
		6/14/2001		no product	7.87	71.02
		7/24/2001		no product	6.78	72.11
		8/13/2001		no product	5.67	73.22
		9/17/2001		no product	3.63	75.26
		10/22/2001		no product	6.09	72.80
		11/13/2001		no product	6.80	72.09
		12/17/2001		no product	7.01	71.88
		3/18/2002		no product	6.90	71.99
		6/5/2002		no LNAPL	8.21	70.68
		9/16/2002		no LNAPL	4.73	74.16
		12/11/2002		no product	6.73	72.16
		3/13/2003		no product	4.34	74.55
		6/9/2003		no product	5.40	73.49
		9/2/2003		no product	4.94	73.95

BGS = below ground surface
Elevation is referenced to National Geodetic Vertical Datum 1929 (NGVD 1929)
Depth to product measured from top of casing
Depth to water measured from top of casing

3.0 Summary of Sampling and Laboratory Analytical Results

3.1 Soil Monitoring

Quarterly soil-screening and sampling was conducted on September 4, 2003 during the monitoring period. One soil boring, labeled as SB-4, was installed in the vicinity of ground water monitoring well (CEF-9-9S). The soil was screened using an Organic Vapor Analyzer (OVA) equipped with a Flame Ionization Detector (FID) and a sample was collected for laboratory analysis on September 4, 2003. The water table was encountered below 6 feet below land surface. The OVA/FID readings are summarized below.

Date	Soil Boring No.	Depth (ft bls)	OVA/FID Unfiltered	OVA/FID Filtered	OVA/FID Net
09/04/2003	SB-4	2	ND	ND	ND
	SB-4	4	ND	ND	ND
	SB-4	6	ND	ND	ND

Note: Laboratory sample collected at 6 feet bls

The laboratory soil sample was analyzed for BTEX and Methyl Tert-Butyl Ether (MTBE) using United States Environmental Protection Agency (EPA) Method 8021B, Naphthalene and Polycyclic Aromatic Hydrocarbons (PAH) using EPA Method 8270, and TRPH using the FDEP FL-PRO (Florida Petroleum Residual Organic) Method. The results indicated that no constituents are above the Leachability or Direct Exposure Residential SCTL per Chapter 2-777 F.A.C. The location of SB-4 is shown on **Figure 1-1**. Copies of the analytical laboratory report from the soil-sampling event are provided in **Appendix A**, and analytical results are summarized on **Table 3-1**.

3.2 Groundwater Monitoring

Groundwater from monitoring wells CEF-9-2S, CEF-9-3S, CEF-9-5S, CEF-9-7D, and CEF-9-9S was sampled on September 2, 2003 during the third quarter. The samples were analyzed for BTEX and MTBE using EPA Method 8021B, Naphthalene and PAH using EPA Method 8270, TRPH using the FL PRO Method, and Nitrate, Nitrite, and Phosphate using EPA Method 300.0. None of the monitoring wells exhibited concentrations above the Groundwater Cleanup Target Levels (GCTL) per Chapter 62-777 FAC. The locations of the monitoring wells are shown on **Figure 1-1**. Copies of the analytical laboratory reports from the groundwater-sampling events are provided in **Appendix B**, and the analytical results are summarized on **Table 3-2**.

Field analytical tests were performed during each sampling event. Groundwater from each of the five monitoring wells was tested for pH, conductivity, temperature, dissolved oxygen,

carbon dioxide, alkalinity, ferrous iron, and hydrogen sulfide. The results from the field analytical tests are summarized on **Table 3-3**.

TABLE 3-1

SOIL ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Soil Boring Number	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylene	BTEX	Methyl tert-butyl ether	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	Benzo (g,h,i) perylene	TRPH (mg/kg)
SB-1	1/4/2001	0.00067	<0.0011	0.00081	<.0032	0.00148	<0.0011	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	0.0565	0.055	0.019	0.0345	0.0765	0.039	0.073	0.0564	0.113	0.18	73
	6/27/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/20/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/12/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/20/2002	<0.0011	<0.0011	<0.0011	<0.0032	<0.0065	<0.0011	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	0.089 J	0.14 J	0.055	0.12	0.24	0.11	0.21	0.12	0.19	0.25	120
	9/26/2002	<0.00112	<0.00112	<0.00112	<0.00335	<0.00671	<0.00112	<0.177	<0.177	<0.177	<0.177	<0.177	<0.177	0.185	0.136	0.0636	0.108	0.211	0.0653	0.195	0.0337	0.136	0.235	477
SB-2	1/4/2001	<0.12	0.65	<0.12	0.53	1.18	<0.12	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	0.0285	0.056	0.0096	0.027	0.0645	0.0215	0.062	0.046	0.0545	0.0815	70
	6/27/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/20/2001	<0.0013	<0.0013	<0.004	0.0049	0.0049	<0.0013	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.02	<0.02	<0.02	0.0062	0.025	0.0097	0.016	<0.02	0.015	0.013	21
	12/12/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/20/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SB-3	1/4/2001	<0.1	<0.1	0.5	4	4.5	<0.1	1.3	<0.18	<0.18	<0.18	<0.18	<0.18	<0.018	0.0425	<.018	0.0165	0.042	0.0195	0.042	0.0275	0.0405	0.0615	86
	6/27/2001	<0.0011	<0.0011	<0.0011	<0.0033	<0.0066	<0.0011	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	21
	9/20/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/12/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/7/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/20/2002	NS	NS	NS	NS	N	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SB-4	1/4/2001	<0.11	<0.11	0.15	3.2	3.35	<0.11	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.019	0.01185	<.019	0.05	0.024	0.0121	0.0235	0.014	0.0636	0.0275	220
	6/27/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/20/2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/12/2001	<0.0012	<0.0012	<0.0012	<0.0035	<0.0071	<0.0012	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.021	<0.021	<0.021	0.045	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	1100
	3/7/2002	<0.0012	<0.0012	<0.0012	<0.0035	<0.0071	<0.0012	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.015	0.01	<0.020	0.027	0.017	0.01	0.029	0.024	0.038	0.03	340
	6/20/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2002	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/10/2002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.004	<0.0412	<0.0412	<0.0412	<0.00864	<0.0263	<0.0272	<0.00864	<0.0111	<0.00535	<0.00618	<0.0074	<0.007	<0.00412	<0.0177	<0.0123	<0.0313	17.6
	3/14/2003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	37.6
	6/9/2003	<0.0011	<0.0011	<0.0011	0.0018	0.0018	<0.005	<.071	<.071	<.071	<.071	<.071	<.071	<.071	<.071	<.071	<.071	<.071	<.071	<.071	<.071	<.071	<.071	35.9
	9/4/2003	<0.001	<0.001	<0.001	<0.0009	<.001	<.004	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	11
Direct Exposure Residential [1]		1.1	1100	380	5900	n/a	3200	40	1100	1900	2200	2000	18000	2900	2200	1.4	140	1.4	15	0.1	1.5	0.1	2300	340
Leachability from GW Criteria [1]		0.0007	0.6	0.5	0.2	n/a	0.2	1.7	27	2.1	160	250	2500	1200	880	3.2	77	10	25	8	28	30	32000	340

All values reported in mg/kg

Method 8310 compounds are the average of duplicate runs

1 = Ch 62-777 F.A.C Soil cleanup Target Level (SCTLs) reported in mg/kg

Shaded values indicate the compounds that exceed the SCTLs

NS = Not Sampled

TABLE 3-2

GROUNDWATER ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identificaltion	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylene	BETX	Methyl tert-butyl ether	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	1-Methylnaphthalene	2-Methylnaphthalene	Benzo (g,h,i) perylene	Nitrate	Nitrite	Phosphate	TRPH
CEF-9-2S	12/18/2000	<1.0	6.9	<1.0	1.7	8.6	NA	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	<530
	1/18/2001	<1.0	<1.0	<1.0	4.2	4.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	0.21	<500
	1/24/2001	<1.0	1.6	<1.0	0.56	2.16	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	0.28	<530
	1/31/2001	0.41	3.0	0.30	4.0	7.71	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	0.31	<500
	2/7/2001	<1.0	0.98	<1.0	0.92	1.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.11	<0.40	0.29	<500
	2/14/2001	<1.0	0.42	<1.0	0.76	1.18	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.14	<0.40	0.20	220
	2/21/2001	<1.0	0.41	0.32	0.69	1.42	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.11	<0.40	0.33	<500
	3/7/2001	<1.0	0.24	<1.0	0.51	0.75	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.12	<.40	0.19	<530
	3/20/2001	<1.0	1.1	<1.0	0.57	1.67	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.12	<0.40	0.28	<520
	4/3/2001	0.15	0.62	<1.0	0.51	1.28	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.24	<0.40	0.23	<500
	4/17/2001	0.13	0.5	<1.0	<1.0	0.63	<1.0	0.6	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.14	<0.40	0.17	<520
	5/1/2001	<1.0	1.2	<1.0	0.32	1.52	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	<520
	6/14/2001	<1.0	<1.0	<1.0	0.93	0.93	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.17	<0.40	0.36	280
	7/24/2001	<1.0	8.8	<1.0	6.7	15.5	<1.0	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.3	<0.40	<1.0	1400
	8/13/2001	<1.0	7.6	<1.0	3.5	11.1	<1.0	2.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.18	<0.40	<1.0	1200
	9/17/2001	<1.0	2.1	<1.0	<1.0	2.1	<1.0	1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	580
	10/22/2001	0.98	7.5	<1.0	0.98	9.46	<1.0	2.8	<1.0	<1.1	<1.1	<1.1	<1.1	<0.21	0.1	<0.21	<0.21	0.041	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.16	<0.40	0.33	780
	11/13/2001	2.4	14	<1.0	2.7	19.1	<1.0	5.3	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.21	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.15	<0.40	<1.0	720
	12/17/2001	1.1	21	2.1	5.6	29.8	<1.0	3.3	<1.1	<1.1	<1.0	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	2000
	3/18/2002	<1.0	7.28	2.02	4.57	13.87	<1.0	3.3	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.21	<0.21	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	--	--	<0.21	0.165	<0.40	<1.0	736
	6/5/2002	<1.0	<1.0	1.1	<1.0	1.1	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	0.120 J	0.091 J	<0.20	0.094 J	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	310 J
	9/16/2002	0.756	19	<1.0	11.7	31.456	<1.0	1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.22	0.075	<0.22	<0.22	0.13	<0.22	<0.22	<0.22	<0.22	--	--	0.15	0.11	<0.40	<1.0	851
	12/10/2002	4.6	50.8	2.0	30.5	87.9	<1.0	3.60	<1.04	<1.04	<0.52	<0.52	<0.52	<0.21	<0.21	<0.10	<0.10	<0.10	<0.15	<0.10	<0.21	<0.21	--	--	<0.21	0.23	<0.10	<0.1000	1510
	3/13/2003	2.80	40.5	2.5	37.4	83.2	<1.0	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	--	--	<2.4	<0.100	<0.100	<0.100	2620
	6/9/2003	<1.0	1.3	<1.0	2	3.3	<1.0	<.10	<.10	<.10	<.10	<.10	<.10	<.10	0.12	<0.10	<0.10	<0.10	<.10	<.10	<.10	<.10	<.10	<.10	<.10	2.94	<0.10	<0.100	994
	9/2/2003	<1.00	<1.0	<1.0	<1.0	<1.0	<1.0	0.22	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	4.07	<.10	<0.10	<200

TABLE 3-2

GROUNDWATER ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identificaltion	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylene	BETX	Methyl tert-butyl ether	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	1-Methylnaphthalene	2-Methylnaphthalene	Benzo (g,h,i) perylene	Nitrate	Nitrite	Phosphate	TRPH
CEF-9-3S	12/18/2000	18	130	8.9	170	326.9	NA	29	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	1500
	1/18/2001	21	140	40	430	631	<1.0	20	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	0.20	1700
	1/24/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	0.21	720
	1/31/2001	<1.0	38	2.8	180	220.8	<1.0	3.6	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	960
	2/7/2001	0.36	12	1.9	89	103.26	<1.0	0.75	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	0.039	<0.20	0.044	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.074	<0.40	<1.0	720
	2/14/2001	0.21	8.0	2.8	53	64.01	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	520
	2/21/2001	0.24	7.2	3.7	45	56.14	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.15	<0.40	0.21	470
	3/7/2001	<1.0	<1.0	<1.0	4.6	4.6	<1.0	2.3	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.20	<0.40	<1.0	440
	3/20/2001	<1.0	<1.0	<1.0	4.7	4.7	<1.0	2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.22	<0.40	<1.0	<270
	4/3/2001	<1.0	2.7	<1.0	3	5.7	<1.0	0.8	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.25	0.063	0.18	<520
	4/17/2001	<1.0	5.9	0.95	5.6	12.45	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.16	<0.40	<1.0	300
	5/1/2001	0.65	6.2	1.9	12	20.75	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	600
	6/14/2001	0.52	3.3	<1.0	4.2	8.02	<1.0	1	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.19	<0.40	<1.0	780
	7/24/2001	<1.0	11	<1.0	4.4	15.4	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.24	<0.40	<1.0	540
	8/13/2001	<1.0	11	<1.0	3.2	14.2	<1.0	2.7	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.2	<0.40	<1.0	760
	9/17/2001	<1.0	11	<1.0	20	31	<1.0	6	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	1200
	10/22/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	8.3	<1.0	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	780
	11/13/2001	<1.0	15	<1.0	5.9	20.9	<1.0	7.6	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.21	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	500
	12/17/2001	<1.0	11	1.1	3.1	15.2	<1.0	4.9	<1.0	<1.1	<1.0	<1.1	<1.1	<0.20	<0.22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	440
	3/18/2002	<1.0	6.14	1.67	2.65	10.46	<1.0	2.72	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.21	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.21	<0.60	<0.40	<1.0	630
	6/5/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.21	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.21	<0.60	<0.40	<1.0	680
	9/16/2002	<1.0	3.31	1.74	3	8.05	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	0.075	<0.21	<0.21	0.18	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.22	<0.40	<1.0	674
	12/10/2002	<1.0	1.6	<1.0	1.9	3.5	<1.0	<1.05	<1.05	<1.05	<0.53	<0.53	<0.53	<0.21	<0.21	<0.11	<0.11	<0.11	<0.15	<0.11	<0.21	<0.21	--	--	<0.21	0.49	<0.10	<0.1000	298
	3/13/2003	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--	--	<2.5	<0.100	<0.100	<0.100	385
	6/9/2003	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<.10	<.10	<.10	<.10	<.10	<.10	<.10	0.11	<0.10	<0.10	<0.10	<.10	<.10	<.10	<.10	<.10	<.10	<.10	2.15	<0.10	<0.100	894
	9/2/2003	<1.00	<1.0	<1.0	<1.0	<1.0	0.22	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	8.18	<0.1	<0.1	552

TABLE 3-2

GROUNDWATER ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identificaltion	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylene	BETX	Methyl tert-butyl ether	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	1-Methylnaphthalene	2-Methylnaphthalene	Benzo (g,h,i) perylene	Nitrate	Nitrite	Phosphate	TRPH
CEF-9-5S	12/18/2000	<1.0	<1.0	<1.0	0.52	0.52	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.09	<0.40	<1.0	<530
	1/18/2001	0.12	<1.0	<1.0	<1.0	0.12	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.31	<0.40	<1.0	<500
	1/24/2001	<1.0	0.77	0.30	2.2	3.27	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.30	<0.40	<1.0	<530
	1/31/2001	0.30	<1.0	<1.0	<1.0	0.3	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	--	--	<0.22	0.26	<0.40	<1.0	<530
	2/7/2001	0.34	0.26	<1.0	<1.0	0.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.28	<0.40	<1.0	<500
	2/14/2001	0.84	0.66	<1.0	0.46	1.96	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.20	<0.40	<1.0	200
	2/21/2001	0.84	0.77	0.31	0.56	2.48	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.18	<0.40	<1.0	<500
	3/7/2001	0.75	0.85	0.31	0.87	2.78	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.20	<0.40	<1.0	<530
	3/20/2001	0.10	0.11	<1.0	<1.0	0.21	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.15	<0.40	<1.0	<520
	4/3/2001	0.16	<1.0	<1.0	<1.0	0.16	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0..074	<0.40	<1.0	<520
	4/17/2001	0.26	<1.0	<1.0	<1.0	0.26	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.11	<0.40	<1.0	<520
	5/1/2001	<1.0	0.32	<1.0	<1.0	0.32	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.22	<0.40	<1.0	<530
	6/14/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.25	<0.40	<1.0	<500
	7/24/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.2	<0.40	<1.0	<520
	8/13/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.16	<0.40	<1.0	<520
	9/17/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.32	<0.40	<1.0	<520
	10/22/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.1	<1.0	<1.0	<1.1	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.2	<0.40	<1.0	<530
	11/13/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.2	<0.40	<1.0	<530
	12/17/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.1	<1.0	<1.0	<1.0	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.36	<0.40	<1.0	<540
	3/18/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.394	<0.40	<1.0	<530
	6/5/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	1.5	0.096 J	<1.0	<530
	9/16/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	--	--	<0.22	0.13	<0.40	<1.0	423
	12/10/2002	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.05	<1.05	<1.05	<0.53	<0.53	<0.53	<0.21	<0.21	<0.11	<0.11	<0.11	<0.15	<0.11	<0.21	<0.21	--	--	<0.21	0.71	<0.10	<0.1000	<100
	3/13/2003	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--	--	<2.5	<0.100	<0.100	<0.100	<211
	6/9/2003	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<.10	<.10	<.10	<.10	<.10	<.10	<.10	0.11	<0.10	<0.10	<0.10	<.10	<.10	<.10	<.10	<.10	<.10	<.10	0.13	<0.10	<0.100	<222
	9/2/2003	<1.00	<1.0	<1.0	<1.0	<1.0	<1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	<200

TABLE 3-2

GROUNDWATER ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identificaltion	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylene	BETX	Methyl tert-butyl ether	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	1-Methylnaphthalene	2-Methylnaphthalene	Benzo (g,h,i) perylene	Nitrate	Nitrite	Phosphate	TRPH
CEF-9-7D	12/18/2000	<1.0	<1.0	<1.0	<1.0	<4.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.30	<0.40	<1.0	<500
	1/18/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	<500
	1/24/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	<520
	1/31/2001	0.13	<1.0	<1.0	0.37	0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	--	--	<0.22	<0.60	<0.40	<1.0	<520
	2/7/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	<530
	2/14/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	<500
	2/21/2001	<1.0	<1.0	<1.0	0.24	0.24	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	<500
	3/7/2001	<1.0	<1.0	<1.0	0.36	0.36	<1.0	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	<530
	3/20/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	<520
	4/3/2001	0.47	<1.0	<1.0	1.1	1.57	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	0.072	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	<520
	4/17/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	<520
	5/1/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	<520
	6/14/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	<520
	7/24/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.21	<0.40	<1.0	<520
	8/13/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.61	<0.40	<1.0	<520
	9/17/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	<520
	10/22/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.1	<1.0	<1.1	<1.1	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	290
	11/13/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.1	<1.1	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.21	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	<530
	12/17/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.1	<1.0	<1.0	<1.0	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	<530
	3/18/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	<530
	6/5/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	<520
	9/16/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	0.097	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	420
	12/10/2002	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.11	<1.11	<1.11	<0.56	<0.56	<0.56	<0.22	<0.22	<0.11	<0.11	<0.11	<0.16	<0.11	<0.22	<0.22	--	--	<0.22	<0.10	<0.10	<0.1000	<100
	3/13/2003	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	--	--	<2.4	<0.100	<0.100	<0.100	<211
	6/9/2003	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<.10	<.10	<.10	<.10	<.10	<.10	<.10	0.12	<0.10	<0.10	<0.10	<.10	<.10	<.10	<.10	<.10	<.10	<.10	<0.10	<0.10	<0.100	<222
	9/2/2003	<1.00	<1.0	<1.0	<1.0	<1.0	<1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	<200

TABLE 3-2

GROUNDWATER ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

Well Identificaltion	Sample Date	Benzene	Ethyl Benzene	Toluene	Xylene	BETX	Methyl tert-butyl ether	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1, 2, 3-cd) pyrene	Dibenzo (a,h) anthracene	1-Methylnaphthalene	2-Methylnaphthalene	Benzo (g,h,i) perylene	Nitrate	Nitrite	Phosphate	TRPH
CEF-9-9S	1/18/2001	24	210	99	640	973	<1.0	63	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	2300
	1/24/2001	22	190	60	440	712	<1.0	45	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	1400
	1/31/2001	16	160	49	430	655	<5.0	57	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	1800
	2/7/2001	8.7	160	40	360	568.7	<2.0	53	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	1900
	2/14/2001	16	260	74	590	940	<1.0	36	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	2300
	2/21/2001	9.5	150	36	290	485.5	<10	50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	1800
	3/7/2001	27	210	82	410	729	<20	37	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	2100
	3/20/2001	11	120	18	150	299	<5.0	45	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	1600
	4/3/2001	14	140	36	250	440	<10	35	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.081	<0.40	<1.0	870
	4/17/2001	23	200	44	370	637	<5.0	49	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	1300
	5/1/2001	12	210	38	310	570	<5.0	59	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	1400
	6/14/2001	9.5	130	17	130	286.5	<10	24	1.2	<1.0	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.18	<0.40	0.35	1200
	7/24/2001	16	150	10	120	296	<1.0	25	3.3	7	<1.0	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	0.19	<0.40	<1.0	1200
	8/13/2001	16	140	9.1	130	295.1	3.5	26	3.2	7.2	<1.0	<1.0	<1.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	0.2	<0.40	0.48	1500
	9/17/2001	18	150	30	290	488	2.9	23	<1.1	<1.1	<1.1	<1.1	<1.1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	--	--	<0.21	<0.60	<0.40	<1.0	1500
	10/22/2001	1.9	6	0.67	13	21.6	<1.0	4.7	<1.1	<1.1	<1.1	<1.1	<1.1	<0.20	<0.22	<0.20	<0.20	<0.20	<0.22	<0.20	<0.20	<0.20	--	--	<0.20	0.13	<0.40	<1.0	3100
	11/13/2001	6.8	54	2.8	44	107.6	<1.0	24	<1.1	<1.1	<1.1	<1.1	<1.1	<0.20	<0.21	<0.20	<0.21	<0.20	<0.20	<0.21	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	1700
	12/17/2001	1.8	43	<1.0	36	80.8	<1.0	32	<1.0	<1.1	<1.0	<1.1	<1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.20	<0.60	<0.40	<1.0	1400
	3/18/2002	1	30.4	1.81	46.6	79.81	<1.0	42.6	<1.1	<1.1	<1.1	<1.1	<1.1	<0.20	<0.21	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.21	0.17	<0.40	<1.0	719
	6/5/2002	1.4	39	1.7	55	97.1	<1.0	44	<1.1	<1.1	<1.1	<1.1	<1.1	<0.20	<0.21	<0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	<0.21	0.089 J	<0.40	<1.0	860
	9/16/2002	<1.0	9.79	<1.0	9.29	19.08	<1.0	13	<1.0	<1.0	<1.0	<1.0	<1.0	<0.21	0.084	0.1	<0.21	0.13	<0.21	<0.21	<0.21	<0.21	--	--	0.068	<0.60	<0.40	<1.0	3400
	12/10/2002	1.4	7.6	<1.0	10	19	<1.0	21.6	<1.03	<1.03	<0.52	<0.52	<0.52	<0.21	<0.21	<0.10	<0.10	<0.10	<0.14	<0.10	<0.21	<0.21	--	--	<0.21	<0.10	<0.10	<0.1000	225
	3/13/2003	<1.0	2.3	<1.0	3.0	5.3	<1.0	11.5	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	--	--	<2.4	1.3	<0.100	<0.100	446
	6/9/2003	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	11.9	<.10	<.10	<.10	<.10	<.10	<.10	0.11	<0.10	<0.10	<0.10	<.10	<.10	<.10	<.10	3.63	4.43	<.10	2.91	<0.10	<0.100	500
	9/2/2003	<1.00	<1.0	<1.0	<1.0	<1.0	<1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	15.4	<0.1	<0.1	<200
Groundwater Criteria[1]		1	30	40	20	n/a	50	20	210	20	280	210	2100	280	210	0.2	4.8	0.2	0.5	0.2	0.2	0.2	20	20	210	10,000	1000	n/a	5000
Natural Attenuation Default		100	300	400	200	n/a	500	200	2100	200	2800	2100	21000	2800	2100	20	480	20	50	20	20	20	200	200	2100	100000	10000	n/a	50000

All values reported in ug/L; expcept Nitrate, Nitrite, and Phosphate, they are reported in mg/L
1 = Ch 62-777 F.A.C Groundwater Cleanup Target Levels (GCTLs) reported in ug/L
Shaded values indicate the compounds that exceed the GCTLs

TABLE 3-3

GROUNDWATER FIELD ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

	Date	pH	Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)
CEF-9-2S	12/18/2000	6.19	0.192	27.20	0.0	NR	80	1.2	0.3
	1/18/2001	6.19	0.106	23.40	2.5	1000+	400+	0.0	0.3
	1/24/2001	6.41	0.650	22.30	3.9	1000+	400+	0.0	0.1
	1/31/2001	6.49	0.062	25.10	4.7	1000+	400	0.0	0.2
	2/7/2001	6.42	0.060	22.40	5.2	1000+	400+	0.2	0.1
	2/14/2001	6.30	0.070	23.00	5.8	1000+	400+	0.0	0.7
	2/21/2001	6.30	0.070	23.00	6.3	NR	NR	0.0	0.1
	3/7/2001	6.60	0.080	22.00	6.0	NR	NR	0.2	0.1
	3/20/2001	6.37	0.092	22.60	6.6	1000+	400+	0.0	0.5
	4/3/2001	6.40	0.100	23.00	6.5	>	400+	0.2	0.5
	4/17/2001	8.55	0.110	23.00	4.0	1000+	400+	0.2	0.1
	5/1/2001	6.20	0.110	23.00	3.0	1000+	400+	0.2	0.1
	6/14/2001	5.74	0.128	25.00	2.0	1000+	400+	0.0	0.1
	7/24/2001	5.71	0.144	26.4	2.1	500	120	0.6	0.1
	8/13/2001	6.11	0.153	27.8	1.9	1000+	220	0.0	0.3
	9/17/2001	5.59	0.174	27.8	1.7	180	60	1.8	0.2
	10/22/2001	6.13	0.167	27.3	1.8	1000+	400+	1.0	0.1
	11/13/2001	6.38	0.163	26.1	1.6	160	60	1.0	0.5
	12/17/2001	6.00	0.146	25.6	1.5	240	60	1.0	1.0
	3/18/2002	6.13	0.140	23.6	1.2	200	60	0.6	0.3
	6/5/2002	6.18	0.120	26.6	1.0	240	60	0.2	0.1
	9/16/2002	5.91	0.154	28.8	0.2	NR	NR	1.0	0.5
	12/11/2002	5.50	NR	25.4	0.2	95	NR	NR	0.4
	3/13/2003	6.48	0.148	22.2	0.4	117	40	1.4	0.3
	6/9/2003	6.46	0.23	26.14	4.65	181	25	0	0
	9/2/2003	6.4	0.43	29.56	6.71	80.00	30	0	0.1
CEF-9-3S	12/18/2000	6.49	0.348	25.40	0.0	17	160	3.4	0.5
	1/18/2001	6.50	0.131	23.00	1.6	1000+	600	0.2	0.5
	1/24/2001	6.67	0.087	22.30	1.5	1000+	300	0.4	0.3
	1/31/2001	6.67	0.087	23.50	2.6	1000+	400	0.0	0.6
	2/7/2001	6.47	0.074	22.20	1.6	1000+	400+	1.2	0.1
	2/14/2001	6.50	0.067	22.00	2.4	1000+	400+	0.0	0.5
	2/21/2001	6.40	0.070	23.00	2.2	400	100	0.2	0.1
	3/7/2001	6.70	0.080	22.00	2.5	300	60	0.8	0.1
	3/20/2001	6.14	0.073	22.70	2.6	250	80	0.6	0.3
	4/3/2001	6.10	0.080	23.00	3.4	200	400+	0.1	0.1
	4/17/2001	5.90	0.080	23.00	1.8	160	80	0.8	0.5
	5/1/2001	6.20	0.090	24.00	1.7	120	60	1.2	0.3
	6/14/2001	5.41	0.098	26.10	1.9	228	80	1.1	2.0
	7/24/2001	6.82	0.111	27.20	3.1	120	40	2.0	2.0
	8/13/2001	6.61	0.108	27.90	2.5	84	60	2.2	0.5
	9/17/2001	6.24	0.139	28.20	2.1	60	60	1.0	0.3
	10/22/2001	6.82	0.119	27.40	1.8	120	80	1.4	0.7
	11/13/2001	6.58	0.121	26.30	0.5	100	40	1.4	0.8
	12/17/2001	5.00	0.118	25.60	1.7	100	60	1.2	1.0
	3/18/2002	6.19	0.138	23.4	3.9	60	40	1.0	0.4
	6/5/2002	6.18	0.158	27.5	1.6	80	40	0.8	0.5
	9/16/2002	6.20	0.160	29.1	0.6	380	40	0.1	0.5
	12/11/2002	5.80	NR	25.9	0.2	30	80	0.9	0.3
	3/13/2003	6.32	0.206	22.4	1.1	64	20	1.0	0.3
	6/9/2003	6.07	0.187	26.68	2.32	124	10	0	0
	9/2/2003	6.00	0.537	28.78	1.98	74	35	0	0

TABLE 3-3

GROUNDWATER FIELD ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

	Date	pH	Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)
CEF-9-5S	12/18/2000	6.20	0.186	22.70	0.0	10	100	0.0	0.1
	1/18/2001	6.43	0.158	22.40	3.8	1000+	400+	0.6	0.1
	1/24/2001	6.54	0.159	21.40	3.5	200	100	0.4	0.0
	1/31/2001	6.51	0.178	22.80	4.2	350	400	0.6	0.1
	2/7/2001	6.55	0.163	21.80	4.0	220	120	0.2	0.0
	2/14/2001	6.40	0.150	22.00	3.4	1000+	400+	0.0	0.2
	2/21/2001	6.40	0.150	21.00	4.5	140	100	0.2	0.1
	3/7/2001	6.57	0.141	20.90	3.3	300	80	0.2	0.0
	3/20/2001	6.20	0.130	21.00	3.5	300	160	0.1	0.1
	4/3/2001	5.90	0.070	21.00	5.7	500	120	0.4	0.1
	4/17/2001	6.10	0.080	22.00	4.3	260	100	0.9	0.1
	5/1/2001	6.10	0.110	22.00	3.4	280	100	0.4	0.1
	6/14/2001	6.11	0.119	25.20	NR	1000+	400+	0.0	3.0
	7/24/2001	5.36	0.062	25.50	3.8	260	120	1.0	0.1
	8/13/2001	6.85	0.058	26.60	3.8	1000+	180	0.0	0.1
	9/17/2001	6.57	0.164	26.50	5.5	200	80	0.6	0.1
	10/22/2001	6.27	0.074	25.90	2.5	220	80	0.8	0.1
	11/13/2001	6.71	0.075	24.90	2.1	80	60	0.4	0.1
	12/17/2001	6.00	0.072	24.20	2.9	140	40	0.6	0.0
	3/18/2002	6.44	0.070	22.0	2.3	80	40	0.4	0.0
	6/5/2002	6.43	0.117	25.3	1.6	80	40	0.2	0.0
	9/16/2002	6.79	0.085	27.9	3.4	110	60	0.1	0.0
	12/11/2002	6.09	NR	24.6	1.1	22	60	0.0	0.1
	3/13/2003	3.93	0.277	20.36	5.44	68	140	0	0
	6/9/2003	6.52	0.138	24.91	0.0	122	40	2.0	0.0
	9/2/2003	5.96	0.354	28.02	1.7	68	85	0.0	0.0
CEF-9-7D	12/18/2000	7.45	0.264	25.20	0.1	8	85	0.0	0.1
	1/18/2001	6.69	0.133	24.40	2.0	80	100	0.4	0.1
	1/24/2001	6.29	0.079	24.20	1.9	130	100	0.6	0.0
	1/31/2001	6.29	0.092	25.40	1.0	50	60	0.1	0.1
	2/7/2001	5.93	0.057	24.20	2.4	140	60	0.2	0.0
	2/14/2001	5.90	0.050	24.00	2.6	70	40	0.2	0.1
	2/21/2001	5.80	0.050	24.00	2.4	100	40	0.4	0.0
	3/7/2001	6.10	0.060	23.30	1.9	140	40	0.6	0.0
	3/20/2001	5.47	0.049	23.60	2.4	50	40	0.3	0.1
	4/3/2001	5.40	0.050	23.00	2.8	80	40	0.4	0.1
	4/17/2001	5.30	0.050	24.00	2.7	60	40	0.6	0.0
	5/1/2001	5.50	0.050	24.00	2.5	80	40	0.8	0.0
	6/14/2001	9.82	0.047	24.40	NR	102	40	0.6	0.0
	7/24/2001	5.42	0.043	24.30	2.5	80	20	0.6	0.0
	8/13/2001	5.44	0.041	24.80	2.5	66	40	0.8	0.0
	9/17/2001	5.47	0.065	25.00	8.1	50	40	0.6	0.1
	10/22/2001	4.87	0.029	26.00	2.9	60	20	0.4	0.0
	11/13/2001	6.21	0.043	24.50	2.6	80	40	0.6	0.0
	12/17/2001	5.00	0.033	25.00	1.7	90	20	0.6	0.0
	3/18/2002	5.47	0.036	25.1	1.6	50	20	0.0	0.0
	6/5/2002	5.36	0.390	25.9	2.0	90	20	0.6	0.0
	9/16/2002	5.30	0.037	26.1	0.4	100	20	0.4	0.0
	12/11/2002	4.16	NR	25.3	0.5	63	40	0.8	0.1
	3/13/2003	3.90	0.043	23.92	2.20	115	15	0.2	0
	6/9/2003	5.07	0.041	24.43	0	118	10	0.2	0
	9/2/2003	4.71	0.125	26.37	0.14	152	0	0.6	0

TABLE 3-3

GROUNDWATER FIELD ANALYTICAL RESULTS

BUILDING 9 NUTRIENT INJECTION SYSTEM
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

	Date	pH	Conductivity (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)	Carbon Dioxide (mg/L)	Alkalinity as $CaCO_3$ (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)
CEF-9-9S	12/18/2001	5.31	0.121	26.30	0.0	NR	NR	NR	NR
	1/18/2001	5.44	0.058	23.00	2.1	500	400+	1.0	5.0
	1/24/2001	5.53	0.054	22.60	1.7	500	200	0.8	5.0
	1/31/2001	5.44	0.059	23.30	2.1	500	400	1.1	5.0
	2/7/2001	5.46	0.052	22.60	2.4	260	100	0.6	5.0
	2/14/2001	5.40	0.050	23.00	2.0	120	140	1.0	4.0
	2/21/2001	5.40	0.050	22.00	1.9	300	80	0.6	5.0
	3/7/2001	5.56	0.540	22.00	1.5	200	80	0.6	5.0
	3/20/2001	5.28	0.052	22.30	2.3	360	80	0.4	5.0
	4/3/2001	5.00	0.060	22.00	2.4	280	160	0.3	5.0
	4/17/2001	5.00	0.060	23.00	2.2	200	100	0.6	5.0
	5/1/2001	5.20	0.060	23.00	2.2	220	60	0.4	5.0
	6/14/2001	5.02	0.064	26.00	NR	88	60	1.8	0.5
	7/24/2001	4.35	0.057	26.80	2.1	170	40	1.0	2.0
	8/13/2001	8.54	0.049	27.40	2.5	220	40	1.0	5.0
	9/17/2001	5.08	0.088	28.20	3.1	130	20	0.8	0.6
	10/22/2001	4.94	0.095	27.20	2.7	160	40	1.0	5.0
	11/13/2001	5.21	0.080	25.90	1.2	110	40	1.4	1.0
	12/17/2001	5.00	0.068	25.40	1.7	80	20	1.0	1.0
	3/18/2002	5.15	0.104	23.6	1.2	100	20	0.6	1.0
	6/5/2002	5.35	0.119	26.7	1.4	10	20	0.6	0.7
	9/16/2002	5.13	0.136	28.4	0.1	380	20	0.7	2.0
	12/11/2002	4.62	NR	26.1	4.1	38	40	0.9	2.0
	3/13/2003	5.81	0.205	22.5	0.3	53	10	1.0	0.5
	6/9/2003	4.88	0.259	25.81	0.00	242	5	0	0
	9/2/2003	3.85	0.787	28.93	1.52	54	0	0	0

NR = No Reading

4.0 Conclusions and Recommendations

4.1 Conclusions

Laboratory analysis of the soil at SB-04 indicated that all contaminant concentrations were below the Leachability and Direct Exposure Residential SCTL.

Third Quarter 2003 analytical laboratory results indicate that contaminant concentrations in groundwater sampled from all monitoring wells were below the GCTLs. LNAPL was not noted in any monitoring well during the monitoring period.

4.2 Recommendations

It is recommended that operation of the nutrient injection system be continued for at least one more quarter. The field parameter readings will be evaluated and, if warranted, the airflow may be rebalanced as warranted. All five monitoring wells will continue to be sampled one time during the next quarter in order to confirm that the contaminant levels in the ground water are in fact below the GCTLs.

The soil screening and sampling that has been conducted to evaluate the performance of the remediation system with respect to the soil in the location of SB-04 indicates that soil contaminant levels are below the SCTLs.

It is recommended that soil sampling be discontinued at SB-04 as a result of laboratory reports indicating contaminant concentrations below the SCTLs.

5.0 References

Tetra Tech NUS, Inc. (TtNUS), June 2000. Remedial Action Plan Addendum; Building 9, Former Tanks 9L1 and 9L2; Naval Air Station Cecil Field, Jacksonville, Florida.

Priester and Associates, September 2000. PHA-ER Remediation System Design Specifications, Building 9 Site, Remedial Action Plan Addendum.

CH2M HILL Constructors, Inc. (CCI), September 2000. Work Plan Addendum No. 08 nutrient injection system Installations at Building 9, former Tanks 9L1 and 9L2 and building 46, Former Tanks 46R, 46D, 46SUL, and 46UL; Naval Air Station Cecil Field, Jacksonville, Florida.

APPENDICES

A	*September 2003 Laboratory Analytical Reports for Soil Samples*
B	*September 2003 Laboratory Analytical Reports for Groundwater Samples*
C	*3rd Quarter 2003 Groundwater Sampling Logs*
D	*3rd Quarter 2003 Site Visit Reports*

APPENDIX A

September 2003 Laboratory Analytical Reports for Soil Samples

TestAmerica
ANALYTICAL TESTING CORPORATION

Nashville Division

COOLER RECEIPT FORM BC# 345596

Client: Terraine

Cooler Received On: 9/5/03 And Opened On: 9/5/03 By: James Jacobs

(Signature)

1. Temperature of Cooler when opened 0 Degrees Celsius
2. Were custody seals on outside of cooler?.....YES...NO...NA
   a. If yes, how many, what kind and where:_____
3. Were custody seals on containers and intact?.....NO...YES...NA
4. Were the seals intact, signed, and dated correctly?.....YES...NO...NA
5. Were custody papers inside cooler?.....YES...NO...NA
6. Were custody papers properly filled out (ink,signed,etc)?.....YES...NO...NA
7. Did you sign the custody papers in the appropriate place?.....YES...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Other None
9. Cooling process: Ice Ice pack Ice(direct contact) Dry ice Other None
10. Did all containers arrive in good condition(unbroken)?.....YES...NO...NA
11. Were all container labels complete (#,date,signed,pres,etc)?.....YES...NO...NA
12. Did all container labels and tags agree with custody papers?.....YES...NO...NA
13. Were correct containers used for the analysis requested?.....YES...NO...NA
14. a. Were VOA vials received?.....YES...NO...NA
    b. Was there any observable head space present in any VOA vial?.....NO...YES...NA
15. Was sufficient amount of sample sent in each container?.....YES...NO...NA
16. Were correct preservatives used?.....YES...NO...NA
    If not, record standard ID of preservative used here_____
17. Was residual chlorine present?.....NO...YES...NA
18. See attached for resolution of non-conformance:

Fed-Ex UPS Velocity Airborne Route Off-street Misc.

TestAmerica ANALYTICAL TESTING CORPORATION

Nashville Division
2960 Foster Creighton
Nashville, TN 37204

Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

345596

Client Name: Terraine Inc Client #: 9463
Address: 2622 NW 97th Ave
City/State/Zip Code: Miami FL 33172
Project Manager: James Young
Telephone Number: 305-513 4901 Fax: 305-513-4902
Sampler Name: (Print Name) Karen Baer
Sampler Signature: Karen Baer

Project Name: 04-41001/2 Building 9
Project #: ↓
Site/Location ID: _____ State: _____
Report To: James Young
Invoice To: James Young
Quote #: 0923021090 2 PO#: 04-41001/2.4.2

TAT
___ Standard
___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: Y N

QC Deliverables
___ None
___ Level 2 (Batch QC)
___ Level 3
___ Level 4
Other: Standard

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other)	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: BTEX/MTBE 8260	PAH 8270	TRPH FL PRO								REMARKS
SB4 6'	7/4/03	917	x		G					1	2	2	X	X	X								138147

Special Instructions:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: 0c
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Karen Baer			J Jarb	9/5/03	830

TestAmerica
ANALYTICAL TESTING CORPORATION

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800-765-0980 • 615-726-3404 Fax

9/11/03 CASE NARRATIVE

TERRAINE, INC. 9463
JIM YOUNG
2622 N.W. 97TH
MIAMI, FL 33172

This report includes the analytical certificates of analysis for all samples listed below. These samples relate to your project identified below:

Project Name: BUILDING 9
Project Number: 04-41001/2.
Laboratory Project Number: 345596.

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. Any QC recoveries outside laboratory control limits are flagged individually with an #. Sample specific comments and quality control statements are included in the Laboratory notes section of the analytical report for each sample report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

Sample Identification	Lab Number	Collection Date
SB4 (6')	03-A138147	9/ 4/03

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Sample Identification	Lab Number	Collection Date

These results relate only to the items tested.
This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By: Roxanne L. Connor Report Date: 9/11/03

Ashley Morris, Lab Director
Michael H. Dunn, M.S., QA/QC Director
Johnny A. Mitchell, Operations Manager Organics
Eric S. Smith, Assistant Technical Director
Roxanne L. Connor, Technical Services
Gail A. Lage, Technical Serv.
Glenn L. Norton, Technical Serv.
Kelly S. Comstock, Technical Serv.
Pamela A. Langford, Technical Serv.

Laboratory Certification Number: E87358

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ANALYTICAL REPORT

TERRAINE, INC. 9463
JIM YOUNG
2622 N.W. 97TH
MIAMI, FL 33172

Project: 04-41001/2
Project Name: BUILDING 9
Sampler: KAREN BAER

Lab Number: 03-A138147
Sample ID: SB4 (6')
Sample Type: Soil
Site ID:

Date Collected: 9/ 4/03
Time Collected: 9:17
Date Received: 9/ 5/03
Time Received: 8:30
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS									
% Dry Weight	81.4	%		1	9/ 6/03	14:13	M. Ricke	CLP	2444
ORGANIC PARAMETERS									
Benzene	ND	mg/kg	0.001	1	9/10/03	15:26	J. Redmond	8021B	2323
Ethylbenzene	ND	mg/kg	0.001	1	9/10/03	15:26	J. Redmond	8021B	2323
Toluene	ND	mg/kg	0.001	1	9/10/03	15:26	J. Redmond	8021B	2323
Xylenes, total	ND	mg/kg	0.0009	1	9/10/03	15:26	J. Redmond	8021B	2323
MTBE	ND	mg/kg	0.004	1	9/10/03	15:26	J. Redmond	8021B	2323
TRPH	11	mg/kg	10	1	9/ 9/03	11:27	Weatherly	FPRO	3551
EXTRACTABLE ORGANICS									
Acenaphthene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Acenaphthylene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Anthracene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Benzo(a)anthracene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Benzo(a)pyrene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Benzo(b)fluoranthene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Benzo(g,h,i)perylene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Benzo(k)fluoranthene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Chrysene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Dibenz(a,h)anthracene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Fluoranthene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Fluorene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
2-Methylnaphthalene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A138147
Sample ID: SB4 (6')
Project: 04-41001/2

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Naphthalene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Phenanthrene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
Pyrene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541
1-Methylnapthalene	ND	mg/kg	0.0033	1	9/ 8/03	19:38	D. Harris	8270C-SIM	4541

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
FL-PRO	25. g	2.0 ml	9/ 6/03		K. Turner	FDEP
PAH-SIM	29.9 gm	1.0 ml	9/ 6/03		M. Ricke	SW3550
BTX Prep	5.66 g	5.0 ml	9/ 4/03	9:17	J. Redmond	5035

Surrogate	% Recovery	Target Range
UST surr-Trifluorotoluene	87.	65. - 119.
TPH sur, o-Terphenyl	121. #	62. - 109.
TPH Surr, C-35	73.	60. - 118.
BNA Surr-Nitrobenzene-d5	67.	44. - 99.
BNA Surr-2-Fluorobiphenyl	76.	45. - 94.
BNA Surr-Terphenyl-d14	62.	53. - 104.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.
All results reported on a wet weight basis.

End of Sample Report.

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PROJECT QUALITY CONTROL DATA
Project Number: 04-41001/2
Project Name: BUILDING 9
Page: 1
Laboratory Receipt Date: 9/ 5/03

Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for the defined analytical batch for MS/MSD analysis on an true sample matrix. Laboratory reagent water was used for QC purposes.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
UST ANALYSIS								
TRPH	mg/kg	11.0	48.2	17.0	219#	62. - 163.	3551	03-A138147

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
UST PARAMETERS						
TRPH	mg/kg	48.2	30.3	45.61#	25.	3551
BNA Surr-Nitrobenzene-d5	% Rec		73.			4541
BNA Surr-2-Fluorobiphenyl	% Rec		91.			4541
BNA Surr-Terphenyl-d14	% Rec		63.			4541

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
UST PARAMETERS						
Benzene	mg/kg	0.100	0.102	102	71 - 132	2323
Toluene	mg/kg	0.100	0.0992	99	68 - 129	2323
Ethylbenzene	mg/kg	0.100	0.0997	100	71 - 131	2323

Project QC continued . . .

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PROJECT QUALITY CONTROL DATA
Project Number: 04-41001/2
Project Name: BUILDING 9
Page: 2
Laboratory Receipt Date: 9/ 5/03

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
Xylenes, total	mg/kg	0.200	0.210	105	66 - 131	2323
MTBE	mg/kg	0.100	0.106	106	56 - 140	2323
TRPH	mg/kg	17.0	17.0	100	63 - 153	3551
EXTRACTABLE PARAMETERS						
Acenaphthene	mg/kg	0.0330	0.0280	85	26 - 106	4541
Acenaphthylene	mg/kg	0.0330	0.0221	67	23 - 113	4541
Anthracene	mg/kg	0.0330	0.0221	67	33 - 108	4541
Benzo(a)anthracene	mg/kg	0.0330	0.0231	70	47 - 119	4541
Benzo(a)pyrene	mg/kg	0.0330	0.0175	53	37 - 106	4541
Benzo(b)fluoranthene	mg/kg	0.0330	0.0254	77	43 - 121	4541
Benzo(g,h,i)perylene	mg/kg	0.0330	0.0231	70	23 - 124	4541
Benzo(k)fluoranthene	mg/kg	0.0330	0.0238	72	40 - 112	4541
Chrysene	mg/kg	0.0330	0.0274	83	48 - 117	4541
Dibenz(a,h)anthracene	mg/kg	0.0330	0.0224	68	30 - 129	4541
2-Methylnaphthalene	mg/kg	0.0330	0.0224	68	31 - 115	4541
Naphthalene	mg/kg	0.0330	0.0271	82	23 - 105	4541
Phenanthrene	mg/kg	0.0330	0.0280	85	36 - 107	4541
Pyrene	mg/kg	0.0330	0.0234	71	38 - 113	4541
1-Methylnapthalene	mg/kg	0.0330	0.0251	76	35 - 113	4541

Duplicates

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch	Sample Dup'd

Project QC continued . . .

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PROJECT QUALITY CONTROL DATA
Project Number: 04-41001/2
Project Name: BUILDING 9
Page: 3
Laboratory Receipt Date: 9/ 5/03

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
UST PARAMETERS					
Benzene	< 0.0010	mg/kg	2323	9/10/03	12:45
Toluene	< 0.0010	mg/kg	2323	9/10/03	12:45
Ethylbenzene	< 0.0010	mg/kg	2323	9/10/03	12:45
Xylenes, total	< 0.0010	mg/kg	2323	9/10/03	12:45
MTBE	< 0.005	mg/kg	2323	9/10/03	12:45
TRPH	< 5.00	mg/kg	3551	9/ 8/03	19:44
UST surr-Trifluorotoluene	86.	% Recovery	2323	9/10/03	12:45
EXTRACTABLE PARAMETERS					
Acenaphthene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Acenaphthylene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Anthracene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Benzo(a)anthracene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Benzo(a)pyrene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Benzo(b)fluoranthene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Benzo(g,h,i)perylene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Benzo(k)fluoranthene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Chrysene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Dibenz(a,h)anthracene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Fluoranthene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Fluorene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Indeno(1,2,3-cd)pyrene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
2-Methylnaphthalene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Naphthalene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Phenanthrene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
Pyrene	< 0.00330	mg/kg	4541	9/ 8/03	15:33
1-Methylnapthalene	< 0.00330	mg/kg	4541	9/ 8/03	15:33

Project QC continued . . .

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PROJECT QUALITY CONTROL DATA
Project Number: 04-41001/2
Project Name: BUILDING 9
Page: 4
Laboratory Receipt Date: 9/ 5/03

BNA Surr-Nitrobenzene-d5	86.	% Rec	4541	9/ 8/03	15:33
BNA Surr-2-Fluorobiphenyl	102.	% Rec	4541	9/ 8/03	15:33
BNA Surr-Terphenyl-d14	77.	% Rec	4541	9/ 8/03	15:33

= Value outside Laboratory historical or method prescribed QC limits.

End of Report for Project 345596

APPENDIX B

September 2003 Laboratory Analytical Reports for Groundwater Samples

TestAmerica
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Nashville Division

COOLER RECEIPT FORM BC# 345168

Client: Terraine

Cooler Received On: 9/3/03 And Opened On: 9/3/03 By: Mark Beasley

M. Beasley
(Signature)

1. Temperature of Cooler when opened 0.0 Degrees Celsius
2. Were custody seals on outside of cooler?.....YES...(NO)...NA
   a. If yes, how many, what kind and where:_____
3. Were custody seals on containers and intact?.....(NO)...YES...NA
4. Were the seals intact, signed, and dated correctly?.....YES...(NO)...NA
5. Were custody papers inside cooler?.....(YES)...NO...NA
6. Were custody papers properly filled out (ink,signed,etc)?.....(YES)...NO...NA
7. Did you sign the custody papers in the appropriate place?.....(YES)...NO...NA
8. What kind of packing material used? (Bubblewrap) Peanuts Vermiculite Other None
9. Was sufficient ice used (if appropriate)?.....(YES)...NO...NA
10. Did all containers arrive in good condition(unbroken)?.....(YES)...NO...NA
11. Were all container labels complete (#,date,signed,pres,etc)?.....(YES)...NO...NA
12. Did all container labels and tags agree with custody papers?.....(YES)...NO...NA
13. Were correct containers used for the analysis requested?.....(YES)...NO...NA
14. a. Were VOA vials received?.....(YES)...NO...NA
    b. Was there any observable head space present in any VOA vial?.....(NO)...YES...NA
15. Was sufficient amount of sample sent in each container?.....(YES)...NO...NA
16. Were correct preservatives used?.....(YES)...NO...NA
    If not, record standard ID of preservative used here_____
17. Was residual chlorine present?.....(NO)...YES...NA
18. See attached for resolution of non-conformance:

UPS Velocity Airborne Route Off-street (Fedex) Misc.

345168

TestAmerica, Inc.

2960 Foster Creighton Dr.
Nashville, TN 37204
Tel. No. 800-765-0980
Fax No. 615-726-0954

Terraine, Inc. - Chain Of Custody Record

ACCOUNT INFORMATION

TAI ACCOUNT NO: 9463 | NAME OF PM TO BILL: James L. Young
TAI QUOTE NO: 09230210902 | PURCHASE ORDER NO: 04-41001/2.4.2

TERRAINE PROJECT NO. 0 4 - 4 1 0 0 1

TERRAINE TASK NO. [redacted] 2.4.2

DATE: 9/2/03
PAGE: 1 of 1

CONSULTANT COMPANY: TERRAINE, INC.
BILLING ADDRESS: 7380 Phillips Highway, Suite 106
CITY: Jacksonville, Florida 32256
TELEPHONE: 904-296-6001 | FAX: 305-513-4902 (main) | E-MAIL: jly@terraine.com

QC DELIVERABLES
- [x] STANDARD
- [x] LEVEL 2
- BATCH QC
- [ ] LEVEL 3
- [ ] LEVEL 4

SITE DESCRIPTION: Building 9
SITE ADDRESS (STREET, CITY, STATE): NAS Cecil Field, Jacksonville, Florida
PROJECT CONTACT (Report to): James L. Young | PROJECT CONTACT CELL PHONE: 305-490-7702 | PROJECT CONTACT E-MAIL: jly@terraine.com
FACILITY ID NO:
CONTRACT NO / CONTRACT TASK ORDER NO (for Federal Projects): N62467-02-G-0352 / CTO#0001
SAMPLER NAME(S) (Print): K. Baer/ Frank Rodriguez
SAMPLER NAME(S) (Signatures):
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS): [x] STD [ ] 10 DAYS [ ] 5 DAYS [ ] 3 DAYS [ ] <24 HRS
ELECTRONIC DELIVERABLES: [x] FAX RESULTS [x] E-MAIL PDF [x] ELEC. DATA

TEMPERATURE ON RECEIPT (°C)

SPECIAL INSTRUCTIONS OR NOTES : 48 Hour Hold!

~~Hold preserved 125 ml plastic for reserve.~~ Report nitrate and nitrite separately.

REQUESTED ANALYSIS (if more than one method is listed, circle one)

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX (AIR, GW, SOIL, SLUDGE, WW, ETC)	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TPH - Purgeable (8015) GRO	TPH - Extractable (8015) DRO	BTEX / MTBE (8021B)	BTEX / MTBE + Oxygenates (8260B)	VOCs (8260B)	VOCs Aromatic (8021B)	VOCs Halogenated (8021B)	PAH (8270)	Metals (Specify)	TRPH (FL-PRO)	Vapor VOCs BTEX, MTBE/GRO (EPA-18, TO-18)	Vapor VOCs Full List (EPA-18, TO-18)	Pre burn (8021, Halogenated, FL-Pro, As, Cd, Cr, Pb)	Nitrate	Nitrite	Orthophosphate					Container PID Readings or Laboratory Notes/Remarks
	CEF-9-5S	9/2	9:50	GW	5		1	3		9			X					X		X				X	X	X					136434
	CEF-9-7D	9/2	12:25	GW	5		1	3		9			X					X		X				X	X	X					35
	CEF-9-2S	9/2	11:55	GW	5		1	3		9			X					X		X				X	X	X					36
	CEF-9-3S	9/2	11:16	GW	5		1	3		9			X					X		X				X	X	X					37
	CEF-9-9S	9/2	10:34	GW	5		1	3		9			X					X		X				X	X	X					38
	EB-BLDG9	9/2	12:55	GW	5		1	3		9			X					X		X				X	X	X					39
	TRIP BLANK	--	--	GW	1					1			X																		136440
	~~[illegible]~~			~~[illegible]~~									~~X~~					~~X~~		~~X~~											

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature]	9/3/03	8:20
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	0.0		
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

05/1/01 Revision

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9/ 8/03 CASE NARRATIVE

TERRAINE, INC. 9463
JIM YOUNG
2622 N.W. 97TH
MIAMI, FL 33172

This report includes the analytical certificates of analysis for all samples listed below. These samples relate to your project identified below:

Project Name: NAS CECIL FIELD
Project Number: N62467-02-G-0352/CTO #1.
Laboratory Project Number: 345168.

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. Any QC recoveries outside laboratory control limits are flagged individually with an #. Sample specific comments and quality control statements are included in the Laboratory notes section of the analytical report for each sample report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accredidation.

Sample Identification	Lab Number	Collection Date
CEF-9-5S	03-A136434	9/ 2/03
CEF-9-7D	03-A136435	9/ 2/03
CEF-9-2S	03-A136436	9/ 2/03
CEF-9-3S	03-A136437	9/ 2/03
CEF-9-9S	03-A136438	9/ 2/03
EB-BLDG9	03-A136439	9/ 2/03
Trip Blank	03-A136440	

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Sample Identification	Lab Number	Collection Date

These results relate only to the items tested.
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Report Approved By: Report Date: 9/ 8/03

Ashley Morris, Lab Director
Michael H. Dunn, M.S., QA/QC Director
Johnny A. Mitchell, Operations Manager Organics
Eric S. Smith, Assistant Technical Director
Roxanne L. Connor, Technical Services
Gail A. Lage, Technical Serv.
Glenn L. Norton, Technical Serv.
Kelly S. Comstock, Technical Serv.
Pamela A. Langford, Technical Serv.

Laboratory Certification Number: E87358

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ANALYTICAL REPORT

TERRAINE, INC. 9463
JIM YOUNG
2622 N.W. 97TH
MIAMI, FL 33172

Project: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
Sampler: KB/FR

Lab Number: 03-A136434
Sample ID: CEF-9-5S
Sample Type: Water
Site ID:

Date Collected: 9/ 2/03
Time Collected: 9:56
Date Received: 9/ 3/03
Time Received: 8:20
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
ORGANIC PARAMETERS									
Benzene	ND	ug/L	1.00	1.0	9/ 3/03	23:54	A. Cobbs	8021B	9559
Ethylbenzene	ND	ug/L	1.0	1.0	9/ 3/03	23:54	A. Cobbs	8021B	9559
Toluene	ND	ug/L	1.0	1.0	9/ 3/03	23:54	A. Cobbs	8021B	9559
Xylenes (Total)	ND	ug/L	1.0	1.0	9/ 3/03	23:54	A. Cobbs	8021B	9559
Methyl-t-butylether	ND	ug/L	1.0	1.0	9/ 3/03	23:54	A. Cobbs	8021B	9559
TRPH	ND	ug/L	200.	1.0	9/ 4/03	23:36	M.Jarrett	FPRO	1455
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Acenaphthylene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Anthracene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Benzo(a)anthracene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Benzo(a)pyrene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Benzo(b)fluoranthene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Benzo(g,h,i)perylene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Benzo(k)fluoranthene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Chrysene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Dibenz(a,h)anthracene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Fluoranthene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Fluorene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
2-Methylnaphthalene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Naphthalene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Phenanthrene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
Pyrene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676
1-Methylnaphthalene	ND	ug/L	0.10	1.0	9/ 6/03	1:48	D. Harris	8270C-SIM	2676

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A136434
Sample ID: CEF-9-5S
Project: N62467-02-G-0352/CTO #1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	ND	mg/L	0.100	1.0	9/ 3/03	19:19	S. Overton	300	9291
Nitrite-N as N	ND	mg/L	0.10	1.0	9/ 3/03	19:19	S. Overton	300	9291
Ortho Phosphate as P	ND	mg/L	0.100	1.0	9/ 3/03	13:20	T. Beverly	365.2	9413

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	980. ml	1.0 ml	9/ 4/03		K. Turner	3510C
Fla Pro	1000 ml	2.0 ml	9/ 4/03		M. Ricke	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	92.	82. - 142.
TPH Surr, C-35	67.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	101.	69. - 129.
BNA Surr-Nitrobenzene-d5	76.	34. - 107.
BNA Surr-2-Fluorobiphenyl	83.	40. - 96.
BNA Surr-Terphenyl-d14	69.	26. - 106.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

TERRAINE, INC. 9463
JIM YOUNG
2622 N.W. 97TH
MIAMI, FL 33172

Project: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
Sampler: KB/FR

Lab Number: 03-A136435
Sample ID: CEF-9-7D
Sample Type: Water
Site ID:

Date Collected: 9/ 2/03
Time Collected: 12:25
Date Received: 9/ 3/03
Time Received: 8:20
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
ORGANIC PARAMETERS									
Benzene	ND	ug/L	1.00	1.0	9/ 4/03	0:25	A. Cobbs	8021B	9559
Ethylbenzene	ND	ug/L	1.0	1.0	9/ 4/03	0:25	A. Cobbs	8021B	9559
Toluene	ND	ug/L	1.0	1.0	9/ 4/03	0:25	A. Cobbs	8021B	9559
Xylenes (Total)	ND	ug/L	1.0	1.0	9/ 4/03	0:25	A. Cobbs	8021B	9559
Methyl-t-butylether	ND	ug/L	1.0	1.0	9/ 4/03	0:25	A. Cobbs	8021B	9559
TRPH	ND	ug/L	200.	1.0	9/ 4/03	23:57	M.Jarrett	FPRO	1455
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Acenaphthylene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Anthracene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Benzo(a)anthracene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Benzo(a)pyrene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Benzo(b)fluoranthene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Benzo(g,h,i)perylene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Benzo(k)fluoranthene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Chrysene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Dibenz(a,h)anthracene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Fluoranthene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Fluorene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
2-Methylnaphthalene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Naphthalene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Phenanthrene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
Pyrene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676
1-Methylnaphthalene	ND	ug/L	0.10	1.0	9/ 6/03	2:23	D. Harris	8270C-SIM	2676

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A136435
Sample ID: CEF-9-7D
Project: N62467-02-G-0352/CTO #1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	ND	mg/L	0.100	1.0	9/ 3/03	19:19	S. Overton	300	9291
Nitrite-N as N	ND	mg/L	0.10	1.0	9/ 3/03	19:19	S. Overton	300	9291
Ortho Phosphate as P	ND	mg/L	0.100	1.0	9/ 3/03	13:20	T. Beverly	365.2	9413

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	980. ml	1.0 ml	9/ 4/03		K. Turner	3510C
Fla Pro	1000 ml	2.0 ml	9/ 4/03		M. Ricke	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	98.	82. - 142.
TPH Surr, C-35	57.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	105.	69. - 129.
BNA Surr-Nitrobenzene-d5	64.	34. - 107.
BNA Surr-2-Fluorobiphenyl	64.	40. - 96.
BNA Surr-Terphenyl-d14	65.	26. - 106.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

TERRAINE, INC. 9463
JIM YOUNG
2622 N.W. 97TH
MIAMI, FL 33172

Project: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
Sampler: KB/FR

Lab Number: 03-A136436
Sample ID: CEF-9-2S
Sample Type: Water
Site ID:

Date Collected: 9/ 2/03
Time Collected: 11:55
Date Received: 9/ 3/03
Time Received: 8:20
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
ORGANIC PARAMETERS									
Benzene	ND	ug/L	1.00	1.0	9/ 4/03	0:56	A. Cobbs	8021B	9559
Ethylbenzene	ND	ug/L	1.0	1.0	9/ 4/03	0:56	A. Cobbs	8021B	9559
Toluene	ND	ug/L	1.0	1.0	9/ 4/03	0:56	A. Cobbs	8021B	9559
Xylenes (Total)	ND	ug/L	1.0	1.0	9/ 4/03	0:56	A. Cobbs	8021B	9559
Methyl-t-butylether	ND	ug/L	1.0	1.0	9/ 4/03	0:56	A. Cobbs	8021B	9559
TRPH	ND	ug/L	200.	1.0	9/ 5/03	0:17	M.Jarrett	FPRO	1455
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Acenaphthylene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Anthracene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Benzo(a)anthracene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Benzo(a)pyrene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Benzo(b)fluoranthene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Benzo(g,h,i)perylene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Benzo(k)fluoranthene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Chrysene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Dibenz(a,h)anthracene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Fluoranthene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Fluorene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
2-Methylnaphthalene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Naphthalene	0.22	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Phenanthrene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
Pyrene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676
1-Methylnaphthalene	ND	ug/L	0.20	1.0	9/ 6/03	2:58	D. Harris	8270C-SIM	2676

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A136436
Sample ID: CEF-9-2S
Project: N62467-02-G-0352/CTO #1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	4.07	mg/L	0.100	1.0	9/ 3/03	19:19	S. Overton	300	9291
Nitrite-N as N	ND	mg/L	0.10	1.0	9/ 3/03	19:19	S. Overton	300	9291
Ortho Phosphate as P	ND	mg/L	0.100	1.0	9/ 3/03	13:20	T. Beverly	365.2	9413

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	500. ml	1.0 ml	9/ 4/03		K. Turner	3510C
Fla Pro	1000 ml	2.0 ml	9/ 4/03		M. Ricke	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	88.	82. - 142.
TPH Surr, C-35	57.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	105.	69. - 129.
BNA Surr-Nitrobenzene-d5	75.	34. - 107.
BNA Surr-2-Fluorobiphenyl	78.	40. - 96.
BNA Surr-Terphenyl-d14	68.	26. - 106.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

TERRAINE, INC. 9463
JIM YOUNG
2622 N.W. 97TH
MIAMI, FL 33172

Project: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
Sampler: KB/FR

Lab Number: 03-A136437
Sample ID: CEF-9-3S
Sample Type: Water
Site ID:

Date Collected: 9/ 2/03
Time Collected: 11:16
Date Received: 9/ 3/03
Time Received: 8:20
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
ORGANIC PARAMETERS									
Benzene	ND	ug/L	1.00	1.0	9/ 4/03	1:26	A. Cobbs	8021B	9559
Ethylbenzene	ND	ug/L	1.0	1.0	9/ 4/03	1:26	A. Cobbs	8021B	9559
Toluene	ND	ug/L	1.0	1.0	9/ 4/03	1:26	A. Cobbs	8021B	9559
Xylenes (Total)	ND	ug/L	1.0	1.0	9/ 4/03	1:26	A. Cobbs	8021B	9559
Methyl-t-butylether	ND	ug/L	1.0	1.0	9/ 4/03	1:26	A. Cobbs	8021B	9559
TRPH	552.	ug/L	200.	1.0	9/ 5/03	0:37	M.Jarrett	FPRO	1455
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Acenaphthylene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Anthracene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Benzo(a)anthracene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Benzo(a)pyrene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Benzo(b)fluoranthene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Benzo(g,h,i)perylene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Benzo(k)fluoranthene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Chrysene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Dibenz(a,h)anthracene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Fluoranthene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Fluorene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
2-Methylnaphthalene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Naphthalene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Phenanthrene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
Pyrene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676
1-Methylnaphthalene	ND	ug/L	0.20	1.0	9/ 6/03	3:32	D. Harris	8270C-SIM	2676

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A136437
Sample ID: CEF-9-3S
Project: N62467-02-G-0352/CTO #1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	8.18	mg/L	0.200	2.0	9/ 3/03	19:19	S. Overton	300	9291
Nitrite-N as N	ND	mg/L	0.10	1.0	9/ 3/03	19:19	S. Overton	300	9291
Ortho Phosphate as P	ND	mg/L	0.100	1.0	9/ 3/03	13:20	T. Beverly	365.2	9413

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	500. ml	1.0 ml	9/ 4/03		K. Turner	3510C
Fla Pro	1000 ml	2.0 ml	9/ 4/03		M. Ricke	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	84.	82. - 142.
TPH Surr, C-35	72.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	105.	69. - 129.
BNA Surr-Nitrobenzene-d5	78.	34. - 107.
BNA Surr-2-Fluorobiphenyl	72.	40. - 96.
BNA Surr-Terphenyl-d14	64.	26. - 106.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

TERRAINE, INC. 9463
JIM YOUNG
2622 N.W. 97TH
MIAMI, FL 33172

Project: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
Sampler: KB/FR

Lab Number: 03-A136438
Sample ID: CEF-9-9S
Sample Type: Water
Site ID:

Date Collected: 9/ 2/03
Time Collected: 10:34
Date Received: 9/ 3/03
Time Received: 8:20
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
ORGANIC PARAMETERS									
Benzene	ND	ug/L	1.00	1.0	9/ 4/03	8:32	A. Cobbs	8021B	9559
Ethylbenzene	ND	ug/L	1.0	1.0	9/ 4/03	8:32	A. Cobbs	8021B	9559
Toluene	ND	ug/L	1.0	1.0	9/ 4/03	8:32	A. Cobbs	8021B	9559
Xylenes (Total)	ND	ug/L	1.0	1.0	9/ 4/03	8:32	A. Cobbs	8021B	9559
Methyl-t-butylether	ND	ug/L	1.0	1.0	9/ 4/03	8:32	A. Cobbs	8021B	9559
TRPH	ND	ug/L	200.	1.0	9/ 5/03	0:58	M.Jarrett	FPRO	1455
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Acenaphthylene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Anthracene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Benzo(a)anthracene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Benzo(a)pyrene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Benzo(b)fluoranthene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Benzo(g,h,i)perylene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Benzo(k)fluoranthene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Chrysene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Dibenz(a,h)anthracene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Fluoranthene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Fluorene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
2-Methylnaphthalene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Naphthalene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Phenanthrene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
Pyrene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676
1-Methylnaphthalene	ND	ug/L	0.10	1.0	9/ 6/03	4:07	D. Harris	8270C-SIM	2676

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 03-A136438
Sample ID: CEF-9-9S
Project: N62467-02-G-0352/CTO #1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	15.4	mg/L	1.00	10.0	9/ 3/03	19:19	S. Overton	300	9291
Nitrite-N as N	ND	mg/L	0.10	1.0	9/ 3/03	19:19	S. Overton	300	9291
Ortho Phosphate as P	ND	mg/L	0.100	1.0	9/ 3/03	13:20	T. Beverly	365.2	9413

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	950. ml	1.0 ml	9/ 4/03		K. Turner	3510C
Fla Pro	1000 ml	2.0 ml	9/ 4/03		M. Ricke	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	101.	82. - 142.
TPH Surr, C-35	77.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	105.	69. - 129.
BNA Surr-Nitrobenzene-d5	83.	34. - 107.
BNA Surr-2-Fluorobiphenyl	80.	40. - 96.
BNA Surr-Terphenyl-d14	66.	26. - 106.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

TERRAINE, INC. 9463
JIM YOUNG
2622 N.W. 97TH
MIAMI, FL 33172

Project: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
Sampler: KB/FR

Lab Number: 03-A136439
Sample ID: EB-BLDG9
Sample Type: Water
Site ID:

Date Collected: 9/ 2/03
Time Collected: 12:53
Date Received: 9/ 3/03
Time Received: 8:20
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
ORGANIC PARAMETERS									
Benzene	ND	ug/L	1.00	1.0	9/ 4/03	9:03	A. Cobbs	8021B	9559
Ethylbenzene	ND	ug/L	1.0	1.0	9/ 4/03	9:03	A. Cobbs	8021B	9559
Toluene	ND	ug/L	1.0	1.0	9/ 4/03	9:03	A. Cobbs	8021B	9559
Xylenes (Total)	ND	ug/L	1.0	1.0	9/ 4/03	9:03	A. Cobbs	8021B	9559
Methyl-t-butylether	ND	ug/L	1.0	1.0	9/ 4/03	9:03	A. Cobbs	8021B	9559
TRPH	ND	ug/L	200.	1.0	9/ 5/03	1:59	M.Jarrett	FPRO	1455
EXTRACTABLE ORGANICS									
Acenaphthene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Acenaphthylene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Anthracene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Benzo(a)anthracene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Benzo(a)pyrene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Benzo(b)fluoranthene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Benzo(g,h,i)perylene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Benzo(k)fluoranthene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Chrysene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Dibenz(a,h)anthracene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Fluoranthene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Fluorene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
2-Methylnaphthalene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Naphthalene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Phenanthrene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
Pyrene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676
1-Methylnaphthalene	ND	ug/L	0.11	1.0	9/ 6/03	4:41	D. Harris	8270C-SIM	2676

Sample report continued . . .

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ANALYTICAL TESTING CORPORATION

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ANALYTICAL REPORT

Laboratory Number: 03-A136439
Sample ID: EB-BLDG9
Project: N62467-02-G-0352/CTO #1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
MISCELLANEOUS CHEMISTRY									
Nitrate-N as N	ND	mg/L	0.100	1.0	9/ 3/03	19:19	S. Overton	300	9291
Nitrite-N as N	ND	mg/L	0.10	1.0	9/ 3/03	19:19	S. Overton	300	9291
Ortho Phosphate as P	ND	mg/L	0.100	1.0	9/ 3/03	13:20	T. Beverly	365.2	9413

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
PAH-SIM	900. ml	1.0 ml	9/ 4/03		K. Turner	3510C
Fla Pro	1000 ml	2.0 ml	9/ 4/03		M. Ricke	FDEP

Surrogate	% Recovery	Target Range
TPH Surr., O-Terphenyl	94.	82. - 142.
TPH Surr, C-35	73.	55. - 118.
BTEX/GRO Surr., a,a,a-TFT	105.	69. - 129.
BNA Surr-Nitrobenzene-d5	60.	34. - 107.
BNA Surr-2-Fluorobiphenyl	62.	40. - 96.
BNA Surr-Terphenyl-d14	67.	26. - 106.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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ANALYTICAL REPORT

TERRAINE, INC. 9463
JIM YOUNG
2622 N.W. 97TH
MIAMI, FL 33172

Project: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
Sampler: KB/FR

Lab Number: 03-A136440
Sample ID: Trip Blank
Sample Type: Water
Site ID:

Date Collected:
Time Collected:
Date Received: 9/ 3/03
Time Received: 8:20
Page: 1

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
ORGANIC PARAMETERS									
Benzene	ND	ug/L	1.00	1.0	9/ 4/03	9:34	A. Cobbs	8021B	9559
Ethylbenzene	ND	ug/L	1.0	1.0	9/ 4/03	9:34	A. Cobbs	8021B	9559
Toluene	ND	ug/L	1.0	1.0	9/ 4/03	9:34	A. Cobbs	8021B	9559
Xylenes (Total)	ND	ug/L	1.0	1.0	9/ 4/03	9:34	A. Cobbs	8021B	9559
Methyl-t-butylether	ND	ug/L	1.0	1.0	9/ 4/03	9:34	A. Cobbs	8021B	9559

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	106.	69. - 129.

LABORATORY COMMENTS:
ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
# = Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

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PROJECT QUALITY CONTROL DATA
Project Number: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
Page: 1
Laboratory Receipt Date: 9/ 3/03

Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for the defined analytical batch for MS/MSD analysis on an true sample matrix. Laboratory reagent water was used for QC purposes.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
UST ANALYSIS								
Benzene	mg/l	< 0.00100	0.0579	0.0500	116	60. - 143.	9559	03-A136434
Toluene	mg/l	< 0.0010	0.0575	0.0500	115	62. - 139.	9559	03-A136434
Ethylbenzene	mg/l	< 0.0010	0.0562	0.0500	112	61. - 138.	9559	03-A136434
Xylenes (Total)	mg/l	< 0.0010	0.109	0.100	109	59. - 137.	9559	03-A136434
Methyl-t-butylether	mg/l	< 0.0010	0.0476	0.0500	95	60. - 138.	9559	03-A136434
TRPH	mg/l	< 0.100	0.338	0.430	79	44. - 101.	1455	blank
BTEX/GRO Surr., a,a,a-TFT	% Recovery				102	69 - 129	9559	
EXTRACTABLE PARAMETERS								
Acenaphthene	mg/l	< 0.00010	0.00080	0.00100	80	28 - 106	2676	BLANK
Pyrene	mg/l	< 0.00010	0.00084	0.00100	84	35 - 118	2676	BLANK
BNA Surr-Nitrobenzene-d5	% Rec				71	34 - 107	2676	
BNA Surr-2-Fluorobiphenyl	% Rec				76	40 - 96	2676	
BNA Surr-Terphenyl-d14	% Rec				69	26 - 106	2676	
MISC PARAMETERS								
Ortho Phosphate as P	mg/l	0.551	0.796	0.250	98	80 - 120	9413	03-A136525

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
UST PARAMETERS						
Benzene	mg/l	0.0579	0.0585	1.03	23.	9559
Toluene	mg/l	0.0575	0.0574	0.17	24.	9559

Project QC continued . . .

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PROJECT QUALITY CONTROL DATA
Project Number: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
Page: 2
Laboratory Receipt Date: 9/ 3/03

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
Ethylbenzene	mg/l	0.0562	0.0559	0.54	24.	9559
Xylenes (Total)	mg/l	0.109	0.108	0.92	25.	9559
Methyl-t-butylether	mg/l	0.0476	0.0524	9.60	24.	9559
TRPH	mg/l	0.338	0.352	4.06	41.	1455
BTEX/GRO Surr., a,a,a-TFT	% Recovery		102.			9559
EXTRACTABLE PARAMETERS						
Acenaphthene	mg/l	0.00080	0.00077	3.82	33.	2676
Pyrene	mg/l	0.00084	0.00076	10.00	32.	2676
BNA Surr-Nitrobenzene-d5	% Rec		68.			2676
BNA Surr-2-Fluorobiphenyl	% Rec		70.			2676
BNA Surr-Terphenyl-d14	% Rec		65.			2676
Ortho Phosphate as P	mg/l	0.796	0.796	0.00	20	9413

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
UST PARAMETERS						
Benzene	mg/l	0.100	0.0965	96	74 - 120	9559
Toluene	mg/l	0.100	0.0928	93	73 - 118	9559
Ethylbenzene	mg/l	0.100	0.0891	89	72 - 118	9559
Xylenes (Total)	mg/l	0.200	0.175	88	72 - 116	9559
Methyl-t-butylether	mg/l	0.100	0.0896	90	64 - 124	9559
TRPH	mg/l	0.430	0.352	82	55 - 118	1455

Project QC continued . . .

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PROJECT QUALITY CONTROL DATA
Project Number: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
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Laboratory Receipt Date: 9/ 3/03

BTEX/GRO Surr., a,a,a-TFT	% Recovery			101	69 - 129	9559
EXTRACTABLE PARAMETERS						
Acenaphthene	mg/l	0.00100	0.00083	83	28 - 106	2676
Acenaphthylene	mg/l	0.00100	0.00070	70	26 - 106	2676
Anthracene	mg/l	0.00100	0.00076	76	30 - 116	2676
Benzo(a)anthracene	mg/l	0.00100	0.00077	77	38 - 128	2676
Benzo(a)pyrene	mg/l	0.00100	0.00068	68	34 - 117	2676
Benzo(b)fluoranthene	mg/l	0.00100	0.00079	79	37 - 132	2676
Benzo(g,h,i)perylene	mg/l	0.00100	0.00077	77	28 - 122	2676
Benzo(k)fluoranthene	mg/l	0.00100	0.00084	84	35 - 128	2676
Chrysene	mg/l	0.00100	0.00090	90	42 - 126	2676
Dibenz(a,h)anthracene	mg/l	0.00100	0.00072	72	35 - 124	2676
2-Methylnaphthalene	mg/l	0.00100	0.00061	61	31 - 108	2676
Naphthalene	mg/l	0.00100	0.00074	74	9 - 120	2676
Phenanthrene	mg/l	0.00100	0.00085	85	34 - 116	2676
Pyrene	mg/l	0.00100	0.00079	79	35 - 118	2676
1-Methylnaphthalene	mg/l	0.00100	0.00071	71	31 - 112	2676
BNA Surr-Nitrobenzene-d5	% Rec			76	34 - 107	2676
BNA Surr-2-Fluorobiphenyl	% Rec			79	40 - 96	2676
BNA Surr-Terphenyl-d14	% Rec			71	26 - 106	2676
MISC PARAMETERS						
Nitrate-N as N	mg/l	3.00	3.05	102	90 - 110	9291
Nitrite-N as N	mg/l	3.00	3.14	105	90 - 110	9291
Ortho Phosphate as P	mg/l	0.250	0.270	108 #	88 - 107	9413

Duplicates

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch	Sample Dup'd
Nitrate-N as N	mg/l	< 0.100	< 0.100	N/A	15.	9291	03-A136439
Nitrite-N as N	mg/l	< 0.10	< 0.10	N/A	15.	9291	03-A136439

Project QC continued . . .

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PROJECT QUALITY CONTROL DATA
Project Number: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
Page: 4
Laboratory Receipt Date: 9/ 3/03

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
UST PARAMETERS					
Benzene	< 0.00060	mg/l	9559	9/ 3/03	12:34
Toluene	< 0.0006	mg/l	9559	9/ 3/03	12:34
Ethylbenzene	< 0.0006	mg/l	9559	9/ 3/03	12:34
Xylenes (Total)	< 0.0010	mg/l	9559	9/ 3/03	12:34
Methyl-t-butylether	< 0.0006	mg/l	9559	9/ 3/03	12:34
TRPH	< 0.100	mg/l	1455	9/ 4/03	21:55
TPH Surr., O-Terphenyl	108.	% Recovery	1455	9/ 4/03	21:55
TPH Surr, C-35	68.	% Recovery	1455	9/ 4/03	21:55
BTEX/GRO Surr., a,a,a-TFT	106.	% Recovery	9559	9/ 3/03	12:34
EXTRACTABLE PARAMETERS					
Acenaphthene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Acenaphthylene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Anthracene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Benzo(a)anthracene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Benzo(a)pyrene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Benzo(b)fluoranthene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Benzo(g,h,i)perylene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Benzo(k)fluoranthene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Chrysene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Dibenz(a,h)anthracene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Fluoranthene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Fluorene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Indeno(1,2,3-cd)pyrene	< 0.00010	mg/l	2676	9/ 5/03	23:30
2-Methylnaphthalene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Naphthalene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Phenanthrene	< 0.00010	mg/l	2676	9/ 5/03	23:30
Pyrene	< 0.00010	mg/l	2676	9/ 5/03	23:30

Project QC continued . . .

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PROJECT QUALITY CONTROL DATA
Project Number: N62467-02-G-0352/CTO #1
Project Name: NAS CECIL FIELD
Page: 5
Laboratory Receipt Date: 9/ 3/03

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Analysis Date	Analysis Time
1-Methylnaphthalene	< 0.00010	mg/l	2676	9/ 5/03	23:30
BNA Surr-Nitrobenzene-d5	77.	% Rec	2676	9/ 5/03	23:30
BNA Surr-2-Fluorobiphenyl	84.	% Rec	2676	9/ 5/03	23:30
BNA Surr-Terphenyl-d14	74.	% Rec	2676	9/ 5/03	23:30
MISC PARAMETERS					
Nitrate-N as N	< 0.100	mg/l	9291	9/ 3/03	19:19
Nitrite-N as N	< 0.10	mg/l	9291	9/ 3/03	19:19
Ortho Phosphate as P	< 0.100	mg/l	9413	9/ 3/03	13:20

= Value outside Laboratory historical or method prescribed QC limits.

End of Report for Project 345168

APPENDIX C

3rd Quarter 2003 Groundwater Sampling Logs

GROUNDWATER SAMPLING LOG

TERRAINE

Project Information

Project No: 04-41001/2	Project Name: Building 9 - Cecil Field LTM/RAO	
Technician 1: Karen Baer	Technician 2: Frank Rodriguez	Weather: Sunny
Sampling ID: 04-41001/2:CEF-9-2S:9/2/2003		
Notes:		

Well Information

Well ID: **CEF-9-2S**	Sampling Date: **9/2/2003**	
Well Diam (in): 2.0	Total Well Depth (ft): 14.45	Well Screen Interval (ft):
TOC Elevation (ft msl): 78.74	Northing: 0	Easting: 0
Static Depth to Water (ft): 4.57	Well Capacity (gal): 1.61	

Purge Setup

Purge Method: Nomad Submersible	Tubing Material: PPE		Pump Set at (ft): 7.50
pH Meter: Horiba U-22	Cond. Meter: Horiba U-22	DO Meter: Horiba U-22	Turb. Meter: Hach 2100P
Purge Start: 11:33	Purge End: 11:52	Total Volume Purged (gal): 2.25	

Purging Data

Time	Water Level (ft)	Vol Purged (gal)	Pump Rate (gal/min)	DO (mg/L)	Temp (°C)	SEC (µS/cm)	pH	ORP (mV)	Turbidity (NTU)	Color	Odor
11:41	4.93	0.25	0.00	7.30	29.69	440.0	6.30	91.0	379.00	brown	slight HC
11:46	5.25	0.75	0.00	7.18	29.50	439.0	6.36	84.0	421.00		
11:48	5.30	1.25	0.00	6.82	29.47	431.0	6.38	72.0	440.00		
11:52	5.30	2.25	0.33	6.65	29.46	426.0	6.39	55.0	486.00		

Sampling Data

Sample Information		Final Purge Readings		Field Test Kit Readings (mg/L)			
Sample Date:	9/2/2003	DO (mg/L):	6.71	DO:	0.00	Sulfate:	0.00
Sample Start Time:	11:52	Temp (*C):	29.56	CO2:	80.00	Sulfide:	0.00
Sample End Time:	12:04	SEC (uS/cm):	427.00	Alkalinity:	30.00		
Field Filtered:	☐	pH:	6.40	Ferrous Iron:	0.00		
Duplicate:	☐	ORP (mV):	54.00	H2S:	0.10		
		Turb (NTU):	498.00	Manganese:	0.00		

Lab Analyses/Methods:	Technician Initials
"VOCs, TRPH, PAHs, Nitrate/Nitrite, Orthophosphate"	

GROUNDWATER SAMPLING LOG

TERRAINE

Project Information

Project No: 04-41001/2	Project Name: Building 9 - Cecil Field LTM/RAO	
Technician 1: Karen Baer	Technician 2: Frank Rodriguez	Weather: Sunny
Sampling ID: 04-41001/2:CEF-9-3S:9/2/2003		
Notes:		

Well Information

Well ID: **CEF-9-3S**	Sampling Date: **9/2/2003**	
Well Diam (in): 2.0	Total Well Depth (ft): 15.54	Well Screen Interval (ft):
TOC Elevation (ft msl): 78.81	Northing: 0	Easting: 0
Static Depth to Water (ft): 4.74	Well Capacity (gal): 1.76	

Purge Setup

Purge Method: Nomad Submersible	Tubing Material: PPE		Pump Set at (ft): 8.00
pH Meter: Horiba U-22	Cond. Meter: Horiba U-22	DO Meter: Horiba U-22	Turb. Meter: Hach 2100P
Purge Start: 10:59	Purge End: 11:15	Total Volume Purged (gal): 3.00	

Purging Data

Time	Water Level (ft)	Vol Purged (gal)	Pump Rate (gal/min)	DO (mg/L)	Temp (°C)	SEC (µS/cm)	pH	ORP (mV)	Turbidity (NTU)	Color	Odor
11:01	4.90	0.50	0.00	4.82	29.38	621.0	5.80	134.0	437.00	brown	none
11:04	5.00	1.00	0.00	3.30	29.18	590.0	5.92	127.0	401.00		
11:07	5.50	1.50	0.00	2.82	28.95	573.0	5.95	125.0	380.00		
11:09	5.10	2.00	0.00	2.42	28.89	561.0	5.97	122.0	369.00		
11:11	5.10	2.50	0.00	2.22	28.84	552.0	6.00	120.0	356.00		
11:13	5.10	2.75	0.25	2.05	28.81	542.0	6.00	119.0	349.00		
11:15	5.10	3.00	0.00	2.01	28.79	539.0	6.00	118.0	346.00		

Sampling Data

Sample Information		Final Purge Readings		Field Test Kit Readings (mg/L)			
Sample Date:	9/2/2003	DO (mg/L):	1.98	DO:	0.00	Sulfate:	0.00
Sample Start Time:	11:16	Temp (*C):	28.78	CO2:	74.00	Sulfide:	0.00
Sample End Time:	11:21	SEC (uS/cm):	537.00	Alkalinity:	35.00		
Field Filtered:	☐	pH:	6.00	Ferrous Iron:	0.00		
Duplicate:	☐	ORP (mV):	117.00	H2S:	0.00		
		Turb (NTU):	349.00	Manganese:	0.00		

Lab Analyses/Methods:	Technician Initials
"VOCs, TRPH, PAHs, Nitrate/Nitrite, Orthophosphate"	

GROUNDWATER SAMPLING LOG

TERRAINE

Project Information

Project No: 04-41001/2	Project Name: Building 9 - Cecil Field LTM/RAO	
Technician 1: Karen Baer	Technician 2: Frank Rodriguez	Weather: Sunny
Sampling ID: 04-41001/2:CEF-9-5S:9/2/2003		
Notes:		

Well Information

Well ID: **CEF-9-5S**	Sampling Date: **9/2/2003**	
Well Diam (in): 2.0	Total Well Depth (ft): 13.72	Well Screen Interval (ft):
TOC Elevation (ft msl): 78.93	Northing: 0	Easting: 0
Static Depth to Water (ft): 5.10	Well Capacity (gal): 1.40	

Purge Setup

Purge Method: Nomad Submersible	Tubing Material: PPE		Pump Set at (ft): 8.50
pH Meter: Horiba U-22	Cond. Meter: Horiba U-22	DO Meter: Horiba U-22	Turb. Meter: Hach 2100P
Purge Start: 09:34	Purge End: 09:54	Total Volume Purged (gal): 2.50	

Purging Data

Time	Water Level (ft)	Vol Purged (gal)	Pump Rate (gal/min)	DO (mg/L)	Temp (°C)	SEC (µS/cm)	pH	ORP (mV)	Turbidity (NTU)	Color	Odor
09:42	5.20	0.50	0.00	2.70	28.68	350.0	5.56	119.0	93.00	turbid	none
09:47	5.20	1.00	0.00	2.55	28.52	349.0	5.81	88.0	96.20		
09:51	5.35	1.50	0.00	2.20	28.22	348.0	5.89	63.0	69.50		
09:53	5.40	2.00	0.00	1.94	28.09	351.0	5.93	4.0	29.10		
09:54	5.40	2.50	0.00	1.79	28.00	353.0	5.95	-26.0	19.70		

Sampling Data

Sample Information		Final Purge Readings		Field Test Kit Readings (mg/L)			
Sample Date:	9/2/2003	DO (mg/L):	1.70	DO:	0.00	Sulfate:	0.00
Sample Start Time:	09:56	Temp (*C):	28.02	CO2:	68.00	Sulfide:	0.00
Sample End Time:	10:11	SEC (uS/cm):	354.00	Alkalinity:	85.00		
Field Filtered:	☐	pH:	5.96	Ferrous Iron:	0.00		
Duplicate:	☐	ORP (mV):	-35.00	H2S:	0.00		
		Turb (NTU):	15.90	Manganese:	0.00		

Lab Analyses/Methods:	Technician Initials
"VOCs, TRPH, PAHs, Nitrate/Nitrite, Orthophosphate"	

GROUNDWATER SAMPLING LOG

TERRAINE

Project Information

Project No: 04-41001/2	Project Name: Building 9 - Cecil Field LTM/RAO	
Technician 1: Karen Baer	Technician 2: Frank Rodriguez	Weather: Sunny
Sampling ID: 04-41001/2:CEF-9-7D:9/2/2003		
Notes:		

Well Information

Well ID: **CEF-9-7D**	Sampling Date: **9/2/2003**	
Well Diam (in): 2.0	Total Well Depth (ft): 29.23	Well Screen Interval (ft):
TOC Elevation (ft msl): 78.59	Northing: 0	Easting: 0
Static Depth to Water (ft): 4.82	Well Capacity (gal): 3.98	

Purge Setup

Purge Method: Nomad Submersible	Tubing Material: PPE		Pump Set at (ft): 24.00
pH Meter: Horiba U-22	Cond. Meter: Horiba U-22	DO Meter: Horiba U-22	Turb. Meter: Hach 2100P
Purge Start: 12:18	Purge End: 12:22	Total Volume Purged (gal): 0.75	

Purging Data

Time	Water Level (ft)	Vol Purged (gal)	Pump Rate (gal/min)	DO (mg/L)	Temp (°C)	SEC (µS/cm)	pH	ORP (mV)	Turbidity (NTU)	Color	Odor
12:18	5.60	0.25	0.00	0.53	26.85	126.0	5.34	137.0	27.40	clear	none
12:20	5.65	0.50	0.00	0.19	26.59	127.0	4.96	147.0	16.00		
12:22	4.65	0.75	0.12	0.13	26.41	126.0	4.77	155.0	10.30		

Sampling Data

Sample Information

Sample Date:	9/2/2003
Sample Start Time:	12:18
Sample End Time:	12:33
Field Filtered:	☐
Duplicate:	☐

Final Purge Readings

DO (mg/L):	0.14
Temp (*C):	26.37
SEC (uS/cm):	125.00
pH:	4.71
ORP (mV):	158.00
Turb (NTU):	6.04

Field Test Kit Readings (mg/L)

DO:	0.00	Sulfate:	0.00
CO2:	152.00	Sulfide:	0.00
Alkalinity:	0.00		
Ferrous Iron:	0.60		
H2S:	0.00		
Manganese:	0.00		

Lab Analyses/Methods:

"VOCs, TRPH, PAHs, Nitrate/Nitrite, Orthophosphate"

Technician Initials

GROUNDWATER SAMPLING LOG

TERRAINE

Project Information

Project No: 04-41001/2	Project Name: Building 9 - Cecil Field LTM/RAO	
Technician 1: Karen Baer	Technician 2: Frank Rodriguez	Weather: Sunny
Sampling ID: 04-41001/2:CEF-9-9S:9/2/2003		
Notes:		

Well Information

Well ID: **CEF-9-9S**	Sampling Date: **9/2/2003**	
Well Diam (in): 2.0	Total Well Depth (ft): 14.23	Well Screen Interval (ft):
TOC Elevation (ft msl): 78.89	Northing: 0	Easting: 0
Static Depth to Water (ft): 4.94	Well Capacity (gal): 1.51	

Purge Setup

Purge Method: Nomad Submersible	Tubing Material: PPE		Pump Set at (ft): 8.00
pH Meter: Horiba U-22	Cond. Meter: Horiba U-22	DO Meter: Horiba U-22	Turb. Meter: Hach 2100P
Purge Start: 10:20	Purge End: 10:33	Total Volume Purged (gal): 1.50	

Purging Data

Time	Water Level (ft)	Vol Purged (gal)	Pump Rate (gal/min)	DO (mg/L)	Temp (°C)	SEC (µS/cm)	pH	ORP (mV)	Turbidity (NTU)	Color	Odor
10:29	5.20	0.50	0.00	2.05	29.32	783.0	3.89	254.0	12.30	clear	none
10:30	5.20	1.00	0.00	1.68	29.06	788.0	3.86	274.0	4.49		
10:33	5.20	1.50	0.00	1.55	28.95	788.0	3.85	288.0	2.49		

Sampling Data

Sample Information		Final Purge Readings		Field Test Kit Readings (mg/L)			
Sample Date:	9/2/2003	DO (mg/L):	1.52	DO:	0.00	Sulfate:	0.00
Sample Start Time:	10:34	Temp (*C):	28.93	CO2:	54.00	Sulfide:	0.00
Sample End Time:	10:40	SEC (uS/cm):	787.00	Alkalinity:	0.00		
Field Filtered:	☐	pH:	3.85	Ferrous Iron:	0.00		
Duplicate:	☐	ORP (mV):	292.00	H2S:	0.00		
		Turb (NTU):	1.98	Manganese:	0.00		

Lab Analyses/Methods:	Technician Initials
"VOCs, TRPH, PAHs, Nitrate/Nitrite, Orthophosphate"	

APPENDIX D

3rd Quarter 2003 Site Visit Reports

NAS CECIL FIELD

BUILDINGS 9 & 46

pHA-ER OPERATION and MAINTENANCE LOG
Site Name: Cecil Field, Tank Site 9
Personnel on Site: C Priester

Date: 7/22/2003
Arrival Time: 9:00 AM
Departure Time: 2:00 PM

Exterior Parameters	Arrival		Departure		Comments
Power Disconnect (On/Off)	On		On		
Power Hour Meter (hours)			21,832.0		
Pressure Hour Meter (hours)			19,960.0		
Max Temp (°F)			128		
Air Supply					
Leg 1 (PSIG)	33		33		
Nitrous Oxide					
Cylinder 1 (psig, primary/secondary)	0/45	AG	800/45		AG Jax
Cylinder 2 (psig, primary/secondary)	725/45	AG	725/45		AG Jax
Flow Meter (CFH)	0.1		0.1		
Adjunct Gas					
Cylinder 1 (psig, primary/secondary)	NA		NA		
Flow Meter					
TEP					
Gallons (US, Liq.)	0.5		1.3		Added TEP
Air Flow (CFM)					
Air Flow					
Inj. Well 1 (Valve % Open/CFM)	100	2	0	0	Flows set to concentrate flow to MW2S
Inj. Well 2 (Valve % Open/CFM)	15	1	0	0.0	
Inj. Well 3 (Valve % Open/CFM)	0	0.0	100	4	Flows set to concentrate flow to MW9S
Inj. Well 4 (Valve % Open/CFM)	0	0	50	4.0	

Maintenance Information	Maintenance Performed
Nitrous System Cylinders/Regulators	OK. Replaced One cylinder.
Nitrous Oxide Solenoid Valve	OK
TEP System	OK. IV 100% OV 100% BPV 50%. None added.
AC PC4 0010719278	Replaced Compressor 6/6/2003
AC PC4 0010719276	Replaced Compressor 6/6/2003 Replaced inlet filters.
Air Legs/ Solenoid Valves	OK
Ventilation Fan	OK
Primary Electrical System	OK
PLC-Telemetry	OK
Relay Assembly	OK
Pressure Switch	OK
Flow Switch	OK
Additional Notes:	System operating normally.

PhA-ER Monthly System O&M Progress Report
Tank Site 9
July 22, 2003 O&M Event

1.0 Introduction

Building 9 served as the NAS Cecil Field main fire base station from 1953 until base closure. Prior to 1953, the site served as a public works center and incorporated a transportation garage and automotive hobby shop. As such the site contained two (2) gasoline UST's, which are believed to have been removed in 1985. A fuel storage tank was located west of the former UST location; the removal date of this tank is unknown. A site assessment report (SAR) concluded that petroleum constituents have impacted both soil and groundwater at the site. A MAGNUS (multi application gas nutrient systems) bioremediation system was installed to treat the impacted soil and groundwater to cleanup target levels.

2.0 Description of July 22, 2003 Site Visit, Preventative and Corrective Maintenance by C. Priester

- System On and both compressors operating normally upon arrival. Replaced both compressors on June 6, 2003.
- One nitrous oxide cylinder still with adequate pressure. Replaced one nitrous oxide cylinder. Performed leak check. None detected.
- Replaced compressor inlet filters.
- Checked TEP level – added TEP. Flow left at 50%.
- Checked for system leaks – none detected.
- Switched system flows (IW's 3-4) to allow greater flow to vicinity of MW-9-9S.

3.0 Operation efficiencies

Operational efficiencies are currently maximized based on laboratory reports and field tests.

4.0 Remedial progress

Analytical data to date indicates that the groundwater has been treated to well below natural attenuation standards. Groundwater clean-up target levels are only slightly exceeded at CEF-9-2S. Contaminant mass reductions in the soil are essentially 100%.

4.1 Flow rate monitoring

Flow regimen set to prevent the benzene rebound in monitoring well CEF-2S.

5.0 Recommendations

Re-balance system as needed as future monitoring well laboratory report results are received and analyzed. Essentially 100% Mass Reductions have been obtained, therefore maintenance of Oxygen in shallow aquifer is continuing until stable target levels are obtained.

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pHA-ER OPERATION and MAINTENANCE LOG		**Date:**	8/18/2003
Site Name: Cecil Field, Tank Site 9		**Arrival Time:**	1:00 PM
Personnel on Site:	C Priester	**Departure Time:**	5:00 PM

Exterior Parameters	**Arrival**		**Departure**		**Comments**
Power Disconnect (On/Off)	On		On		
Power Hour Meter (hours)			22,481.0		
Pressure Hour Meter (hours)			20,610.0		
Max Temp (°F)			128		
Air Supply					
Leg 1 (PSIG)	33		33		
Nitrous Oxide					
Cylinder 1 (psig, primary/secondary)	300/45	AG	300/45		AG Jax
Cylinder 2 (psig, primary/secondary)	725/45	AG	725/45		AG Jax
Flow Meter (CFH)	0.1		0.1		
Adjunct Gas					
Cylinder 1 (psig, primary/secondary)	NA		NA		
Flow Meter					
TEP					
Gallons (US, Liq.)	1		1		
Air Flow (CFM)					
Air Flow					
Inj. Well 1 (Valve % Open/CFM)	0	0	100	4	Flows set to concentrate flow to MW2S
Inj. Well 2 (Valve % Open/CFM)	0	0	15	4	
Inj. Well 3 (Valve % Open/CFM)	100	4	0	0	Flows set to concentrate flow to MW9S
Inj. Well 4 (Valve % Open/CFM)	50	4	0	0	

Maintenance Information	**Maintenance Performed**
Nitrous System Cylinders/Regulators	OK. Replaced One cylinder.
Nitrous Oxide Solenoid Valve	OK
TEP System	OK. IV 100% OV 100% BPV 50%. None added.
AC PC4 0010719278	Replaced Compressor 6/6/2003
AC PC4 0010719276	Replaced Compressor 6/6/2003
Air Legs/ Solenoid Valves	OK
Ventilation Fan	OK
Primary Electrical System	OK
PLC-Telemetry	OK
Relay Assembly	OK
Pressure Switch	OK
Flow Switch	OK
Additional Notes:	System operating normally.

PhA-ER Monthly System O&M Progress Report
Tank Site 9
August 21, 2003 O&M Event

1.0 Introduction

Building 9 served as the NAS Cecil Field main fire base station from 1953 until base closure. Prior to 1953, the site served as a public works center and incorporated a transportation garage and automotive hobby shop. As such the site contained two (2) gasoline UST's, which are believed to have been removed in 1985. A fuel storage tank was located west of the former UST location; the removal date of this tank is unknown. A site assessment report (SAR) concluded that petroleum constituents have impacted both soil and groundwater at the site. A MAGNUS (multi application gas nutrient systems) bioremediation system was installed to treat the impacted soil and groundwater to cleanup target levels.

2.0 Description of August 21, 2003 Site Visit, Preventative and Corrective Maintenance by C. Priester

- System On and both compressors operating normally upon arrival. Replaced both compressors on June 6, 2003.
- Two nitrous oxide cylinders still with adequate pressure. Performed leak check. None detected.
- Documented hour meter reading
- Checked TEP level – added TEP. Flow left at 50%.
- Checked for system leaks – none detected.
- Switched system flows (IW's 1-2) to allow greater flow to vicinity of MW CEF-9-2S.

3.0 Operation efficiencies

Operational efficiencies are currently maximized based on laboratory reports and field tests.

4.0 Remedial progress

Analytical data to date indicates that the groundwater has been treated to well below natural attenuation standards. Groundwater clean-up target levels are only slightly exceeded at CEF-9-2S. Last data available dates to December 2002. Contaminant mass reductions in the soil are essentially 100%.

4.1 Flow rate monitoring

Flow regimen set to prevent the benzene rebound in monitoring well CEF-2S.

5.0 Recommendations

Re-balance system as needed as future monitoring well laboratory report results are received and analyzed. Essentially 100% Mass Reductions have been obtained, therefore maintenance of Oxygen in shallow aquifer is continuing until stable target levels are obtained.

OPERATIONS & MAINTENANCE MONTHLY CHECKLIST
CONTRACT NO. N62467-02-G-0352, CTO NO. 0001, TERRAINE PROJ. NO. 04-40001
BUILDINGS 9 & 46 NUTRIENT INJECTION SYSTEM
NAVAL AIR STATION, CECIL FIELD, FLORIDA

All sections to be completed on a monthly basis. Visit to be performed while Subcontractor is at site.

BUILDING 9

1.0
Subcontractor on site: PHA
Subcontractor Employee(s): Priester Newman
General Conditions Encountered at Site:
Date: 9-24
Time: 3 pm
Tech 1 & 2: None

2.0 Cylinders Replaced:
Type: None MT
Quantity:
Comments:
Type: —
Quantity: —
Comments: —

3.0 Compressor:
Filters Inspected Yes No
Filters Replaced Yes No
Comments:
Leak Test Performed Yes No
Minor Leaks Detected Yes No
Minor Leaks Fixed Yes No
Comments:

4.0 Telemetry System:
Operating Correctly Yes No
Software Replaced Yes No
Hardware Replaced Yes No
Phone Line OK Yes No
Comments:

5.0 Other Information/Comments:

BUILDING 46

6.0
Subcontractor on site: PHA
Subcontractor Employee(s): Priester Newman
General Conditions Encountered at Site:
Date: 9-24
Time: 3 pm
Tech 1 & 2: NONE

7.0 Cylinders Replaced:
Type: N_2O
Quantity: 5 (2 EAST 3 WEST)
Comments:
Type: —
Quantity: —
Comments: —

8.0 Compressor:
Filters Inspected Yes No
Filters Replaced Yes No
Comments:
Leak Test Performed Yes No
Minor Leaks Detected Yes No
Minor Leaks Fixed Yes No
Comments:

9.0 Telemetry System:
Operating Correctly Yes No
Software Replaced Yes No
Hardware Replaced Yes No
Phone Line OK Yes No
Comments:

10.0 Other Information/Comments:

Signature [signature] Signature _____

pHA-ER OPERATION and MAINTENANCE LOG			**Date:**		9/24/2003
Site Name: Cecil Field, Tank Site 9			**Arrival Time:**		3:00 PM
Personnel on Site:	C Priester		**Departure Time:**		7:00 PM
	Megan Uttcoht	904 220 1461		Ensafe	
Exterior Parameters	**Arrival**		**Departure**		**Comments**
Power Disconnect (On/Off)	On		On		
Power Hour Meter (hours)			23,373.0		
Pressure Hour Meter (hours)			21,501.7		
Max Temp (°F)			128		
Air Supply					
Leg 1 (PSIG)	33		33		
Nitrous Oxide					
Cylinder 1 (psig, primary/secondary)	300/45	AG	300/45		AG Jax
Cylinder 2 (psig, primary/secondary)	725/45	AG	725/45		AG Jax
Flow Meter (CFH)	0.1		0.1		
Adjunct Gas					
Cylinder 1 (psig, primary/secondary)	NA		NA		
Flow Meter					
TEP					
Gallons (US, Liq.)	1		1		
Air Flow (CFM)					
Air Flow					
Inj. Well 1 (Valve % Open/CFM)	100	0	100	4	Flows set to concentrate flow to MW2S
Inj. Well 2 (Valve % Open/CFM)	15	0	15	4	
Inj. Well 3 (Valve % Open/CFM)	0	4	0	0	Flows set to concentrate flow to MW9S
Inj. Well 4 (Valve % Open/CFM)	0	4	0	0	
Maintenance Information	**Maintenance Performed**				
Nitrous System Cylinders/Regulators	OK.				
Nitrous Oxide Solenoid Valve	OK				
TEP System	OK. IV 100% OV 100% BPV 50%. None added.				
AC PC4 0010719278	Replaced Compressor 6/6/2003				
AC PC4 0010719276	Replaced Compressor 6/6/2003				
Air Legs/ Solenoid Valves	OK				
Ventilation Fan	OK				
Primary Electrical System	OK				
PLC-Telemetry	OK				
Relay Assembly	OK				
Pressure Switch	OK				
Flow Switch	OK				
Additional Notes:	System operating normally.				

PhA-ER Monthly System O&M Progress Report
Tank Site 9
September 24, 2003 O&M Event

1.0 Introduction

Building 9 served as the NAS Cecil Field main fire base station from 1953 until base closure. Prior to 1953, the site served as a public works center and incorporated a transportation garage and automotive hobby shop. As such the site contained two (2) gasoline UST's, which are believed to have been removed in 1985. A fuel storage tank was located west of the former UST location; the removal date of this tank is unknown. A site assessment report (SAR) concluded that petroleum constituents have impacted both soil and groundwater at the site. A MAGNUS (multi application gas nutrient systems) bioremediation system was installed to treat the impacted soil and groundwater to cleanup target levels.

2.0 Description of September 24, 2003 Site Visit, Preventative and Corrective Maintenance by C. Priester

- Met Megan Uttecht, Ensafe on site at 3:00 PM
- System On and both compressors operating normally upon arrival. Replaced both compressors on June 6, 2003.
- Two nitrous oxide cylinders still with adequate pressure. Performed leak check. None detected.
- Documented hour meter reading
- Checked TEP level – added TEP. Flow left at 50%.
- Checked for system leaks – none detected.
- Switched system flows (IW's 1-2) to allow greater flow to vicinity of MW CEF-9-2S.

3.0 Operation efficiencies

Operational efficiencies are currently maximized based on laboratory reports and field tests.

4.0 Remedial progress

Analytical data to date indicates that the groundwater has been treated to well below natural attenuation standards. Groundwater clean-up target levels are only slightly exceeded at CEF-9-2S. Last data available dates to December 2002. Contaminant mass reductions in the soil are essentially 100%. Recent June 2003, sampling verifies soil levels are adequately reduced.

4.1 Flow rate monitoring

Flow regimen set to prevent the benzene rebound in monitoring well CEF-2S.

5.0 Recommendations

Re-balance system as needed as future monitoring well laboratory report results are received and analyzed. Essentially 100% Mass Reductions have been obtained, therefore maintenance of Oxygen in shallow aquifer is continuing until stable target levels are obtained.